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Digital Resilience Within a Hypermediated Polycrisis

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Abstract

This thematic issue examines digital resilience within an increasingly complex landscape of hypermediated, overlapping crises. Situated at the intersection of several research areas—including digital literacy, platform studies, Indigenous media studies, journalism studies, and political science—the thematic issue explores the complexities of digital resilience and seeks to advance its conceptualization and understanding. The issue brings together 15 articles spanning more than 17 countries and addressing a wide range of digital resilience phenomena, from Bangladeshi women’s responses to disinformation and online harassment, to community-led technologies countering environmental injustices in Brazil, to the navigation of digital surveillance in later life in Spain. Together, this issue offers an interdisciplinary, multimethod, and global approach that highlights both the opportunities and challenges involved in fostering digital resilience. In the context of a hypermediated polycrisis, critically assessing how digital resilience can empower people to confront digital threats is especially urgent, particularly for marginalized populations in both the Global North and the Global South.

Keywords

digital literacy; digital society; digital resilience; hypermediatization; social media; polycrisis

1. Hypermediated Polycrisis

The concept of polycrisis refers to the convergence of multiple crises—e.g., environmental, economic, health-related, or informational—that occur simultaneously and interact in ways that amplify their overall impact. Morin and Kern (1999, p. 74) first introduced the term in *Homeland Earth*, where they argued that the “complex intersolidarity of problems, antagonisms, crises, uncontrolled processes, and the general crisis of the planet” constitutes the most pressing challenge confronting humanity. Later, scholars expanded on

this idea. Swilling (2013) characterized a polycrisis as a set of closely connected social, economic, ecological, and institutional crises that cannot be explained by one cause alone, while Tooze (2022) emphasized that these crises intensify through their interaction with one another rather than unfolding separately. As this thematic issue demonstrates, there is growing evidence that humanity is confronting the dynamics of a polycrisis. This polycrisis is unfolding within a unique socio-technological context of hyperconnectivity (Quan-Haase & Wellman, 2005)—one in which digital media, and online communication networks in particular, structure how crises are encountered, understood, and responded to in everyday life.

This socio-technical context is closely tied to the emergence of the “digital society” (Castells, 2024), which reflects a social structure organized around digital information and communication networks where connectivity and information flows have become central to social organization. Building on this perspective, Rainie and Wellman (2012) argue that networked digital infrastructures have given rise to a new social operating system characterized by perpetual connectivity, enabled by the always-on nature of mobile devices. This intensified mediated interconnectedness underpins what media and communication scholar Andreas Hepp (2020) calls “hypermediatization”: A social condition in which digital media function not merely as channels of communication but as pervasive and interwoven environments shaping social relations, institutions, and everyday life.

Within such a hypermediated society, informational flows are deeply entangled with other dimensions of the polycrisis. Focusing on these entanglements, the articles in this thematic issue examine key mediated phenomena (e.g., misinformation, harassment, or surveillance) with the aim of deepening understanding and contributing to the development of digital resilience in the face of current overlapping and compounding crises.

2. Digital Resilience

Although resilience has been defined and operationalized across multiple disciplines, from Holling’s (1973) ecological formulation to Bonanno’s (2004) psychological conceptualization and Folke’s (2006) socio-ecological perspective, a common denominator in these definitions is the capacity of systems, individuals, or communities to anticipate, absorb, adapt to, and transform in response to adversity, disruption, or change (Davoudi, 2012). From this perspective, resilience is not a fixed trait but rather a dynamic process shaped by ongoing learning and adjustment (Luthar et al., 2000).

Within the digital domain, resilience has received comparatively little scholarly attention and remains an underdeveloped field of inquiry. Although the literature on digital resilience is nascent and fragmented, it generally revolves around three cross-cutting themes: (a) digital literacy skills, (b) social capital and networks, and (c) adaptive capacities. Research on digital literacy examines how individuals and societies manage online risks such as misinformation, harassment, and privacy threats, emphasizing critical and reflective competencies as key resources for resilience (e.g., Livingstone et al., 2017; Mihailidis, 2018). At the micro level of the individual, resilience is reflected in experiences such as awareness of misinformation, exposure, and sharing behaviors (e.g., Boulianne & Lee, 2022), while at the macro level of society, it has been conceptualized as a nation’s collective capacity to withstand the impacts of misinformation (Humprecht et al., 2020).

While this body of work has shed light on both macro-level determinants and micro-level individual experiences, it insufficiently captures how resilience is cultivated through collective practices, social networks, and cultural contexts. This gap has prompted scholars to shift attention toward the collective dimension of digital resilience, particularly the mobilization of social resources such as social capital within online networks. From that perspective, resilience emerges not only from institutions or individual competencies but also from relational processes such as trust, mutual support, and shared meaning-making enacted through digital platforms. Concepts such as Tomkova's (2020) digital social resilience, alongside studies of digitally mediated social support and collective action during the Covid-19 pandemic (e.g., Esteve-Del-Valle et al., 2022; Qin et al., 2022), highlight digital resilience as a socially embedded and collectively-produced process.

A parallel strand of research has examined resilience in relation to organizational and institutional responses to digital disruptions such as cyberattacks, system failures, and infrastructural breakdowns (e.g., Park et al., 2015). Within this literature, cyber resilience frameworks emphasize an organization's capacity to prepare for, respond to, and recover from digitally-mediated threats (e.g., Kohn, 2023).

This brief overview of the literature highlights several cross-cutting themes in the field and serves to frame the contributions in this thematic issue, which, as the reader will see, primarily engage with the first (digital literacy skills) and second (social resources like social capital) research themes.

3. Digital Resilience in a Hypermediated Polycrisis

This thematic issue brings together articles that advance both the conceptualization and the empirical investigation of digital resilience across global contexts. It opens with four articles that explore the relationship between digital resilience and digital literacy from complementary perspectives. Pasitselska and Neag (2026) introduce the H.E.L.P. framework—habit, escapism, listening, and participation—which conceptualizes media literacy as a form of digital resilience in contexts marked by war, migration, famine, climate catastrophe, and other forms of adversity. Focusing on professional intermediaries, Carrillo et al. (2026) examine the preparedness, knowledge, and attitudes of Spanish librarians toward disinformation and the role of media and information literacy. Extending this analysis to a broader comparative context, Boulianne (2026) investigates digital resilience across four countries—the United States, the United Kingdom, France, and Canada—and across different age groups, drawing on survey data from 6,000 respondents collected at the height of overlapping crises in February 2021. Relatedly, Távora and Melo (2026) offer an in-depth account of how rural Traditional Peoples and Communities in Brazil have developed forms of digital resilience in response to the previous far-right federal government's mishandling of the Covid-19 pandemic—an approach characterized by science denialism and the active spread of disinformation.

The thematic issue then turns to three articles that focus on a specific digital threat: online mis- and disinformation. Shuchy and Uddin (2026) draw on semi-structured interviews with 25 Bangladeshi activists to examine how gendered disinformation and online harassment targeted women activists in the aftermath of the July–August 2024 mass uprising in Bangladesh, as well as how these activists responded to such attacks. Their study shows how vigilantism and misogyny, amplified by platform algorithms, transformed Facebook and Telegram into hypermediated battlegrounds. Similarly, Luthfia and Angeline (2026) examine how Indonesia's distinctive combination of local cultural values and community-based movements

contributes to strengthening digital resilience against mis- and disinformation. Finally, Kont et al. (2026) explore the comparatively underexamined relationship between misinformation and emotions, focusing on how and under what conditions emotional responses shape reactions to disinformation. Based on 29 semi-structured interviews with young adults in Germany and the Netherlands, this study identifies the emotions elicited when individuals encounter potential disinformation and examines how these emotional dynamics influence the development of digital resilience.

From there, this thematic issue then engages with the still underexplored relationship between digital resilience and platformization (van Dijck et al., 2018) with four articles focusing on censorship, immigration, digital detox practices, and adolescence. Zhang and Quan-Haase (2026) investigate feminist experiences of censorship across Weibo and Zhihu using 19 semi-structured interviews. Their study contributes to rethinking digital resilience as not only resistance to censorship, but as an adaptive capacity to maintain agency and continuity in activism. Moving into a different digital space, Hollingshead et al. (2026) examine the platform logics shaping migration-related content on TikTok in the Canadian context. Turning to practices of digital disconnection, Ludviková and Gabdulhakov (2026) adopt a netnographic approach to study The Offline Club, a Netherlands-based initiative offering curated digital detox events. Their analysis investigates how digital disconnection is collectively experienced within a platformized environment. Finally, drawing on longitudinal, multi-method qualitative data from Chinese adolescents who entered puberty during the Covid-19 pandemic, Dong (2026) examines how digital resilience is enacted through everyday media practices amidst hypermediated and volatile digital environments.

This issue goes on to present two studies that examine the political and journalistic dimensions of participatory budgeting as a digitally-mediated democratic practice. Peiruzá-Parga et al. (2026) track participatory budgeting processes, between 2016 and 2024, across 90 municipalities in Catalonia using the Decidim platform in order to analyze the political factors shaping the resilience of participatory budgeting initiatives deployed through digital infrastructures. Complementing this perspective, Spyridou (2026) draws on 90 semi-structured interviews with journalists in seven European countries—Greece, Cyprus, Romania, Poland, the Netherlands, the United Kingdom, and Ireland—to examine journalistic perceptions of participatory budgeting as a mechanism to rebuild trust.

Finally, the issue explores how individuals build resilience against digital threats in Spain and China. Suárez-Gonzalo et al. (2026) analyze responses to an online survey ($N = 505$) conducted in late 2023 on perceptions and practices related to digital surveillance. Their study identifies the determinants of identity masking and data protection practices, interpreted as forms of resilience to digital surveillance among older internet users in Spain. Similarly, Duan and He (2026) investigate how elderly Chinese citizens (aged 50 and above) encounter, interpret, and respond to disinformation in their study, based on 35 semi-structured, in-depth interviews conducted in Beijing.

Taken together, these contributions highlight the context-dependent, multidimensional, and socially embedded nature of digital resilience, demonstrating how it is shaped by political structures, platform dynamics, literacy practices, and the everyday negotiation of digital threats.

Informed by the articles in this thematic issue, we propose the following research directions as key guidelines for future studies on digital resilience:

- 1) Digital resilience as a protective factor: Digital resilience in the form of media literacy, AI literacy, or digital literacy can function as a protective factor to guard against the impact that crises can have, mitigating the effects of environmental, political, or health crises as well as mis- and disinformation. Research can help uncover and understand such protection mechanisms.
- 2) Digital resilience as an adaptive mechanism: Digital resilience can develop over time as a mechanism to counter crises and sustain activism, normalization, and well-being. A better understanding of the learning and adaptive mechanisms is needed.
- 3) Digital resilience as an outcome: Digital resilience can be a positive outcome of crises when new adaptive behaviors are learnt and further internalized. Research can help detect and conceptualize such adaptive behaviors.
- 4) Levels of digital resilience: The study of digital resilience can occur at individual, group, organizational, community, or societal levels. Research needs to capture digital resilience at each of these levels and examine how they influence each other.
- 5) Digital resilience and inequality: Research on digital resilience needs to include measures of inequality, as oftentimes, marginalized groups are particularly vulnerable to crises and digital threats.

All in all, the global scope of this thematic issue underscores building resilience against digital threats as a societal concern in both the Global North and Global South. The articles in this collection also show that marginalized groups—including women, Traditional Peoples and Communities, and individuals with low levels of media literacy—are disproportionately targeted by digital threats, thereby reproducing and further exacerbating existing inequalities.

Despite the many contributions, we acknowledge that this thematic issue has limitations in its coverage of several aspects that are central to understanding the hypermediated polycrisis. Most articles, for example, focus on specific dimensions of the informational crisis and further research could more fully explore how these intersect with other types of crisis. In addition, the strong emphasis on mis- and disinformation risks narrowing digital resilience to a single category of digital threat, when in practice the concept is broader. Finally, the production of knowledge on digital resilience remains largely centered in Global North universities, reinforcing disparities with knowledge from other regions, particularly in the development and implementation of empirically-grounded resilience-building programs.

Future research can build on the insights offered in this thematic issue and contribute to the further conceptualization and empirical assessment of digital resilience in a world characterized by overlapping and hypermediated crises.

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Conflict of Interests

The authors declare no conflict of interests.

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Media Literacy as Resilience: A Conceptual Framework

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Abstract

Throughout the years, media literacy has been considered an aid for many societal ills in the Western world: from fighting against stereotypical representations of different (marginalized) groups to combating mis- and disinformation. However, these educational initiatives build upon a Western view of the world, and do not take into account issues faced by societies in permanent crisis. The aim of this article is to propose a conceptual framework called H.E.L.P. that positions media literacy as a form of resilience in areas fraught with wars, migration, famine, climate catastrophe, and other adversities. In the H.E.L.P. framework, we identify four core elements: habit (focusing on media use and media environment); escapism (focusing on entertainment and media avoidance); listening (discussing attentiveness to affective and bodily reactions); and participation (highlighting active engagement with media). We discuss implications for media literacy research and provide guidelines for practitioners.

Keywords

crisis; disinformation; media literacy; refugees; resilience; Russian-Ukrainian war

1. Introduction: Media Literacy “Outside the Usual”

In recent years, media literacy education has become instrumentalised as a response to the rampant mis- and disinformation crisis (Robinson & Fassbender, 2024). It has even been proposed as a “strategic defense strategy” for NATO countries (Jolls, 2022). However, if we look back in history, media literacy as a concept and field of study has gained considerable attention since at least the 1980s, most prominently in Western countries (Neag et al., 2022). Since its inception, the concept has become an umbrella term for various types of literacies and competencies, such as digital literacy, information literacy, news literacy, or more recently, “ecomedia” literacy and algorithmic and AI literacy. While media literacy education is used to counter mis-

and disinformation globally, it is often conceptualized and applied according to the frameworks developed in the WEIRD (Western, Educated, Industrialised, Rich, and Democratic) world (Bozdağ et al., 2022). As Melki (2018) claims, “second world problems,” such as dictatorships, wars, famine, and migration, require a totally different approach, which he calls the “media literacy of the oppressed.” This approach takes into account constant socio-economic turmoil, weak independent media, low institutional trust, and conflict. In recent years, this push towards a more inclusive media literacy has gained momentum even in democratic societies, where academics have focused on the inclusion of marginalised groups (Neag et al., 2022).

Bridging the gap between the experience of groups and societies in the state of *information precarity* (Wall et al., 2017) and Westernized media literacy education, we propose a conceptual framework of media literacy as resilience. Building on previous research, we selected key aspects of media literacy education in (permanent) crisis by building on previous literature on disinformation resilience (Humprecht et al., 2020; Kont et al., 2024), mediated trauma (Al-Ghazzi, 2023; Pinchevski, 2019), media avoidance (Aharoni et al., 2021; Kozyreva et al., 2023; Ytre-Arne & Moe, 2021), and civic media literacies (Mihailidis, 2018). This theoretical basis is complemented by our previous empirical research with unaccompanied refugee youth (from Eritrea, Afghanistan, Morocco, and other countries in crisis) and older adults in Ukraine, which we use to illustrate our conceptual framework. We end the article with further research lines and practitioner guidelines for media literacy projects in precarious environments.

2. Literature Review: Towards Building a Conceptual Framework

2.1. Resilience: Overview of the Concept

Despite the long-standing assertion that media literacy education should balance protectionism with support for self-reliant media exploration (Buckingham, 2009; McDougall, 2019), the bulk of policies still focus on protecting people from “disinfodemic” (e.g., “During this coronavirus pandemic,” 2020). However, in precarious environments, it is impossible to avoid or completely shield oneself from the risks associated with media use. Unless people take special measures, they are usually exposed to mis- and disinformation, mediated violence, and uncivil online discussions. These negative experiences affect well-being, informedness, and social trust. Poor quality of information about health, economics, and politics also affects citizens’ decision-making, deterring them from improving their precarious situation.

Why do we suggest that resilience is a key concept when it comes to media literacy “outside the usual”? In contrast to protection from adversity, resilience to detrimental media effects is an adequate strategy that helps people make sense of the world amidst unreliable information and manage risks associated with media use. It is a weapon of the weak, as people who face oppression and scarcity develop strategies to continue using the media despite these hardships, getting information and communicating their struggles to the outside world.

There is ample literature on the concept of resilience, spanning multiple academic fields, from environmental sciences to psychology. Bonanno (2004) defined resilience as the ability of those exposed to highly disruptive events to maintain psychological and physical functioning and the capacity for generative experiences and positive emotions. A more nuanced conceptualization of resilience moves away from the idea of a return to a previous “normal” state, embracing change through adaptation and learning (Davoudi,

2012). In this sense, resilience is not a trait, but a dynamic process “encompassing positive adaptation within the context of significant adversity” (Luthar et al., 2000, p. 543).

When adopting the conceptualization of resilience to the field of media studies, we first need to highlight the mediated nature of risk exposure. On the one hand, mediation might mitigate the negative effects of disruptive events. Scholars go as far as to claim that risk exposure is necessary to build the capacity to manage harm during internet use (Hammond et al., 2023; Vissenberg et al., 2022). This view also aligns with our considerations about the impossibility of sanitizing the media environment and avoiding harm altogether. On the other hand, mediated risk exposure might have more subtle immediate effects, but lead to fatigue and emotional drain that affects the willingness to engage with media in the long-term (Pasitselska, 2022a; Ytre-Arne & Moe, 2021).

Media literacy as resilience, in our understanding, should provide strategies not only for coping with falsehoods of different types and origins, but also for managing one’s media environment, including the scope and intensity of media use, opportunities for emotional relief, and for action against oppression. While we focus here on individual strategies and capacities, we do not aim to promote an individualistic ideology sometimes associated with the use of the term “resilience” (Davoudi, 2012). Instead, we agree with Ungar’s (2011) conceptualization of resilience as the ability to access the resources needed to sustain well-being from communities and governments. We also agree with Moe (2020) that the distribution of burdens among citizens when it comes to media literacy should promote the inclusion of disadvantaged groups. Resilience has thus a multidimensional characteristic that spans from the individual to the collective societal level (Kont et al., 2024).

In the following section, we will establish the theoretical link between resilience and media literacy and outline the broader needs for media literacy education in precarious media environments.

2.2. Coping With Adversity in Precarious Media Environments

2.2.1. Resilience to Falsehoods

Research on the prevalence, detection, and characteristics of misinformation, disinformation, and “fake news” has exploded in recent years (Broda & Strömbäck, 2024). Particularly, data-driven research, relying on computational and quantitative methods, has been developing in parallel to media literacy scholarship, without an effort to establish interdisciplinary dialogue. As a result, information processing and opinion-making are usually studied as detached from their social context (Broda & Strömbäck, 2024; Pasitselska, 2022b). While researchers report the effectiveness of inoculation and prebunking against mis- and disinformation (e.g., Carey et al., 2025; Lewandowsky & Van Der Linden, 2021), these measures are usually tested in artificial conditions and are limited to immediate effects (Broda & Strömbäck, 2024). In contrast, media literacy education often foregrounds individual reflection and choice rather than stimulus–response medical-like interventions (Anderson, 2021; cf. Huang et al., 2024). Especially when aiming at building resilience, media literacy presupposes adaptation and change of media use practices over time (McDougall, 2019), which requires longitudinal intervention design based on existing individual habits and practices.

A separate string of research investigates “resilience to disinformation,” which Kont et al. (2024) define as “a capability that manifests in the process of encountering disinformation and results in either questioning or recognizing disinformation and consequently dismissing it” (pp. 537–538). This research acknowledges the contextual and multidimensional nature of resilience, which also, for example, depends on the level of populism or polarization in media systems, as well as the availability of trustworthy media sources and public trust in media (Humprecht et al., 2020). While recognising the role of institutional and interpersonal trust, existing studies rarely take into consideration the processing of political information that is not based on epistemic thinking. Truthfulness for many people has nothing to do with the accuracy of information, depending primarily on their identity-driven considerations (Schulz et al., 2020). In the context of war and conflict, partisan, religious, and ethnolinguistic ties increase susceptibility to propagandistic narratives (Szostek, 2017). Studies show that in real-life conditions, people often process information relying on social and identity-related cues rather than knowledge-based considerations (Pasitselska, 2022b). Centering media literacy practices around individual habits and routines that are also embedded in the existing social world (co-viewing and co-listening practices, messaging groups, news monitoring distributed among family members) might help overcome ideological resistance and media distrust.

One of the promising paths to develop media literacy approaches congruent with the discussed challenges is through recognition of media-related needs and gratifications people derive from media use in times of crisis. Kozman and Melki (2018) identified five main categories of media-related gratifications during war: Next to cognitive gratifications (that relate to knowing what is happening), affective, escapist, social-integrative, and survivalist gratifications were also important. Realising that people might consume untrustworthy information and turn to dubious sources to maintain high morale or cope with uncertainty (Dekker et al., 2018; Pasitselska, 2022a), we need to change our approach to media literacy interventions.

2.2.2. Resilience to Trauma

The tension between epistemic engagement with media and affective proximity to conflict poses challenges to media literacy application during crisis and war (Al-Ghazzi, 2023; Pasitselska, 2024). The “war feed” (Hoskins & Shchelin, 2023), unmoderated and uncensored, brings torture and war crimes into the digital devices of everyone watching and demands that the witnesses stay connected, appealing to their sense of duty and empathy. Pinchevski (2019) claims that mediated transmission of traumatic events exceeds transmission of meaning or information proper, taking place on the affective rather than on the cognitive level. Moreover, given the pervasive news consumption through social media, political conversations intertwine with personal networked communications, often taking on affective qualities not previously associated with political discourse (Lokot, 2023). Embodied witnessing combines a deeply personal, even intimate experience of relating to suffering, with a collective experience of shared destiny as a part of a community (Chouliaraki, 2010). Since media use during crises often entails (re-)traumatization, we need to rethink prioritizing critical thinking, cross-source validation, and other media literacy techniques that entail more intense media consumption. The competencies of media non-use might become crucial instead.

Media non-use should draw broader attention from the media literacy field, as news saturation and platformized attention economy pose even higher demands from users (Good & Ciccone, 2025). Media non-use is also conceptualised as news avoidance, technological disconnection, and “detox,” among other terms. News avoidance is considered an anti-democratic practice that leaves citizens uninformed (Delli

Carpini, 2000); however, complete avoidance is relatively rare and usually connected to a lack of trust in media and politics (Strömbäck et al., 2020). Studies show that news avoidance increases in times of crisis. Aharoni et al. (2021) note that the volume of breaking news and its emotional intensity lead to indifference and avoidance. Ytre-Arne and Moe (2021), in their study of news use during Covid-19, conclude that “doomscrolling” creates information overload and emotional drain. Taken together, these studies suggest that “literate” avoidance strategies are essential in the highly saturated news environment, and especially in a crisis. Kozyreva et al. (2023) address this problem by introducing the competence of “critical ignoring”: “a type of deliberate ignorance that entails selectively filtering and blocking out information in order to control one’s information environment and reduce one’s exposure to false and low-quality information” (p. 83). In line with this discussion, we can add to our framework the ability to reduce one’s exposure to violent or traumatizing content. There is another benefit of limited news consumption that is related to civic empowerment, which we discuss in the following section: Avoiding news may help people stay focused on issues they feel they can change (Woodstock, 2014).

2.2.3. Resilience to Oppression

In the age of social media, online political expression becomes even more important in a context where one can bear witness to injustice, document, and testify to one’s experience (Lokot, 2023). This matters not just for the formation of public opinion in the conflict-affected country and the support for humanitarian efforts abroad (e.g., in boosting the conflict visibility online, Kasianenko & Boichak, 2024), but also for collective memory and archiving (Kot et al., 2024).

For our purposes, Mihailidis’ (2018) concept of “civic media literacies” is essential. It highlights the need to shift from training individual skills to community-oriented, participatory, and value-driven pedagogy. The connection between media literacy and civic agency prioritizes justice and positive social change. With the development of digital technologies (such as AI), the instrumentalization of information warfare by anti-democratic actors has become even more widespread and skillful (Applebaum, 2024). This must urge media literacy educators to be more proactive when it comes to citizens’ political engagement. Teaching people to be detached critical observers is simply not enough. It is also harmful as it cements existing power structures where those with the most resources are more visible online.

When centering civic participation within media literacy curricula, it is important to balance once again affective and epistemic practices of expression. While affective proximity to conflict and injustice can undermine the credibility of the testimonies (Al-Ghazzi, 2023), producing and sharing affective, embodied knowledge counteracts epistemic inequalities and affirms the civic resistance of ordinary citizens (Lokot, 2023). Next to affective expression, playful epistemologies (such as meme production) should be recognized as powerful practices of civic resistance (Kasianenko & Boichak, 2024), and therefore also included in “civic media literacies,” as Mihailidis (2020) suggests.

To summarize, we have reviewed existing literature on how media literacies can build resilience against disinformation, traumatic content, and civic disengagement. We identified key changes that we see as essential to be included in our “media literacy as resilience” framework. In Section 4, we propose a four-component framework and illustrate it with examples from our previous empirical studies in precarious environments.

3. Note on Empirical Studies

The conceptual framework we propose is informed by our previous empirical studies in precarious media environments and with media users in precarious situations. The first study, Media Literacy for Older Adults in Ukraine (Study 1), conducted by Pasitselska in cooperation with a local NGO after the full-scale Russian invasion, explored existing media literacy practices, skills, and perceived needs of older adults during war in the digital age. The second study, Media Literacy for Unaccompanied Refugee Youth (Study 2), was a research project carried out by Neag in four different European countries (Sweden, the Netherlands, Italy, and the UK) that looked at the lived media experience of young refugees trying to settle in and build a new life on their own. A detailed account of the data collection, analysis, and ethical procedures can be found in our previous publications (Neag, 2020; Pasitselska, 2024). Both studies took a user-centric approach to media use and aimed to create media literacy materials that could aid the studied populations.

4. The H.E.L.P. Framework

We have named our conceptual framework H.E.L.P. based on its building elements, namely: Habit (focusing on media use and media environment); Escapism (focusing on entertainment and media avoidance); Listening (discussing attentiveness to affective and bodily reactions); and, finally, Participation (highlighting active engagement with media). In the sections below, we showcase the importance of each element, also through empirical evidence (see Figure 1).

4.1. Habit

Media use is a situational and contextual practice (Schnauber-Stockmann et al., 2025). Environments (routines, time and location of use, collective norms) and media contexts (access, affordances) influence how people engage with media. Simply put, media use is a habit. In an environment full of distractions, developing a news habit also takes a lot of cognitive and motivational energy (Groot Kormelink, 2022), especially given that one's general, long-term informedness is often not a priority. Hence, effective media literacy interventions should account for the time needed to build new routines. After an initial effort of habit-building, as Tokunaga (2020) shows, comes relative ease, when behavioral sequences are automatically initiated without conscious self-instruction.

In Study 1, we see multiple accounts of people stabilizing and routinizing their media consumption after the initial shock of the full-scale invasion of Ukraine, when they were “glued to their screens.” A male participant from the Kharkiv region describes his routine:

Well, in the morning, I do a quick review, “two cups of coffee,” as I call it. That is, the situation on the front lines, the general situation in Ukraine. In the evening, I watch [a political blogger on YouTube]. He collects all the latest news during the day, including all the foreign news. (m, 60+, Kharkiv)

For some participants, these routines took months to build, accompanied by emotional and cognitive exhaustion from information overload and traumatizing content. A female participant from the Cherkasy region described how she “watched news, and cried, and cried” (f, Cherkasy) until she found a way to reduce and restructure her consumption, with the help of her son.

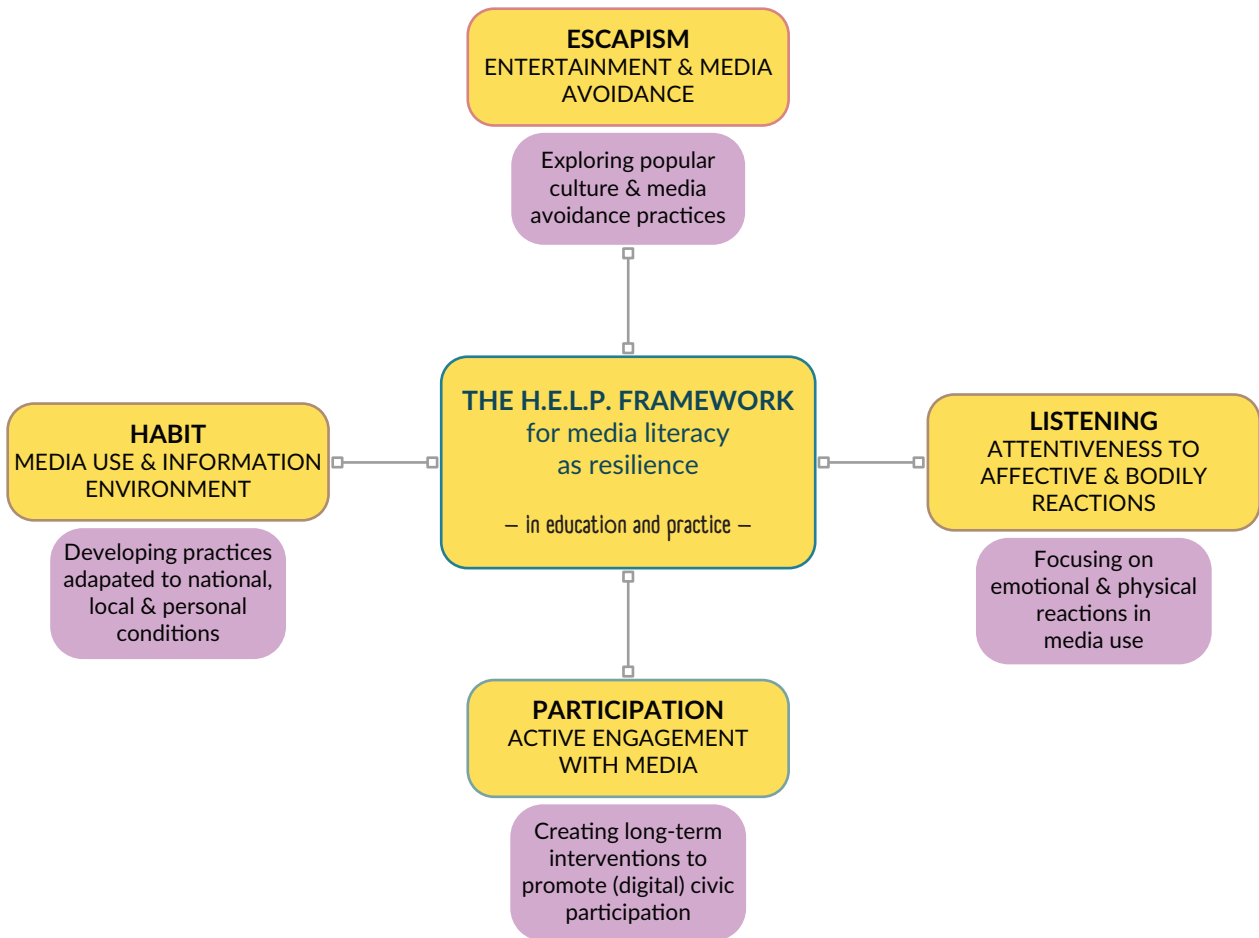


Figure 1. The H.E.L.P. framework.

An important part of the media literacy routine is curating one’s media environment so that media use becomes smoother and less cognitively exhausting. Curation practices depend on factors external to an individual (such as media infrastructures, sources, and legislation) and internal factors that users can manage themselves (home internet connection, available devices, subscription to news sources).

In terms of the external factors, authorities have an important role in creating a more equal infrastructure, even more so in political and social crises. We know from previous studies that providing digital access to economically disadvantaged groups helped alleviate (to some extent) inequalities (Bozdağ et al., 2022). Media regulation and state censorship are also important factors, as media can be weaponized for information warfare (Szostek & Orlova, 2024).

In Study 1, participants named many infrastructural aspects that critically influenced their ability to get reliable information and stay updated on the developments on the front, such as the absence of electricity (no internet, no television), antennas working improperly (only a limited number of TV channels available), or the absence of public Wi-Fi or internet connection.

In Study 2, one of the refugee participants mentioned how useful he found the screens in trains and buses in Sweden, as these showed short news snippets. Another young person then mentioned a national public

broadcasting website that used easier language to present the most important news of the day. For people who are new to a country or learning the language, providing such a curated media environment is essential to overcome the proliferation of dis- and misinformation available online.

In terms of the internal factors, a disrupted media environment requires specific curation on the user's side. In such environments, the tactics of "distributed discovery" (Toff & Nielsen, 2018), relying on incidental news exposure and occasional googling, can become ineffective or harmful. Computational propaganda, often led by authoritarian state actors (Applebaum, 2024), relies on amplification of malevolent and inauthentic content (Lin, 2024). Studies show that by using professional journalistic sources, citizens gain more political knowledge than by relying on social media and user-generated content (Amsalem & Zoizner, 2023). Even one carefully chosen professional media outlet can become a foundation for a healthy news diet.

In addition to media curation, it is important to foster social connections that encourage literate media consumption (Palmer & Toff, 2020; Pasitselska, 2022a). Beyond immediate connections, belonging to imagined communities of media consumers and/or parasocial interactions with journalists or political commentators play important roles in shaping news habits (Palmer & Toff, 2020).

4.2. Escapism

In this block, we highlight the two key categories of media gratifications identified by previous research on media use during war (Kozman & Melki, 2018): affective (to be entertained and to maintain a high morale); and escapist (to "kill time" and escape loneliness).

While some scholars criticize the use of media for entertainment as it diverts attention from political content and news (Prior, 2005), or leads to addiction (LaRose et al., 2003), others also recognize that it can help with (mental) well-being. In a study on young African Americans' social media use, Smith et al. (2023) conclude that students use social media for entertainment to escape from daily stresses, which is acceptable if balanced with seeking information that is also empowering and uplifting (p. 434). The type and pace of entertaining content also matter. For instance, the practice of doomscrolling (Ytre-Arne & Moe, 2021) is different from intentionally watching a movie. As one of the participants in Study 2 mentions:

It's boring when you're alone, watching TV all day and then you're tired, you have nothing to do, you can't think of something else, so I'm watching movies because I want to spend my time or forget the situation that happened to me....And playing games, like PlayStation, or computer. (m, 16, Afghanistan)

Hållander (2021) argues that escapism can be understood as a conscious choice to "slow things down" and "create space for reflection and rest" (p. 495). We argue that digital escapism can offer a much-needed respite from everyday tragedies. In precarious environments, the media literacy routine should support healthy escapist practices. While sustaining a news habit is important, the proportion of news content can be radically reduced, which will contribute to better quality of processing of the available information and leave more time for rest. Participants in both studies mentioned turning to content other than news for relaxation and escapism. For instance, in Study 1, when feeling overwhelmed with news, participants would watch programmes about nature, religious content, hobby-related YouTube channels such as beekeeping, or listen to music. In the case of the unaccompanied refugee youth, instead of traumatic news, online music

brought them together, away from their home. By getting together and searching for popular local musicians, young people bonded and created a space of relaxation and wellbeing in the midst of a difficult migration process. Escaping from news became thus an informed decision:

Interviewer: So you're not following any pages on Facebook coming from Afghanistan?

Participant: Nope, not any kind of page from my country.

Interviewer: Is that a conscious choice?

Participant: That is a choice that I decided not thinking about there, probably sometimes when you go to work and you have hearing bad news what is happening there and you cannot concentrate on your job, the time and the place that I'm working I need to listen every second what they're gonna say, what they need and things like that. (m, 16, Afghanistan)

While complete disconnection from “real life” and political information is neither desirable nor feasible in the situation of war and conflict, it is essential to take breaks and recharge.

4.3. Listening

If exposure to mediated war and conflict is unavoidable, what then would be a “media literate” way to cope with it? Based on the literature about mediated trauma and post-traumatic anxiety and stress, we claim that listening to one's emotional and physical state while consuming media content is the first important step to reduce the harmful impact of such content.

Accumulated research warns that quantity (possibly also repetitiveness) and the graphic nature of mediated exposure to traumatic events are associated with physical and psychological effects akin to direct trauma exposure (Holman et al., 2019). These studies recommend limiting traumatic content exposure as a central coping strategy. When feeling overwhelmed or experiencing intense emotional reactions, media users can opt for critical ignoring (Kozyreva et al., 2023) instead of critical engagement. In practice, this means reducing the number of media sources and choosing professional over user-generated content. Chao et al. (2020) demonstrate that the use of new media, in contrast to traditional media during the Covid-19 pandemic, was significantly associated with depression, anxiety, and stress. In parallel, the research in psychology claims that disengaging from one's own emotions can be harmful for mental health (Compas et al., 2017). Coping strategies such as emotional expression and seeking emotional social support, therefore, might be more beneficial (Eissenstat et al., 2024). In Study 2, one of the mentors of the refugee participants (themselves also a refugee) described how they watched together a music video dedicated to people who have lost their lives on the sea. This allowed them to have a deeper conversation about the refugees' experience and current psychological state. Here, again, we highlight listening to oneself and others during or after exposure to mediated traumatic content as an important component of media consumption.

In Study 1, we note a strategy of following one's bodily reactions and leaving room for “decompressing” from the heavy news load. In the words of a female respondent from the Kyiv region:

During my lunch break, I try to switch off and just eat my food. Because it's quite hard on the mental state. It's the only time in a day, let's say, morning coffee, or lunch, when you can relax and disconnect a little from the outside world. And then you dive back into the news. (f, 60+, Kyiv)

For some participants, the disconnection also became routinized, adding to the habitual media use practices discussed above. For others, disconnection would only happen when they noticed having a "heavy head," or intense emotional reactions such as crying.

4.4. Participation

In a crisis, civic participation remains an important component of media literacy education; however, the feeling of powerlessness becomes harder to overcome as preventing tragedies is most often outside of one's control. We see two alternative routes for civic participation through media consumption and mediated political expression. During crises, citizens have social-integrative needs, such as the need to maintain high morale, trust the nation's leaders (Kozman & Melki, 2018), or feel a part of a national community. Even in tragedy, joining the process of collective witnessing creates a shared existential experience (Chouliaraki, 2010) that helps to endure the gruesome reality. The first route to civic participation is therefore through the consumption of media content that celebrates victories and heroic acts. However, this strategy might also backfire. Participants' mood and mental state often swung according to the events at the front, superseding any other everyday events:

Well, how do I feel? Good news means good feelings. Bad news means bad feelings, that's all. What interests me is the liberation of my territory, the Zaporizhzhia region. We are watching every step our guys take. They took half the village, and we are happy. They took one street—we are also happy. And it is hard because we are waiting for something good to happen but often it turns out worse. (m, 60+, Cherkasy)

The second route to civic participation is via problem-focused stress coping that has proven to be one of the most effective coping strategies (Eissenstat et al., 2024). Taking action against the oppressive conditions can improve an individual's mental state and, more broadly, contribute to community resilience. Pervasive digitalization further enhances and expands citizens' possibilities to exert influence in crises. As Boichak (2022) puts it: "Blurring the boundaries between military and civilian actors, physical and virtual battlefronts, weapons and witnesses, digital media afford unprecedented opportunities for involvement and remote participation in wars" (p. 2). Crowdfunding and online activism are among the most powerful practices in the citizens' toolbox (Kasianenko & Boichak, 2024). Finally, there is a practice of embodied witnessing and sharing of one's experiences to shape collective memory in the digital environment, providing a public narrative about disruptive events. Observing the digital witnessing practices during the full-scale Russian invasion, Kot et al. (2024) claim that social networks can become a powerful mechanism of witnessing, narrating, co-constructing, and sharing the experience of living through the war.

In Study 1, we saw that online participation is among the weakest dimensions of Ukrainian older adults' media use. Despite growing digital proficiency, older adults remain mostly online content consumers, not producers (Serrat et al., 2020). Providing more possibilities for participation, including through improving media literacy skills, might help alleviate the feelings of helplessness articulated by multiple participants in Study 1.

In contrast, in Study 2, we saw countless examples where young refugees were using social media for civic engagement. Their participation ranged from choosing particular cover photos on Facebook showcasing solidarity with people in Kabul to uploading local music from Afghanistan to YouTube to illustrate the cultural richness of the country (for an in-depth discussion, see Neag & Sefton-Green, 2021).

5. Discussion

Joining the call to combat epistemic imperialism in English-language “mainstream” knowledge production (Hendl et al., 2024), in this article, we propose a theoretical framework of *media literacy as resilience*. As we firmly believe in the importance of transcending the confines of the academic “ivory tower” to foster meaningful impact in the real world, we want to combine the theoretical aspects with hands-on suggestions on how this framework might be applied in societies in crisis. We will do so by focusing on the four pillars of the framework and providing possible media literacy approaches.

5.1. Discussion on Implications for Media Literacy Research and Practice

5.1.1. Habit

When it comes to habits relating to media use, we argue that media literacy interventions must work with participants on developing practices that are adapted to the national, local, and personal contexts of the participants. At the same time, media literacy education should strive to alleviate long-standing inequalities along the lines of race, gender, age, abilities, and class (Lindell, 2017; Neag et al., 2022), which are usually exacerbated in times of crisis. Educators should tie the new habits to the existing routines based on thinking first about the external factors: What kind of media infrastructure exists in this location? Is there stable access to electricity? What are the cheapest media available? From there, educational programs should build on people’s rituals (When do people have time to use media during the day? What activities do they find pleasurable? Do they use media individually or collectively?) and socializing patterns (What are the practices of news sharing? Whom do people trust to discuss media events?). While it is more difficult to influence external factors, media educators can (and should) provide support in co-creating healthier media environments, based on their expertise and the available infrastructures. Such support can be anything from providing a curated list of trusted media sources to newsletter subscriptions and setting up push notifications in news apps to remain updated but not overwhelmed (Groot Kormelink, 2022). A good example is “The list of transparent and responsible media” curated by the Institute of Mass Information (2024) in Ukraine.

Attention to existing habits and media environments is also essential when it comes to media literacy research that wants to go against epistemic imperialism. Researchers would need to place their projects within the cultural, historical, and social contexts of communities and begin from there an exploration of people’s media use.

5.1.2. Escapism

Scholars have previously cautioned that media—and in particular, social media—is often used for entertainment, instead of educational or empowerment purposes (e.g., Smith et al., 2023). However, for

media educators working in war zones and during other societal crises, it is important not to take a paternalistic or judgmental approach towards people's media use. While we do not support a total alienation from civic issues through entertainment media, our examples above show that people living in precarious environments do have a dire need to unwind. Through our H.E.L.P. framework, we advise media literacy educators to first understand how their students/learners use entertainment media as a means of escaping difficult life situations and later explore these lived media experiences through critical questions: When and why is a certain type of media content used as a way of relaxing? To what extent can such media help? How might different types of media content influence the way people cope with everyday challenges or emotions? These questions can then lead to a broader discussion on media use and well-being. Furthermore, by critically reflecting on these experiences, groups of learners can collect and curate a list of media content to share with others and alleviate stress or cope with anxiety.

Media literacy has always been a field that builds on popular culture to start discussions, create debate, and build essential critical skills. Previous studies have shown that popular music can create “powerful opportunities for dialogically teachable moments and engagement in literacy learning” (Gainer, 2007, p. 106). Moreover, we also know that including pop culture into education can make formal educational initiatives and curricula more accessible (Hill, 2009). Popular culture can also be used within media literacy as a vehicle for social justice (Currie & Kelly, 2022).

In light of these observations, we deem it essential for media literacy researchers to build upon such literature and not dismiss or overlook these escapist practices, but instead promote an epistemological pluralism. By making a concerted effort to understand how pop culture content intertwines with coping mechanisms in precarious media environments, researchers will be able to present more valid and diverse knowledge.

5.1.3. Listening

In most instances, media education curricula focus on what one should learn or know, based on a set list of teaching outcomes. However, this can only be possible in rather homogeneous groups. Previous calls have highlighted the importance of starting any kind of media education from where learners are situated in terms of knowledge and (media) experience (Supa et al., 2022; Zezulkova & Neag, 2019). Building upon this, we go further and argue that beyond existing cognitive and educational skills, media literacy interventions should also take into account how learners *are feeling*: in other words, listening to their bodily and emotional reactions. As shown above, in times of war or prolonged crisis, media educators and researchers should ask relevant questions, such as: How does one feel when engaging with media, and otherwise? Does (specific) media use cause any kind of emotional and bodily reaction? In educational practice, in recent years, calls have been issued on enhancing emotional and social skills in schools to help the development of students (Banks et al., 2013). Hübner (2023) also highlights that the basis of media literacy—beyond intellectual abilities—should be the development of physical and emotional abilities. In the case of media education in times of crisis, this aspect is even more important. We recommend practitioners to make space (both figuratively and literally) for exploring learners' bodily reactions and feelings towards what they see, hear, or interact with on (social) media.

This is especially relevant for research as well, as such a focus would center on an emotional, spiritual, or intuitive way of knowing in academic perspectives. Participatory, art-based, or autoethnographic methods

would be most suitable then for an engaged and accountable form of knowledge production (Leurs et al., 2023).

5.1.4. Participation

In the framework, we discussed the importance of digital civic participation. As we noted, in the case of marginalised groups, this can be a hurdle difficult to overcome. The development of media literacy skills has long been seen as a way to nurture civic participation among youth (see, e.g., Frau-Meigs et al., 2017). However, there has been an active discussion within the academic community about the limits of media literacy education when it comes to civic skills. As Römer et al. (2023) highlight in their study on working with vulnerable groups, media literacy interventions seemed to have a positive educational effect, but the enhancement of their long-term civic participation remained questionable. The researchers recommend long-term interventions, collaborations with the broader community, and an adaptation of media literacy programmes to the specific needs of learners.

In the case of people living in difficult socio-political situations, we argue that being able to do even small civic acts for the community (online and offline) builds resilience to trauma, strengthens ties, and helps develop stronger coping mechanisms. To better understand the long-term effects of media literacy on such practices, future research could prioritize longitudinal projects that start from participants' own definition of digital civic participation. Furthermore, researchers should make an effort to evaluate the impact of media literacy education on the development of civic skills, with particular attention to intersectional differences, in precarious environments.

5.2. Limitations and Paths Forward

We recognise that this framework cannot be applied in the same way across regions torn by wars, unrest, and other societal crises. The aim of this framework is thus to become a starting point for educators and other stakeholders who are interested in providing media literacy interventions in societal situations “outside the usual”. We also need to highlight here the role of policy-makers and national or local public institutions in fostering media literacy as resilience. While in the two studies we carried out, we noted that many of the media literacy skills have been self-learnt, in the long run, alongside self-learning, societal resilience can be strengthened if media literacy is integrated in public education or offered as part of other support schemes to (older) adults by their respective authorities. Educators have long called for a stronger emphasis on media literacy in mandatory school curricula; however, in times of war and other unrest, we argue that this type of education is nothing less than a crucial need for audiences of all ages.

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Digital Resilience to Disinformation: From Libraries to Citizens

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Abstract

Disinformation is a challenge facing democracies, most especially in the current context of “polycrisis,” in which an “illiberal public sphere” endangers public debate fed by reliable data. Media and information literacy (MIL) has emerged as potentially one of the most effective ways to promote digital resilience to disinformation. According to UNESCO’s first MIL law, libraries and their staff are key to the dissemination and implementation of MIL, since they can be the source of reliable information for all audiences. We analysed the preparedness, knowledge, and attitudes of Spanish librarians to disinformation and MIL by conducting a survey of 110 librarians prior to receiving training in the Media and Information Literacy Community Connections (MIL CC) project (2024–2025). The results show that 64.5% of our respondents had not previously received specific MIL training, although 75% were familiar with fact-checking tools and were able to detect manipulated or false information. However, the fact that over half of the responding librarians conceded that they had not organised any MIL activities for their community underscores the need to train and encourage librarians to actively engage with their central and crosscutting role in fostering MIL.

Keywords

digital resilience; disinformation; libraries; media and information literacy

1. Introduction

In the last two decades, the rise of disinformation—understood as “false, inaccurate, or misleading information designed, presented and promoted to intentionally cause public harm or for profit” (European Commission, 2018)—linked to populist and polarising discourses has responded to the search for simple answers to progressively more complex questions (Guerrero-Solé, 2025). In this regard, the concept of

“polycrisis” (Morin & Kern, 1999, p. 74) reflects a historical moment when economic, political, moral, and communication crises overlap. Since the economic crisis of 2008, it would seem that we have been in permanent polycrisis, caused chiefly by the Covid-19 pandemic and the wars in Ukraine and Gaza, but further aggravated by Donald Trump’s rise to power in 2016 in the US and the Brexit campaign and corresponding media manipulation in the UK (Carrillo & Montagut, 2021a). In the ideological struggle reflected in contemporary populist discourse—especially that of the far right—lying with strategic intent to achieve all kinds of goals is a key disinformation tool.

As asserted by Bennett and Kneuer (2024), we are no longer dealing with a virtuous public sphere in classic Habermasian terms, but rather with an “illiberal public sphere.” Citizens no longer seek reliable information in order to accordingly act politically, but instead seek discourse that reinforces their sense of belonging to a group, with the consequent greater homophily in the digital sphere resulting in greater political polarisation (Esteve-Del-Valle, 2022).

The preservation of democratic systems therefore depends on both contesting the drive for identity and ideological polarisation and addressing the many faces of disinformation, both by those who manage and distribute reliable information and by citizens in general. On the understanding that democratic systems are unviable if the public sphere is massively misinformed, authors such as Victoria-Mas (2021, p. 45) call for “democratic resilience,” which encapsulates the essential concept of “digital resilience” in terms both of cybersecurity (Shandilya et al., 2024) and media and information literacy (MIL).

2. Disinformation: Aggravating the Polycrisis

Since the US presidential elections of 2016 and the Brexit referendum of the same year (both key milestones in the relatively recent social impact of disinformation), information disorders have led to countless academic efforts to shed light on the nature of disinformation and the best ways to counter its harmful effects. Spain is no exception, and both national and cross-national comparative studies in the field have been published in recent years.

As has happened in other geographical contexts, the impact of disinformation in Spain during the Covid-19 pandemic has attracted significant scholarly attention. Macarrón Máñez et al. (2023, p. 455), for instance, draw attention to how “social networks have been the perfect place to disseminate and viralise all types of fake news related to the Covid-19 pandemic.” Apropos of their own research into disinformation during the pandemic in Spain, Salaverría et al. (2020), who categorised hoaxes according to their potential harms, warned that the excess of scientific information had exceeded what publishing houses themselves could cope with, and in many cases, research work was published without the reviews required for publications of this nature.

The imbricated nature of disinformation has boosted further categorisation efforts, such as by Paniagua Rojano et al. (2020), who specifically focus on defining the complex nature of electoral hoaxes. In their investigation of X (formerly Twitter) in relation to the Spanish national elections of 28 April 2010, they concluded that most hoaxes detected by fact-checkers predominantly came from social media and that the most frequent hoax was the false attribution of actions, i.e., saying that someone did something that they did not do (Paniagua Rojano et al., 2020, p. 140). In their analysis of Facebook Ads apropos of the same elections, Cano-Orón

et al. (2021, p. 225) highlighted “the difficulties in making a distinction between advertising, propaganda, and disinformation.”

Other studies of disinformation in Spain include those by Blanco-Herrero et al. (2021), who investigated citizen perceptions of fake news in Spain, and by Gelado-Marcos and Moreno-Felices (2022), who, even before the pandemic, explored the widespread nature of disinformation’s harmful effects. More recently, the Digital News Report has explicitly stated, regarding Spain, that “with disinformation becoming a topic in the political and media agenda and being used as an electoral weapon, media trust has fallen to its lowest level in the past decade (31%), affecting all selected news brands” (Sierra et al., 2025, p. 109).

In this context, numerous authors recognise MIL as an essential tool to curb disinformation and foster both critical thinking and a deeper understanding of the democratic system (López-González et al., 2023; Monreal Guerrero et al., 2017). An efficient and enduring answer to the disinformation-aggravated polycrisis requires better-informed and civic-minded citizens (Marta Lazo, 2018), and MIL is considered to be the most effective long-term solution (European Commission, 2018). Despite efforts at mitigation, polycrisis and disinformation will persist as problems that affect not only young people but also entire communities, due to their capacity to transform and adapt. For those reasons, MIL needs to be, as UNESCO (2023) points out, aimed at everybody and lifelong. Consequently, libraries, as a place to read, learn, and acquire knowledge outside of formal education, are the best loci for lifelong MIL, and librarians are the most indicated professionals to deliver MIL to their community.

3. MIL for Digital and Democratic Resilience

Interest in MIL, although not a new field of study, has greatly expanded in recent years. In the 1980s, Masterman (1996), Buckingham (2005), Martín Barbero (2002), and Livingstone (2004), among others, focused on developing a theoretical framework and knowledge corpus for what was referred to as “educommunication,” “media education,” or “media literacy.” In the 1990s, the focus was primarily on critical understanding and responsible use of the mass media, with media literacy understood as the ability to access, analyse, evaluate, and create messages in a variety of ways (Aufderheide, 1993; Christ & Potter, 1998). As Haavisto et al. (2022, p. 257) explain, this approach “encompasses a set of practices and projects through which human actors plan and do teaching in formal settings for various types of learners, and it also covers informal learning and practices that develop media and information competencies.”

In recent decades, the MIL field has been enriched to include new kinds of mandatory literacies, essential to respond to new challenges. Central to the public sphere in this new era are the social media, where disinformation, hate speech, and populism take root. Key skills to face the new challenges are digital literacy, algorithmic literacy, artificial intelligence (AI) literacy, and transmedia literacy (Scolari, 2018). MIL has accordingly broadened its scope, as reflected in the following UNESCO (2018) definition that has gained consensus among academics and institutions:

[MIL] includes a set of competencies that enable individuals to search, critically evaluate, use and contribute information and media content wisely; to develop a knowledge of one’s rights online; understand how to combat online hate speech, fake information and news and cyberbullying; understand the ethical issues surrounding the access and use of information; and engage with media

and ICTs as producers of information and media content to promote equality, self-expression, pluralistic media and information, intercultural/interreligious dialogue, and peace. (UNESCO, 2018, p. 2)

While the enlarged coverage of MIL may now be clear, what remains uncertain is how to successfully implement MIL and which actors and strategies to use. While many deficits and challenges regarding MIL are acknowledged (Carrillo & Montagut, 2025; Lessenski, 2023; World Economic Forum, 2025), three in particular are recognised to be urgent: the training of key actors, including journalists, librarians, teachers, and families (Carrillo & Montagut, 2025; Castro-Pérez, 2025; LabCom UJI, 2025; McDougall & Rega, 2022; Pereira & Toscano, 2021); universalisation to encompass lifelong learning for all citizens, as set out in UNESCO's five laws of media literacy (2023); and financial backing that ensures MIL quality and continuity.

Other lines of action to further develop MIL include effective integration in the school curriculum (Sádaba & Salaverría, 2023), the development of innovative and attractive methodologies that promote meaningful learning (Lozano-Monterrubio et al., 2024; Tejedor, 2025), and the creation of inclusive and enduring projects, as recommended by the European Digital Media Observatory's Guidelines for Effective Media Literacy Initiatives (European Digital Media Observatory, 2024). MIL also needs to evolve continuously and to be interdisciplinary. As pointed out by the World Economic Forum (2025, p. 6): "As disinformation tactics evolve, so too must MIL initiatives, integrating insights from psychology, technology, and education to remain effective in an ever-changing digital environment."

3.1. MIL in Spain

While initiatives by professional associations, non-governmental organisations, and public and private institutions have been highlighted by several authors (Carrillo & Montagut, 2021a; Cucarella & Fuster, 2022; Ferrés et al., 2022), MIL implementation in Spain since the 1980s has been disjointed. In 2010, the first legislation referring to MIL (the General Law on Audiovisual Communication) was passed, centred on institutional and media responsibility for the training of citizens in how to consume and use information and media products. Between 2013 and 2022, various legislative actions have focused on the education sector, underlining the importance of digital skills and digitalisation planning in the education system, and encompassing technological equipment, open resources, and specific training for teachers and students (Carrillo & Montagut, 2025; Tomé, 2018).

Apart from legislative initiatives, a central role is played by public media and fact-checking organisations. In 2023, the Spanish national radio-television body (RTVE) launched the IVERES project to educate both the public and media professionals in ethical AI use in the handling and production of information. Several fact-checkers (Newtral, Maldito Bulo, Infoveritas, EFE Verifica, Verificat, etc.), in addition to playing a very active role in disseminating information on social media, provide training and design materials aimed at schools, colleges, universities, and other groups. Other entities offering various MIL-related resources and training activities include Learn to Check (specifically focused on disinformation), UNICEF, Fundación FAD Juventud, Cibervoluntarios, and initiatives by public and private media groups (e.g., RTVE Verifica, A3Media AMIBOX), professional journalism associations, and regional regulators (e.g., the Catalan audiovisual board [CAC]).

These entities target not only children and teenagers, but also vulnerable groups such as older adults. They also provide specific training to journalists, political advisors, teachers at all educational levels, and librarians. Since 2016, awareness of the need for MIL in personal and professional contexts has greatly intensified in Spain. Concern about disinformation has been expressed by 69% of Spanish respondents to surveys for the Digital News Report (Sierra et al., 2025), exceeding both the global average (58%) and the European average (54%). This concern is reflected in the emergence of the numerous initiatives mentioned above, aimed at deploying MIL as a means of digital and democratic resilience.

3.2. Librarians: Key to MIL Implementation in the Community

Along with educators, journalists, and families, librarians are key to implementing MIL (Carrillo & Montagut, 2021b; Cucarella & Fuster, 2022). Their role and the role of libraries have both evolved and changed enormously, as shown by new versions and updates of the Public Library Manifesto (International Federation of Library Associations and Institutions & UNESCO, 2022) from 1949 to date. Libraries, as 21st century cultural installations, are far more than merely a place to access books, newspapers, and magazines; they are also a safe place to access digital information and resources and to learn how to find reliable information and manage content on the internet. As defined by the International Federation of Library Associations and Institutions and UNESCO (2022), public libraries are a “living force for education, culture, inclusion and information...an essential agent for sustainable development.”

Several of the 11 missions of the public library described in the Public Library Manifesto are related to MIL, specifically:

Providing access to a broad range of information and ideas free from censorship, supporting formal and informal education at all levels as well as lifelong learning....[And also] initiating, supporting, and participating in literacy activities and programmes to build reading and writing skills, and facilitating the development of media and information literacy and digital literacy skills for all people at all ages, in the spirit of equipping an informed, democratic society. (International Federation of Library Associations and Institutions & UNESCO, 2022)

Other kinds of libraries also have a duty and responsibility to promote MIL, including scholarly libraries, university libraries, scientific libraries, and specialist libraries. Libraries are essential to MIL in several ways: They provide universal access to meaningful information (International Federation of Library Associations and Institutions & UNESCO, 2022), they facilitate lifelong learning, and they form part of the powerful collaborative ecosystem of librarians, educators, policymakers, associations, and local entities (Heredia-Sánchez, 2021; McKeever et al., 2017). Moreover, the library’s information management expertise, innovative nature, and local and global perspectives render it a unique launching pad for MIL deployment.

While MIL can be embedded in routine library activities such as book clubs, conferences, digital literacy workshops, collaborative workspaces (“makerspaces”), and scholarly visits (American Library Association, 2020), a number of challenges first need to be overcome to develop critical thinking and MIL skills, primarily related to professional training (Hutchinson, 2024; Kautonen & Gasparini, 2024), adequate time and resources, and better funding.

4. Research Goals and Methods

We analysed the preparedness, knowledge, and attitudes of Spanish librarians regarding information disorders and MIL, given that, as stated by UNESCO (2018), libraries are essential spaces for the provision of reliable information to all citizens and are key to the dissemination and implementation of MIL (Hutchinson, 2024; Ireland, 2018; McKeever et al., 2017). We established four research goals, as follows:

RG1: To assess the extent to which librarians have received training in MIL and disinformation, and to test librarians' ability to detect false information and their familiarity with fact-checking tools.

RG2: To establish the extent to which activities aimed at fostering MIL are organised or hosted by libraries.

RG3: To investigate librarians' awareness of and attitudes to the scale of disinformation as a threat.

RG4: To analyse librarians' perspectives on future challenges and potential lines of action to combat disinformation.

4.1. Research Design

Our research was designed to analyse librarians' MIL before they acquired formal training on the subject by participating in a MIL project. This project was launched on 8 April 2025 with a course for 110 librarians whose main objective was equipping them with MIL skills; it is still ongoing, with a phase in which the librarians, with Learn to Check support, design and implement MIL activities for their communities.

4.1.1. Sample

According to the Spanish Library Cooperation Council (CCB), there are 4,603 active public libraries in Spain with 17,083,491 registered users (35.6% of the Spanish population). Cultural initiatives in these libraries are also significant: In 2023, 80% implemented 260,009 activities (which potentially included MIL actions; cf. Consejo de Cooperación Bibliotecaria, 2025). Of the public libraries, 53 are state-owned (cf. Ministerio de Cultura, 2024).

Our investigation, focused on the Media and Information Literacy Community Connections (MIL CC) project (2024–2025), aimed to survey 110 librarians employed in 50 Spanish libraries located in 14 of Spain's 17 autonomous regions (Andalusia, Aragon, Asturias, the Basque Country, Canary Islands, Castilla & León, Castilla la Mancha, Extremadura, Galicia, La Rioja, Madrid, Murcia, Navarra, and the Valencian Community). The MIL CC project is funded by the European Media and Information Fund and coordinated by the University Institute of Lisbon (Portugal). In Spain, with the goal of empowering libraries as key agents to fight disinformation, it is supported by the Ministry for Culture and the Spanish Society for Scientific Documentation and Information (SEDIC; for further details see "El proyecto internacional," 2025).

Of the questionnaires sent to 110 MIL project participants, those that were returned complete and that included the required consent constituted our final sample of 78 librarians, employed mainly in public

libraries, but also in university and school libraries and in a single specialist library. Regarding setting, 62 libraries were located in cities with >50,000 inhabitants, nine in towns with 10,000–50,000 inhabitants, and seven in towns with <10,000 inhabitants.

While the exploratory nature of our research has to be acknowledged as a limitation that restricts the generalizability of the findings, our study gathers a significant amount of data on a group and topic that, to our knowledge, have not previously been studied. Furthermore, as three criteria guiding pre-selection of the libraries participating in the project, the data are territorially representative (14 of Spain's 17 autonomous communities are included), representative of the predominant library types (mostly public), and representative of librarians interested in MIL.

4.1.2. Questionnaire

To obtain the data for our study, a semi-structured questionnaire was designed with the aim of collecting qualitative argumentative style data. Librarians were issued the questionnaire via a scanned QR code immediately before face-to-face training held in Madrid on 8 April 2025; absent librarians were sent the questionnaire in personalised emails, and their responses were collected by the end of May 2025. Although the self-reporting nature of the responses may have introduced certain biases, this format was chosen over alternatives because it allows data to be rapidly collected in a standardised manner, especially in the case of a geographically dispersed sample as in this study, with libraries from 14 of Spain's autonomous regions.

Questionnaire responses were anonymous, and the privacy and confidentiality of the participants were guaranteed. Participants were informed of the purposes of the research for which their data would be used and were required to give their explicit consent on the submission form. The questionnaire was not pre-tested, but was built on the basis of a questionnaire successfully used in a previous project, namely, *Between Lines: Reading Disinformation*, with participants from 25 libraries in the Barcelona area. The data were collected using Google Forms, processed with Excel, and visualised with Flourish. To foster participation, the questionnaire was designed to be completed in under 10 minutes.

The questionnaire ultimately aimed to determine the extent to which Spanish libraries could take on their expected key role in combating information disorders. It was therefore structured, based on the specific research goals, in 10 questions (Table 1), as follows:

Q1: In what type of location is your library situated?

Q2: Have you been provided with prior training on disinformation and MIL?

Q3: Has your library organised or hosted workshops or talks on disinformation and MIL?

Q4: What kinds of activities regarding disinformation and MIL have been held in your library?

Q5: This image featuring Swedish activist Greta Thunberg circulated on social media some time ago. It is...

Q6: Explain whether this climate change graphic is accurate or inaccurate and why.

Q7: Which of the following tools can be used to verify suspect information?

Q8: If you receive information on social media and discover it is false, what do you do?

Q9: What do you think are the main harms of disinformation?

Q10: What are the challenges the library sector faces in promoting MIL?

Table 1. Research goals and the related survey questions.

Research goals	Survey questions
Librarian MIL and disinformation training (RG1)	Q2: Have you been provided with prior training on disinformation and MIL?
Librarian MIL-related skills (RG1)	Q5: This image circulated on social media some time ago. It features Swedish activist Greta Thunberg. This image is... Q6: Explain whether this graphic is accurate or incorrect and why. Q7: Which of the following tools can be used to verify suspect information?
Librarian MIL activity organisation (RG2)	Q3: Has your library organised or hosted workshops or talks on disinformation and MIL? Q4: What kinds of activities regarding disinformation and MIL have been held in your library?
Librarian awareness of and attitudes to disinformation (RG3)	Q8: If you receive information on social media and discover it is false, what do you do? Q9: What do you think are the main harms of disinformation?
Challenges to combating disinformation (RG4)	Q10: What are the challenges the library sector faces in promoting MIL and combating disinformation?
Library size	Q1: In what type of location is your library situated?

Q1 aimed to determine the size of the town/city where the library is located, as information to be combined with responses to the other questions to determine whether location was correlated in any way with other variables. Q2, Q3, and Q4 checked for previous knowledge and experience of activities aimed at fostering MIL (informing RG1 and RG2). Q5 and Q6 tested respondents with potential cases of disinformation (informing RG1). Q7 and Q8 addressed familiarity with fact-checking tools and behaviour on encountering potential disinformation (informing RG1 and RG3), given that the consequences could have an impact downstream. Q9 aimed to obtain information on ways to tackle the harmful effects of disinformation from the librarian as a potential information prescriber, and related, Q10 aimed to shed light on the challenges presented by information disorders from the perspective of the librarian, as a means to check their sensitivity to the issue (both informing RG4).

Some questions were yes/no questions (Q2, Q3), others were standard multiple-choice questions (Q1, Q5, Q7) or multiple-choice questions with an additional option of “other” to be completed by the respondent

(Q4, Q8, Q9, Q10). There was also an open question (Q6), for which reasoning in the response was coded as valid, invalid, or not stated (i.e., the respondent guessed correctly that the graphic was wrong, but were not able to explain why).

5. Findings

Our research provides evidence that sheds light on digital resilience, MIL skills, and MIL community activities in libraries in Spain.

5.1. Librarians' MIL Training and Skills

In relation to RG1, our data point to a lack of MIL training among librarians in Spain. Overall, 65.4% of librarians (51/78) stated that they had received no MIL training (prior to the MIL CC project). This deficiency was more critical in librarians working in smaller settings (Figure 1). Of librarians working in towns of <10,000 and of 10,000–50,000 inhabitants (small and medium-sized libraries, respectively), 71.4% and 77.77%, respectively, had received no MIL training, compared to 64.5% employed in cities of >50,000 inhabitants (large libraries). However, even this relatively low percentage for large libraries points to a great need for MIL training for librarians.

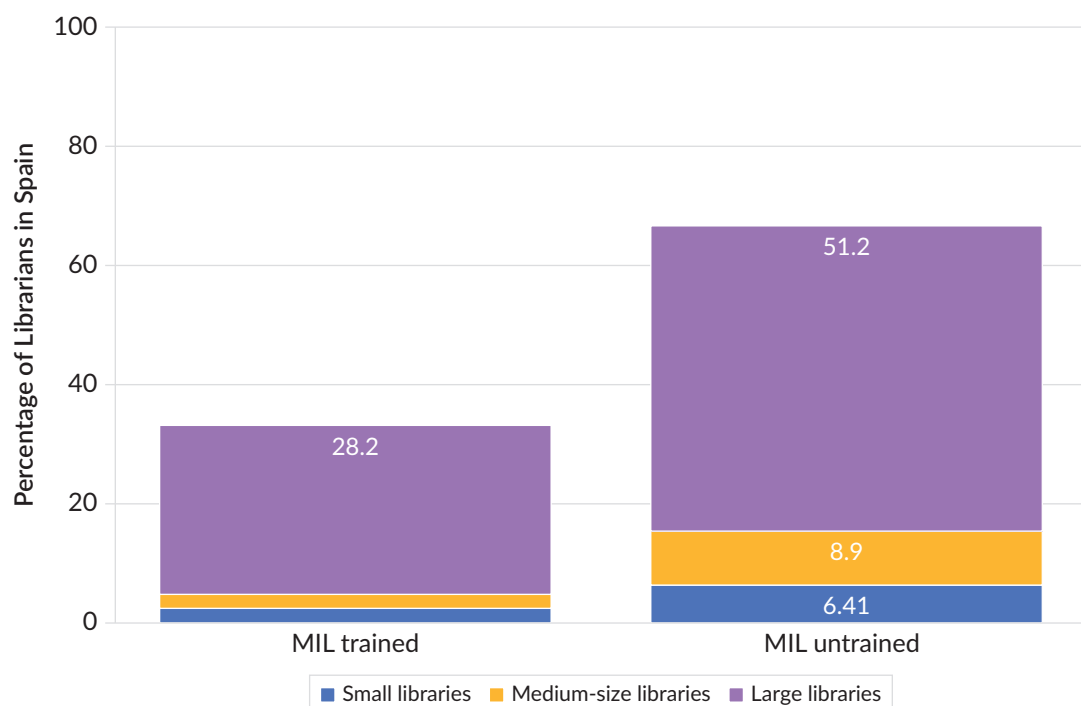


Figure 1. Librarians and MIL training by library size.

Despite their lack of training, the librarians demonstrated a good level of MIL knowledge and skills, as 70% (55/78) were able to identify a fake image, recognise a graphic with incorrect information, and select the correct fact-checking tools in a multiple-choice question.

However, regarding the Greta Thunberg image, although all librarians recognised that it was fake, not all were able to explain why: 78.2% (61/78) chose the correct answer (that it had been manipulated), with the remaining librarians incorrectly stating that it was decontextualised or an AI-generated deepfake (Figure 2). Again in relation to RG1, these data throw light on the ability of librarians to detect false information, particularly fake images.

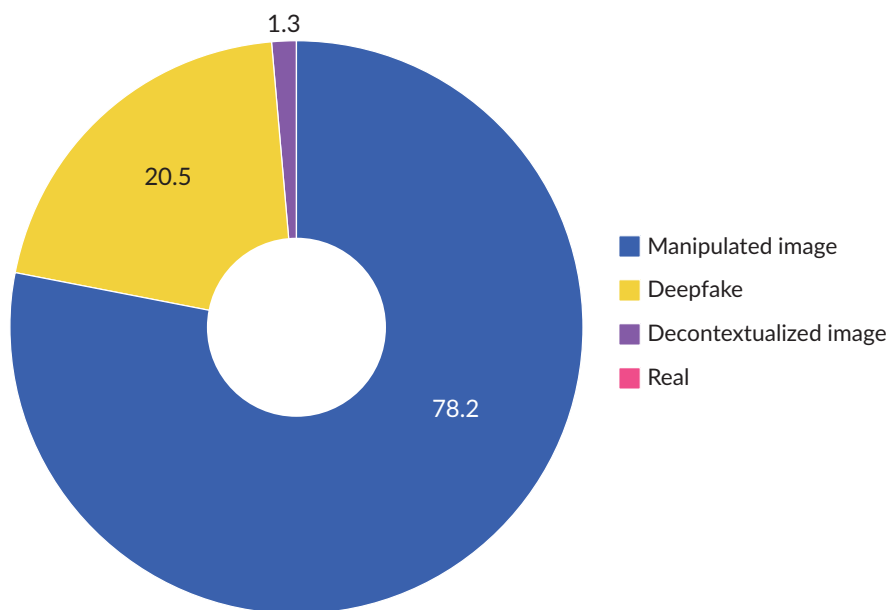


Figure 2. Responses to Q5 regarding classification of the Greta Thunberg image.

Noteworthy was the impact of previous training: 93% of previously MIL-trained librarians were able to correctly detect manipulation, compared to 70% of librarians who had not received previous MIL training. This finding underlines both the need for and the effectiveness of MIL training in relation to critical thinking and resilience to disinformation.

Regarding the climate change graphic decontextualised to foster denialism, 69.2% (55/78) correctly identified it as incorrect, 10.2% (8/78) incorrectly identified it as correct, and 20.51% (15/78) were unsure (Figure 3). When the 55 respondents who answered correctly were asked to explain why the graphic was misleading, 34/55 provided a valid reason, 8/55 an invalid reason, and 13/55 no reason. These data, also responding to RG1, provide insights not only on librarians' ability to identify incorrect graphics, but also on their reasoning capacity.

Again informing RG1, respondents were required to correctly answer a multiple-choice question about fact-checking tools. The correct response was chosen by 73.10% (57/78) of respondents. Prior MIL training was found not to be a determining factor regarding choice of a fact-checking tool, as 70% of those who had received prior training chose the correct answer compared to 75% of those who had not received prior training.

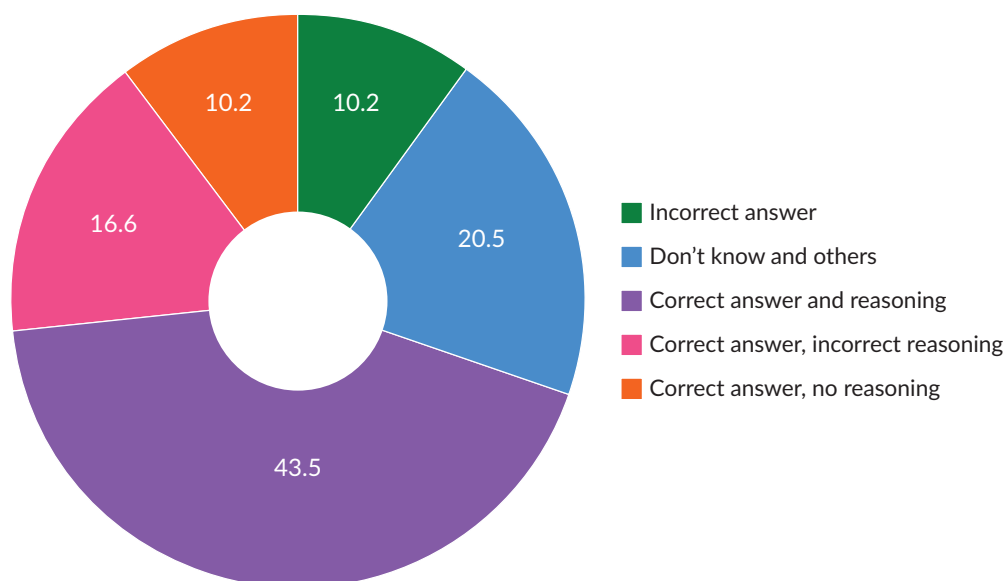


Figure 3. Responses to Q6 regarding the inaccurate climate change graphic.

5.2. Library MIL Activities

Responding to RG2, the data show that only 39.7% (31/78) of librarians reported organising MIL-related activities for their communities. A correlation existed between MIL-trained librarians and library MIL activities (Figure 4): 51.85% of librarians who had received some kind of MIL training stated having organised MIL activities for their communities, compared to just 33% of untrained librarians.

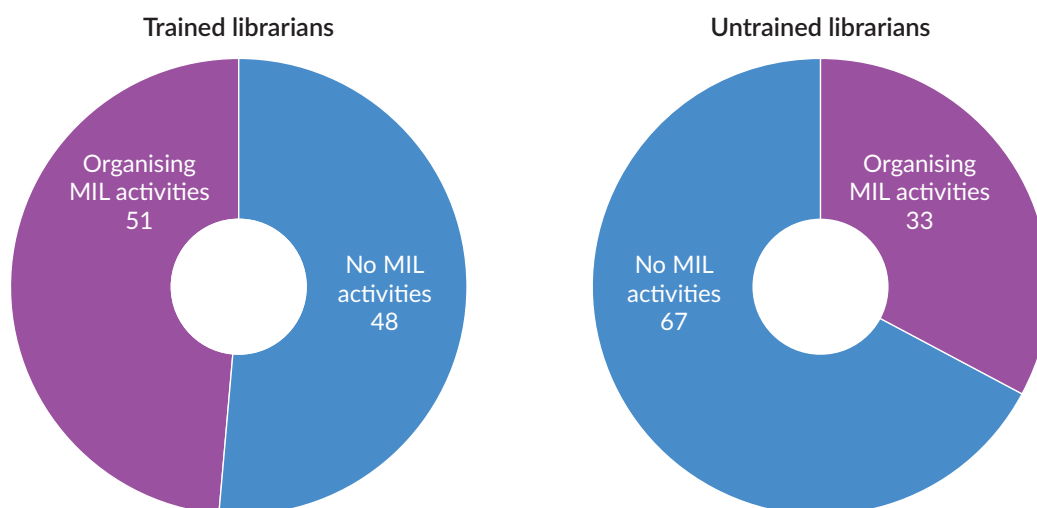


Figure 4. Librarians organising MIL activities according to their MIL training.

Library size was also significant in terms of the organisation of MIL activities: 41.9% of libraries in cities of >50,000 inhabitants developed MIL activities, compared to just 28.5% of libraries in towns of <10,000 inhabitants. Finally, regarding the 31 libraries that organised a MIL-related activity, the most common activities were workshops (74%) followed by talks (58%), with exhibitions, documentaries, and book presentations accounting for smaller shares.

5.3. Awareness of and Attitudes to Disinformation

In response to RG3, we found Spanish librarians to broadly be aware of the threat posed by disinformation and to be capable of understanding its deleterious effects: interference in and erosion of democratic values, damage to vulnerable targets, the generation of mistrust, and the undermining of peaceful coexistence (Figure 5).

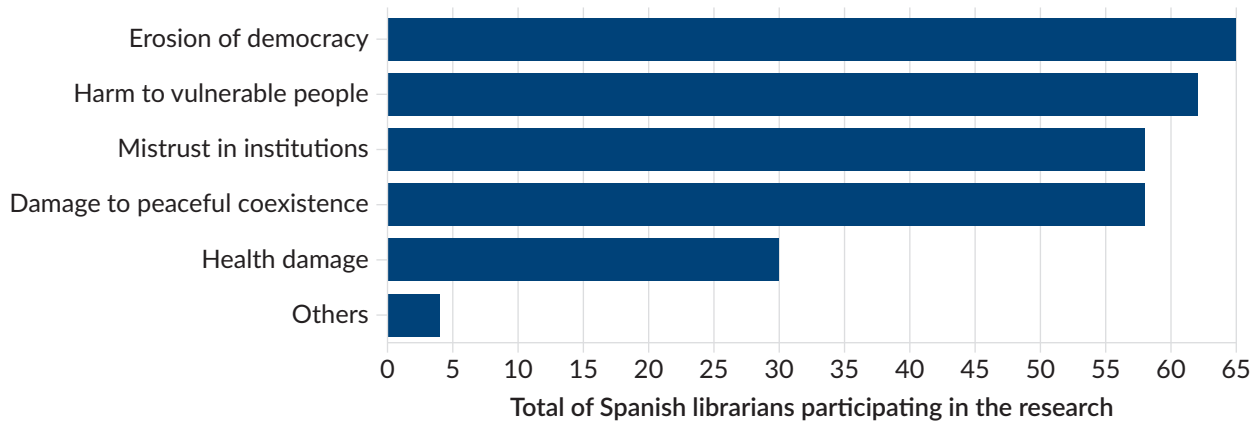


Figure 5. Librarians' perceptions of the main disinformation harms.

The polled librarians were active, critical, and empowered when managing and reporting disinformation. Only 3.8% (3/78) stated that they would do nothing; in contrast, 66.7% (52/78) stated that they would report disinformation, 59% (46/78) declared that they would unfollow the corresponding account, and 46.2% (36/78) responded that they would warn others.

5.4. Challenges to Combating Disinformation

In response to RG4, we found that the librarians were aware that more could be done to promote MIL among citizens. From their perspective, the main shortcomings to effectively fostering citizen MIL were various lacks (Figure 6), mainly of training for librarians, but also of prioritisation by public institutions, of social awareness, and of financial resources (70/78, 54/78, 40/78, 37/78, and 2/78, respectively).

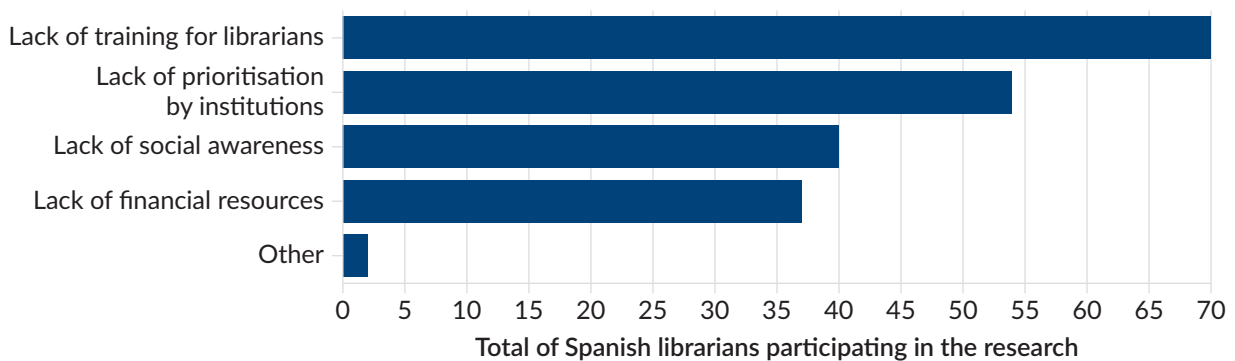


Figure 6. Challenges to effective MIL promotion by libraries.

These shortcomings point to the challenges faced by libraries and possible future lines of action to effectively promote MIL and foster digital resilience to disinformation among citizens.

5.5. Libraries in Cities: Better Situated

Our study also explored a possible link between library setting and MIL training and MIL activities, finding that the size of the town/city where a library was located affected both the level of librarian MIL and disinformation training and the organisation of related activities. While this kind of training for librarians was lacking overall, the deficit was more pronounced in smaller libraries: 35.4% of librarians employed in cities of >50,000 inhabitants had received MIL training, compared to only 22.2% and 28.5% in towns of 10,000–50,000 and <10,000 inhabitants, respectively.

A similar pattern was evident concerning the organisation of MIL activities for citizens: Librarians in larger cities were better placed in this regard. Although such initiatives were clearly lacking overall, the lack was especially pronounced in smaller towns: No MIL activities were organised for their communities in 71.4% of towns of <10,000 inhabitants, compared to 55% of towns of 10,000–50,000 inhabitants, and 59.6% of cities of >50,000 inhabitants.

6. Discussion and Conclusions

The results of this research coincide with those of previous studies and, at the same time, provide an accurate and up-to-date picture of Spanish librarians' knowledge and promotion of MIL in their communities. Consistent with the findings of Pereira and Toscano (2021), this research highlights the need to strengthen the role of librarians as key agents in building digital and democratic resilience among citizens.

Our results, corroborating previous research (Hutchinson, 2024; Ireland, 2018; McKeever et al., 2017), show that Spanish librarians, despite being key in the fight against disinformation and in the implementation of MIL, are insufficiently trained in this area. Only 40% of the librarians in our study had received specific training in MIL, coinciding with previous studies that point to MIL training deficits, not only for librarians (Hutchinson, 2024; Kautonen & Gasparini, 2024), but also for other professionals and age groups and the Spanish population in general (Herrero-Curriel & La Rosa, 2022; Sierra et al., 2025). This need for training, corroborated by assertions elsewhere (Carrillo & Montagut, 2025; Castro-Pérez, 2025; LabCom UJI, 2025), is especially urgent in Spain, where concern about disinformation affects almost 70% of the population, a figure well above the European average (Sierra et al., 2025).

Librarian training is crucial because it enables MIL activities to be developed independently of external professionals or organisations; external involvement would require additional financial resources, already an identified difficulty for libraries. Training would also foster continuity and lifelong training, as recommended by UNESCO (2023).

Our study demonstrates that MIL-trained librarians tend to organise more MIL projects, activities, and initiatives for their communities. The fact that they are also better able to recognise manipulated images and graphics and to deploy fact-checking tools confirms their potential effectiveness in promoting critical thinking and in creating digital and democratic resilience, as evidenced by previous research (Herrero-Curriel

& La Rosa, 2022; LabCom UJI, 2025; Sádaba & Salaverría, 2023; UNESCO, 2018). The fact that workshops and talks were the most common activities promoted by librarians in our study corroborates the need for innovative methodologies, as pointed out by various authors (Lozano-Monterrubbio et al., 2024; Tejedor, 2025; World Economic Forum, 2025). The scope and quality of MIL would be improved by a shift from activities that focus on passive involvement (such as talks or exhibitions) to activities that actively empower citizens (Carrillo & Montagut, 2025; European Digital Media Observatory, 2024).

As would be expected, we found that the librarians with the greatest capacity to promote MIL were those based in large libraries, but also, interestingly, in small libraries more so than medium-sized libraries; this is probably explained by the fact that grants and subsidies disproportionately benefit smaller municipalities relative to medium-sized municipalities.

The librarians were not only aware of the threat posed by disinformation; their concern also exceeded that of the general population (Sierra et al., 2025). Corroborating the findings of several other studies (Carrillo & Iranzo, 2024; Colomina et al., 2021; European External Action Service, 2023), our respondents pointed to erosion of democratic values, mistrust of institutions, and individual harms as the main repercussions of disinformation. Their commitment to curbing disinformation was evident from their behaviour on identifying disinformation on social media and their initiative in organising MIL activities in the interest of an informed, critical, and competent citizenry (International Federation of Library Associations and Institutions & UNESCO, 2022). However, only 40% of our respondents admitted to having been proactive against disinformation; this would suggest, as evidenced by previous studies (Carrillo & Iranzo, 2024; Lessenski, 2023), that library efforts are insufficient.

Our research suggests that training librarians and allocating funds to libraries for community MIL activities should be prioritised, along with policies to foster collaboration between schools, libraries, media organisations, and other civic institutions, thereby reinforcing the information ecosystem and developing resilience to polycrisis and disinformation. Our study also shows that, despite not being trained, most librarians had the necessary skills and knowledge to detect disinformation, and were highly aware of the corresponding harms. Paradoxically, however, they did not organise MIL activities, probably because they lacked confidence (due to not having received proper training), and also perhaps, because they fail to recognise their relevance and potential impact as key MIL agents.

The failure to recognise the importance of libraries as key MIL players is closely linked to a fragmentation in public policy objectives in Spain. In other national and European laws and plans, MIL is included as a core subject in education systems (Carrillo & Montagut, 2021a; Cucarella & Fuster, 2022); in Spain, however, while libraries are vaguely cited as an actor, how they should intervene in implementing MIL is not explicitly described. Some recent reports (e.g., Borrego & Comalat, 2023) point to a lack of technological resources and activities for young people as factors that limit the influence of Spanish libraries. The central role of a library in community MIL is, it would seem, overdependent on the initiative and willingness of the librarian.

A MIL policy that offers incentives, recognitions, and awards for librarians and that develops MIL-focused guidelines and best practices would overcome some of the problems arising from (a) a lack of definition of the librarian's role as a key MIL agent, (b) a lack of resources and strategies, and (c) librarians' uncertainties and insecurities regarding the organisation of MIL activities. A future research line, assuming policies implemented

along the above lines, would be to evaluate how public programmes, funding, and institutional prioritisation influence libraries' capacities to promote MIL.

The present study contributes to the discussion on how libraries can become community spaces for critical learning, democratic engagement, and strengthened media competence, and on how librarians can actively promote digital literacy and foster resilience against disinformation. A line of enquiry for future research would be a study of the inferential or correlational links between different variables that have merely been hinted at in this study.

In terms of the continuity of this research, it would also be interesting to study MIL skills and promotion according to library type (i.e., public, university, school, specialist, other), and to measure the effectiveness of community-implemented MIL activities by evaluating the knowledge and skills acquired. Finally, research into other key digital resilience agents, such as teachers and journalists, would identify other challenges to promoting MIL and solutions in the form of lines of action, thereby fostering society-wide critical thinking and digital and democratic resilience against widespread disinformation and the rise of hate speech.

The essential public service provided by public libraries should be the starting point for strategies against disinformation. Libraries are staffed by highly qualified professionals trained in locating and managing reliable physical, digital, textual, and audiovisual sources and in catering to a general and diverse public. In their provision of a public service, librarians are directly connected with the values of democratic societies and are aware of the requirements of a healthy public sphere. Failure to harness this human potential in the fight against disinformation, by considering libraries to be mere lending services, is a strategic error. In increasingly toxic digital environments, libraries, and especially librarians, become a central and reliable point of reference in a space of democratic resilience that is available to all.

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Conflict of Interests

Two of the authors are president and vice-president of the NGO promoting the MIL CC project within which the data were obtained, although this research was not included in or funded by the project.

Data Availability

The research data associated with the article are available and can be accessed on demand by requiring the authors' permission to access the Google Forms data.

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Generational Differences in Digital Resilience in Four Countries

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Abstract

Multiple crises have marked the formative years of young adults. These crises heightened the need for information while also creating a large audience for misinformation. This article highlights digital resilience in four countries (the US, the UK, France, and Canada) and across different age groups, using a survey conducted in February 2021 at the apex of a series of crises. Based on a sample of 6,000 respondents, the two youngest age groups are more likely to use fact-checking websites, verify suspicious information, and report misinformation to social media platforms. These practices reflect digital resilience. In terms of cross-national differences, respondents from the US have higher use of fact-checking sites, which can be explained by the structural availability of these websites, which tend to focus on American content. In line with theories about uncertainty avoidance, respondents from France have higher rates of verification of suspicious information. Canada is distinctive in its low rates of misinformation reporting to social media platforms. While much of the scholarship has focused on political ideology as shaping engagement with misinformation, this study highlights generational differences, cultural differences, digital literacy programming, structural opportunities, and regulatory frameworks that may shape practices related to digital resilience.

Keywords

Canada; comparative politics; digital media; fact-checking websites; France; generational differences; misinformation; resilience; United Kingdom; United States

1. Introduction

Consecutive and cumulating crises have marked young adults' formative years. These crises include the climate crisis, the pandemic, the outbreak of war in Europe, and increased conflict between Israel and Palestine. These crises have heightened the need for accurate information while also creating a fertile

ground for the creation and dissemination of false or misleading information. There are generational differences in how people respond to crises. For older generations, these crises may prompt greater news consumption to address a need for orientation (Van Aelst et al., 2021), resulting in greater news consumption during the pandemic (Andersen et al., 2024; de Bruin et al., 2021).

However, the youngest generations never developed a news media habit and instead tend to avoid the news (Espeland, 2024; Gorski & Thomas, 2022). During a crisis, they may seek out or be accidentally exposed to alternative sources of (online) information. Lower use of quality legacy news sources and higher use of online (unfiltered) sources can increase vulnerability to misinformation, conspiracy theories, and deepfakes (Humphrecht et al., 2020; Mahl et al., 2023). Instead of reinforcing existing portrayals of young adults as vulnerable, this article highlights how they actively engage with misinformation in ways that contribute to their resilience against its dire effects.

The study utilizes survey data collected in 2021 to explore digital resilience during the height of the pandemic, the reframing of the climate crisis as an emergency, and immediately before the outbreak of war in Europe. While the differences are theorized in terms of social and political context (macro) and digital training (meso), the empirical work is based on individual or micro-level measures. Based on the pooled data, the two youngest age groups are more likely to check suspicious information against other online sources, report it to social media platforms/technology companies, and use fact-checking websites. These three practices are consistent with the concept of digital resilience. Generational differences in digital resilience are theorized in terms of access to digital literacy training.

In terms of cross-national differences, the US is exceptional in the high use of fact-checking sites, reflecting the structural availability of these sites, as well as high rates of misinformation exposure, social media use, and polarization, which provide motives for using these fact-checking sites. France is distinctive in relation to checking suspected misinformation against other sources, which is explained in terms of uncertainty avoidance. Finally, Canada is unique in its low rates of reporting misinformation to platforms, which may be related to the nature of digital literacy programming in Canada, which focuses on the other two activities, rather than reporting.

This research contributes new insights about digital resilience during global and perpetual crises. Additionally, the study provides new theoretical insights into understanding generational and cross-national differences. Finally, the findings and theoretical framework help to understand contemporary threats to the online information environment, including deepfakes, as well as AI-generated content more broadly.

2. Literature Review

2.1. Defining Digital Resilience Against Misinformation

According to Tomkova (2020, p. 417), digital social resilience involves using “computer and data enhanced, social adaptive processes to withstand external shocks and cyber threats.” In other words, groups and communities can utilize digital tools to address social, political, and environmental challenges (Tomkova, 2020). Tomkova (2020) mentions fact-checking and debunking as digital activities related to digital social resilience.

Humprecht et al. (2020) developed a framework for examining resilience to disinformation in different countries and tested the framework using exposure to misinformation. The current study focuses on countering misinformation, measured as three activities: using fact-checking websites, verifying misinformation against other sources, and reporting misinformation to social media platforms. The first two activities align with what Chang (2021, p. 647) refers to as “acts of authentication,” whereas the reporting of misinformation has been rarely studied in the scholarly literature.

Social media platforms/companies have modified their practices regarding the monitoring and reporting of misinformation. The platforms have terminated or reduced funding for their fact-checking initiatives and instead rely on community (or user) reports (McMahon et al., 2025). In other words, social media companies have moved the responsibility to citizens to monitor the accuracy of information. After reviewing the variety of legislative and platform-specific initiatives to combat harmful content, Chakravorti (2025, p. 219) recommends investing “in the area of user education and to institutionalize it in schools across the world...educated digital consumers represent the best—and most inclusive—defense against the scourge of disinformation.” In short, digital literacy training and skill development are critical.

In this context, it is more important than ever before to understand users’ abilities and efforts to monitor their information environment.

2.2. Generational Differences in Digital Resilience

In their resilience model, Humprecht et al. (2020) claim that low trust in news and high social media use would decrease resilience against misinformation (also see Dragomir et al., 2024). Yet, these two characteristics define young people’s experiences of media use (Fletcher et al., 2025; Kalogeropoulos et al., 2019). These patterns would suggest that young people are particularly vulnerable to misinformation. Yet, the empirical work does not offer a clear answer.

Some studies find that age negatively relates to exposure to misinformation (Bachmann et al., 2024; Boulianne & Hoffmann, 2024; Hoffmann & Boulianne, 2025), meaning that younger people have higher rates of exposure. Other studies claim there are no significant age differences in misinformation experiences (S. Lee et al., 2023; T. Lee et al., 2023; Neyazi et al., 2022). Another set of studies suggests that the relationship between age and exposure to misinformation varies by topic, with young people reporting higher exposure to Covid-19 misinformation (Boulianne et al., 2022; Chan et al., 2025) but lower levels of exposure to political misinformation compared to older individuals (Chan et al., 2025; Moore et al., 2023). Holt et al. (2025) find that middle-aged women are the most exposed to misinformation. Scholarly attention has focused more on understanding exposure to misinformation, rather than countering misinformation.

Younger people are more likely to use fact-checking websites (Chia et al., 2024; Robertson et al., 2020; cf. Park, 2024). Indeed, Robertson et al. (2020) find that age and political ideology have similar effect sizes. Young people’s greater engagement may be a result of spending more time online and a general preference for online news and information sources over offline sources (Kalogeropoulos et al., 2026). Furthermore, their greater use may be a product of greater awareness of fact-checking. Studies show that young people are more likely to report familiarity with the fact-checking movement in journalism (Lyons et al., 2020; Robertson et al., 2020). Furthermore, younger people tend to find fact-checking sites to be useful (Robertson et al., 2020).

A meta-analysis demonstrates that exposure to fact-checked information tends to reduce misperceptions (Walter et al., 2020), even in relation to deepfakes (Dan, 2025). Goyanes et al. (2025) consider a battery of activities related to verifying the accuracy of information. They find that verifying information increases confidence in identifying misinformation, based on a two-wave panel study. Despite the critical role of fact-checking in reducing misperceptions, Graham and Porter (2025) argue that there is low demand for fact-checking; few people fact-check when they are exposed to misinformation. Nonetheless, the use of fact-checking sites is indicative of digital resilience, especially related to misinformation.

According to Ofcom, 35% of online users reported harmful content (Ofcom, 2024). The survey included a range of reporting options, including reporting to Ofcom, the police, and/or the platform (Ofcom, 2024). Only 17% of young people report harmful content, such as misinformation, offensive language, and trolling, when they see it. Platforms report that of the millions of pieces of flagged content, approximately 5–6% of this content is removed (Ofcom, 2023). Since very little of the flagged content is removed, users may question whether the effort is worth it.

The process of reporting misinformation to platforms is complex and varies by platform. First, users must have the skills to identify how to report problematic content on a specific platform, since the platforms do not have standard techniques to report this problematic content. The option to report a post can be clearly labelled under the post, as is done on YouTube, but it can also be hidden in a variety of extra features, such as expressing disinterest in a post, hiding a post, or blocking or snoozing a user, as is the case with Facebook. Or, in some cases, the specific post cannot be reported, but a user can be, such as WhatsApp.

Second, users might need to choose who to report the post to: the group administrator/moderator or the platform; they would need to understand the different roles and responsibilities of administrators/moderators versus platforms. Relatedly, Facebook has options to report the post, the image, or the reel, adding to the complexity of the reporting process, which further blurs the responsibilities for addressing problematic content.

Third, users require the confidence to identify the topic of the problematic content, since different platforms use different terminology. For example, the form for reporting this content might ask if the content is harassment, hate speech, pornography, fraud, a copyright or trademark violation, illegal activities, spam, or misinformation. Some platforms include misinformation, false information, or misleading content, while others do not. Reddit, for example, has an option for manipulated content, but no option to report misinformation at the time of this article's writing.

Fourth, platforms are continually changing the process for reporting problematic content. As such, each new report of misinformation might require learning a new reporting process. The series of steps will favour young people who have stronger digital skills, but the effort required to report will also only engage those who are highly motivated to see specific content removed. The first hypothesis is:

H1: Young people are more likely to (a) visit fact-checking websites, (b) check misinformation against other sources, and (c) report misinformation to platforms.

2.3. Digital Literacy

Meta-analyses of research find that media literacy programs are an effective way to counter misinformation (Huang et al., 2024; Lu et al., 2024). Media literacy can be defined as “how people critically consume and produce media in all forms...abilities to access, evaluate, analyze, reflect, and create media across platforms, modalities, and content areas” (Mihailidis, 2022, p. 999). Digital literacy focuses on how people critically consume and produce online content. For younger generations, digital literacy would be a core part of their K-12 school curriculum.

For example, in Canada, MediaSmarts – Canada’s Centre for Digital Media Literacy provides programming to build skills in identifying misinformation. There are specific links for teachers and parents, as well as an option for self-directed learning. In their program to combat misinformation, Break the Fake, they encourage the use of fact-checking tools, recommend checking other sources, and provide tips on verifying online information. As a result of the digital literacy programming, participants develop digital skills, such as the ability to identify misinformation, including identifying deepfakes. MediaSmarts offers a tipsheet for checking deepfakes, which includes checking the source, consulting fact-checkers, and doing a reverse image search. In its programming, MediaSmarts does not cover the reporting of misinformation to social media platforms.

Media literacy programming tends to follow this same template and makes its programming available online to everyone. As such, it is not easy to connect specific programming to specific outcomes or audiences. Instead, this study considers whether a respondent is a current student as a proxy for exposure to digital literacy programs. Education could also be considered a proxy, but older people’s schooling was unlikely to cover digital literacy. In a survey of adults aged 18 or older, student status likely refers to attending a college, technical school, or university. In many cases, librarians have created digital literacy resources to help students across campus understand how to identify and check misinformation, particularly against credible sources, such as those available in the library. The second hypothesis is:

H2: Students are more likely to (a) visit fact-checking websites, (b) check misinformation against other sources, and (c) report misinformation to platforms.

2.4. Cross-National Differences in Digital Resilience

As noted, Humprecht et al. (2020) developed a framework for examining resilience to disinformation in different countries. The US is more vulnerable to disinformation due to “its large advertising market, its weak public service media, and its comparatively fragmented news consumption” (Humprecht et al., 2020, p. 506). Additionally, the US is distinctive in its two-party system, which contributes to political polarization. Empirically, social media use remains the most consistent predictor of misinformation experiences across different countries (Boulianne et al., 2022). Social media use and polarization are related (Kubin & von Sikorski, 2021). As such, the US is particularly vulnerable to misinformation; however, American citizens may also be motivated to engage with misinformation due to high polarization, which encourages citizens to verify or discredit information, especially claims made by out-groups.

Huang et al.’s (2024) meta-analysis of media literacy interventions and misinformation found that these interventions are most effective in cultures with high uncertainty avoidance. In cultures characterized as

having high uncertainty avoidance, individuals tend to feel threatened by the unknown (Hofstede, 2025). In the context of misinformation, citizens in these cultures have a strong desire to seek new information and develop skills that will reduce their uncertainty (Huang et al., 2024). In these cultures, media literacy interventions may be more effective.

We extend this idea to countering misinformation. Those in high uncertainty avoidance cultures will be motivated to use fact-checking sites and other sources of information to determine the truthfulness of the information. They want to resolve their uncertainty because it creates unsettled feelings or causes anxiety. For the four countries considered in this study, France has the highest uncertainty avoidance (Hofstede, 2025). If there's support for this theory, we would see a consistent pattern of respondents in France having higher levels of countering misinformation.

However, untangling the theoretical explanation of cross-national differences is challenging, as France also differs from the other three countries in terms of lower social media use and lower trust in the media, according to the *Digital News Report* (Newman et al., 2024). Table 1 offers macro-level statistics about each country. Social media use and trust in media are core variables for the Online Disinformation Resilience model, which focuses on exposure to misinformation (Humprecht et al., 2020). France has low use of social media, suggesting high resilience. On the other hand, France has low trust in the news, suggesting low resilience. As such, understanding France's resilience will need to consider its high uncertainty-avoidance culture, as well as the media system and adoption of social media.

Table 1. Macro-level characteristics of the four countries.

	US	UK	France	Canada
Uncertainty avoidance score (Hofstede, 2025)	46	35	86	48
Percentage who trust the news (Newman et al., 2024)	32	36	31	39
Percentage who use Facebook (Newman et al., 2024)	61	63	55	60
Percentage who use YouTube (Newman et al., 2024)	60	53	47	62

To cover the different possible results, a research question, rather than a hypothesis, is proposed:

RQ1: Are there cross-national differences in the countering of misinformation (visiting fact-checking websites, checking misinformation against other sources, and reporting of misinformation to platforms)?

3. Methods

3.1. Sample

This study is based on a survey administered to an online panel by Kantar-Lightspeed in February 2021. The full sample includes more than 6,000 respondents with 1,500 respondents in each of the four countries: Canada, the UK, France, and the US. Strict quotas were used to ensure the composition of the online panel matched census data for each country in terms of age, gender, and education. The survey was administered in both English and French. The project was approved (MacEwan University, File No. 101856) in accordance with Canada's *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*. The survey was funded through Canadian Heritage's Digital Citizenship Initiative. The choice of countries is based on Canada as the

focal point—Canada’s two founding nations and Canada’s only neighbour. This study investigates generational and cross-national variations in practices that constitute digital resilience, focusing on the role of digital literacy. Replication and data files are available at <https://doi.org/10.6084/m9.figshare.30837497>

3.2. Measures

Respondents were asked, “During the past 12 months, how often have you visited the websites OR social media pages of...a fact-checking organization, such as Politifact and Fact Check?” The last example covers the American FactCheck.org as well as the AFP (Agence France-Presse) Fact Check. While respondents were offered responses related to frequency, the distribution of answers was highly skewed because only 31% of the pooled sample had used these sources. As such, the frequency measure was converted into a dichotomous variable: *used* (1) or *did not* (0). Figure 1 outlines the differences by country. Respondents from France were the least likely to report using fact-checking websites.

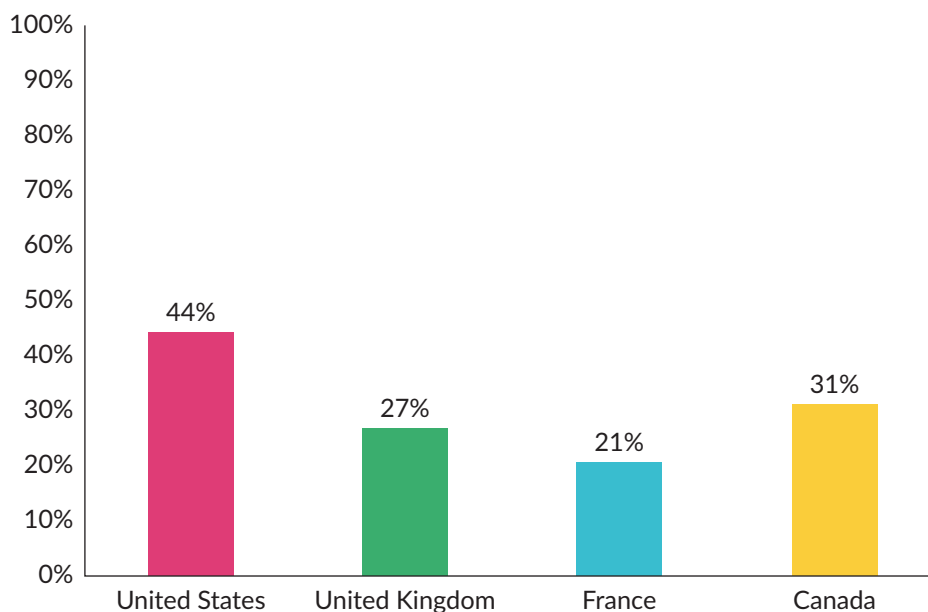


Figure 1. Cross-national differences in the use of fact-checking websites.

In terms of age differences for the use of fact-checking sites (Figure 2, orange triangle line), the two youngest age groups were the most likely to report using them (51% and 50%), whereas the oldest age groups were the least likely to use them (16% and 18%).

The survey posed a series of questions about misinformation, followed by questions about the topic, source, and reactions. If respondents reported seeing misinformation (false or misleading information) on social media in the past month, they received a follow-up question: “When you saw this misinformation, did you check the information to compare it to other sources of information?” For the pooled sample, 52% reported that they checked the information against other sources. Figure 3 reports the country-specific results. Respondents from the UK were the least likely to check the misinformation against other sources. In terms of age differences (Figure 2, blue square line), the youngest age group was the most likely to report checking this information (63%), whereas the two oldest age groups were the least likely (43%).

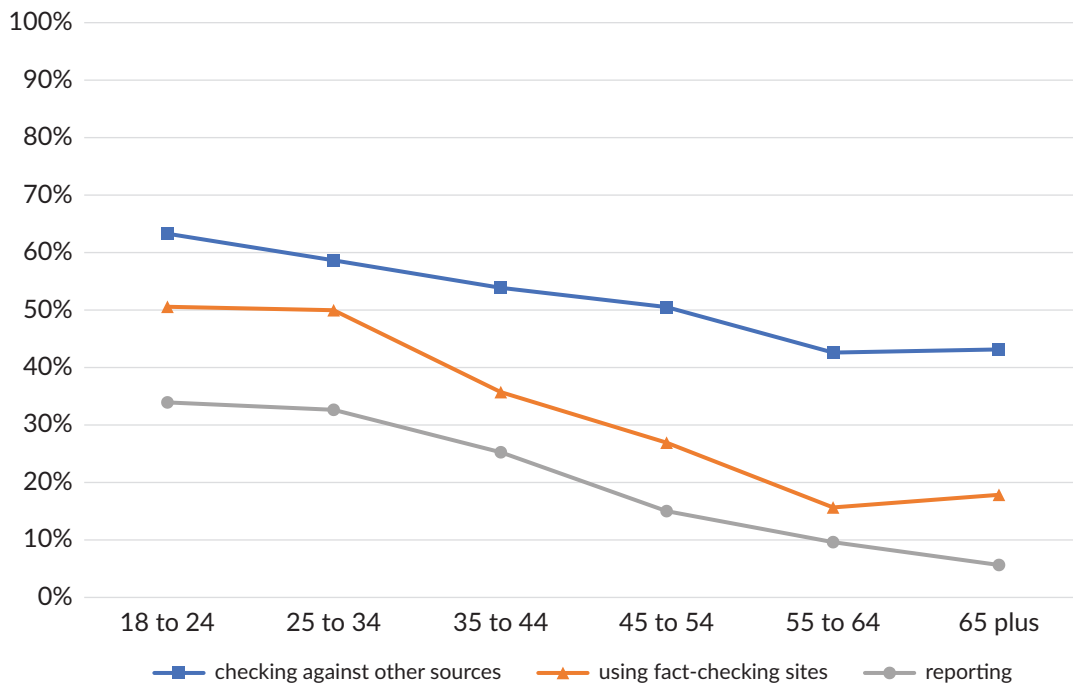


Figure 2. Age differences in the countering of misinformation.

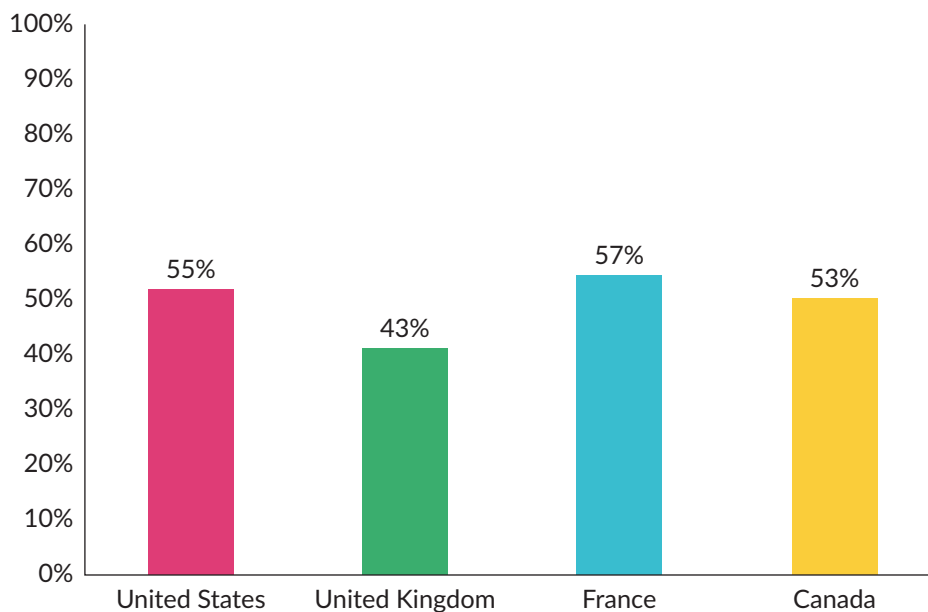


Figure 3. Cross-national differences in the checking of misinformation against other sources.

For those who reported seeing misinformation on social media in the past month, they were asked: “When you saw this misinformation, did you report it to the social media company/platform (e.g., Facebook)?” For the pooled sample, only 20% claimed to have reported misinformation. Figure 4 outlines the country differences in reporting misinformation to the social media company/platform. Respondents from the US were more likely to report misinformation to the social media company/platform, and Canadians were the least likely. In terms of age differences (Figure 2, grey circle line), the two youngest age groups were the most likely to report misinformation to platforms (34% and 33%), whereas the oldest age group was the least likely (6%).

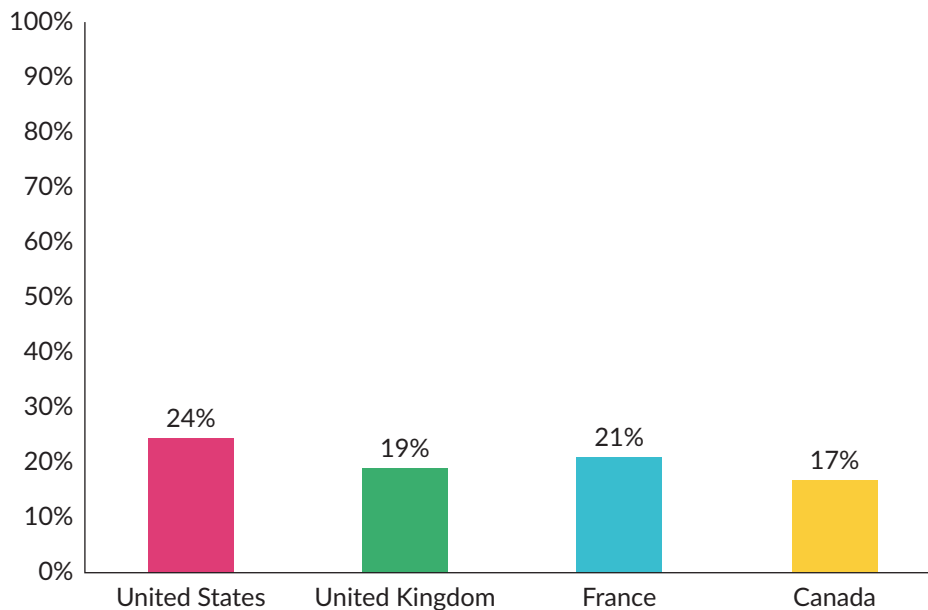


Figure 4. Cross-national differences in the reporting of misinformation to the social media company/platform.

Table 2 offers descriptive statistics and measurement details for the predictor variables. As noted above, the percentages for age, gender, and education match official or census data within each country (National Institute of Statistics and Economic Studies, 2018; Office for National Statistics, 2016; Statistics Canada, 2016; US Census, 2019). Respondents were offered a series of categories for household income in the currency of their respective countries. These categories were then converted into quintiles, so that approximately 20% of respondents are in each of the five new categories; this variable is not included in Table 2 because the means and standard deviations are not interpretable. To assess student status, we asked about respondents' current status (or how they spend the majority of their time). Our measure is effective in capturing full-time college or university students, but is unlikely to capture part-time students who also work.

The statistical models account for political interest and ideology, as prior studies in the US (Graham & Porter, 2025; Park, 2024; Robertson et al., 2020) and in Europe (Goyanes et al., 2025; Lyons et al., 2020) found these variables to predict attitudes toward and the use of fact-checking sites. As noted in the literature review, the effect size for political ideology is equivalent in magnitude to the effect of age on the use of fact-checking sites (Robertson et al., 2020). Yet, scholarship has primarily focused on political ideology at the expense of theorizing age differences.

In addition, the models control for self-assessed knowledge about deepfakes. This question was part of a series of questions designed to measure digital skills. This single item is used as it is the most aligned with the topic of this study. There are no claims about causality with the inclusion of this variable; instead, the results should be treated as correlational and exploratory.

Table 2. Descriptive statistics by country.

	Min-Max	All	US	UK	France	Canada
Ages 18 to 24	0 or 1	10%	12%	11%	10%	12%
Ages 25 to 34	0 or 1	17%	18%	17%	15%	16%
Ages 35 to 44	0 or 1	16%	16%	16%	16%	15%
Ages 45 to 54	0 or 1	18%	17%	18%	17%	18%
Ages 55 to 64	0 or 1	16%	10%	17%	22%	16%
Ages 65 or more	0 or 1	23%	27%	21%	20%	23%
Females	0 or 1	51%	51%	49%	51%	52%
High school or less	0 or 1	49%	42%	56%	56%	42%
Some college	0 or 1	18%	19%	10%	18%	25%
Bachelor's degree	0 or 1	24%	26%	26%	19%	25%
More than a bachelor's degree	0 or 1	9%	13%	8%	7%	8%
Student	0 or 1	5%	5%	5%	5%	6%
Please rate your understanding of the following digital concepts: deepfake (<i>no understanding, little, some, good, full understanding</i>)	1-5	2.06 (1.31)	2.12 (1.39)	1.92 (1.25)	2.20 (1.30)	1.99 (1.28)
How interested would you say you are in politics? (<i>not at all, not very, fairly, very</i>)	1-4	2.52 (0.96)	2.73 (0.99)	2.51 (0.94)	2.29 (0.97)	2.54 (0.91)
In politics, people sometimes talk of left and right. Where would you place yourself on this scale?						
0 to 3 are <i>left-wing</i>	0 or 1	18%	17%	16%	19%	21%
7 to 10 are <i>right-wing</i>	0 or 1	26%	35%	25%	25%	19%
<i>All others</i>	0 or 1	56%	48%	59%	56%	60%

4. Results

Regarding H1 (pooled sample), the two youngest age groups do not differ significantly in their ability to counter misinformation, as measured by the three different activities; the oldest age group is the least likely to engage in these three activities (Tables 3, 4, and 5). These patterns underscore the need for a generational, rather than a linear, approach to age. However, the strength of these patterns differs slightly by country and by activity. These patterns are strongest and most consistent when considering the use of fact-checking websites (Table 1) and reporting misinformation to platforms (Table 3). The age patterns are inconsistent in the UK and France when considering the verification of misinformation against sources (Table 2). In these two countries, age differences are smaller and not significant in relation to checking misinformation against other sources.

As noted, we use current student status to identify respondents who are likely to have received digital literacy training (H2). For the most part, we find that across the four countries, student status is not a significant

predictor of engaging in these three activities. Being a current student in Canada is negatively correlated with the use of fact-checking websites (Table 1). The direction of this relationship is contrary to what we expect.

Regarding cross-national differences (RQ1), we find that the US is exceptional in the higher rates of using fact-checking websites (Table 3; Figure 1). In terms of checking misinformation, Canada has similar rates as the US, but France has significantly higher rates and the UK has significantly lower rates, compared to the US (Table 4; Figure 3). In terms of reporting misinformation to social media platforms, France and the UK do not differ significantly from the US; however, Canada has lower rates of reporting compared to the US (Table 5; Figure 4).

Beyond the research questions and hypotheses, several other noteworthy findings are also present. In all four countries, the self-assessed ability to identify deepfakes positively relates to all three measures of countering information (Tables 3, 4, and 5). With cross-sectional data, we cannot assess the causal flow. This self-assessed knowledge may predict these three activities, but likewise, these three activities may predict a respondent's ability to identify deepfakes. As such, we assess correlations. Understanding deepfakes positively correlates with using fact-checking websites, verifying misinformation against other sources, and reporting misinformation to platforms.

Educational differences are rarely statistically significant; however, they are stronger in the use of fact-checking websites than in the other two activities (pooled sample in Table 3 versus pooled samples in Tables 4 and 5). There are only a few ideological differences. Of the three measures, political ideology appears to have the strongest role in the reporting of misinformation to social media platforms. In the US and UK, right-wing users are more likely to report misinformation to social media platforms. In Canada, both ideological groups are more likely to use fact-checking websites compared to those with no ideological affiliation. Political ideology does not predict the checking of misinformation in any of the four countries studied. Political interest is a consistent and positive predictor of countering misinformation (all three activities).

Across the three activities and four countries, we find only one gender difference: In France, females are less likely to use fact-checking websites. Income rarely predicts the counteraction of misinformation. The exceptions are in the US, where it increases the use of fact-checking sites, and in the UK and France, where it reduces the reporting of misinformation to social media platforms. Overall, these models work better for explaining rates of fact-checking, compared to the other two activities (see Nagelkerke *R*-squared for the various models).

Table 3. Logistic regression of the use of fact-checking websites.

	Pooled		US		UK		France		Canada	
	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>
Ages 25 to 34 (H1)	0.834	0.165	0.685	0.141	1.016	0.951	1.430	0.225	0.570	0.033
Ages 35 to 44 (H1)	0.466	< 0.001	0.452	0.003	0.617	0.080	0.646	0.162	0.317	< 0.001
Ages 45 to 54	0.346	< 0.001	0.206	< 0.001	0.510	0.016	0.377	0.002	0.346	< 0.001
Ages 55 to 64	0.192	< 0.001	0.181	< 0.001	0.401	0.002	0.184	< 0.001	0.110	< 0.001
Ages 65 or more	0.168	< 0.001	0.185	< 0.001	0.163	< 0.001	0.191	< 0.001	0.108	< 0.001
Females	0.875	0.054	1.042	0.756	0.890	0.424	0.608	0.002	0.901	0.445
Some college	1.258	0.014	1.438	0.041	1.142	0.563	1.149	0.509	1.298	0.123
Bachelor's degree	1.374	< 0.001	1.263	0.170	1.325	0.092	1.511	0.034	1.346	0.077
More than bachelor's degree	1.331	0.019	1.354	0.163	0.986	0.959	1.532	0.123	1.133	0.630
Income quintile	0.990	0.705	1.187	0.001	0.943	0.257	0.906	0.108	0.920	0.115
Student (H2)	0.647	0.009	0.626	0.175	0.517	0.075	0.841	0.638	0.530	0.039
Deepfake understanding	1.470	< 0.001	1.528	< 0.001	1.603	< 0.001	1.429	< 0.001	1.378	< 0.001
Political interest	1.706	< 0.001	1.747	< 0.001	1.542	< 0.001	1.801	< 0.001	1.760	< 0.001
Left-wing	1.161	0.094	1.382	0.070	1.066	0.741	0.778	0.227	1.391	0.040
Right-wing	1.221	0.013	0.991	0.948	1.300	0.116	1.034	0.853	1.772	0.001
Canada (RQ1)	0.613	< 0.001								
UK (RQ1)	0.489	< 0.001								
France (RQ1)	0.338	< 0.001								
Nagelkerke R-squared	0.312		0.336		0.272		0.298		0.279	
<i>n</i>	5,593		1,403		1,356		1,392		1,442	

Notes: The reference groups are youth (those aged 18 to 24 years), males, those with high school or less, non-students, those in the centre or reporting no ideological leanings, and the US; missing cases are almost entirely due to missing data on income; the table reports odds ratios; when the odds ratios are greater than 1.00, the relationship is positive; when the odds ratios are less than 1.00, the relationship is negative.

Table 4. Logistic regression of checking misinformation against other sources.

	Pooled		US		UK		France		Canada	
	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>
Ages 25 to 34 (H1)	0.814	0.129	0.589	0.046	0.889	0.667	1.237	0.503	0.897	0.684
Ages 35 to 44 (H1)	0.726	0.023	0.503	0.014	0.968	0.910	1.003	0.994	0.695	0.195
Ages 45 to 54	0.706	0.015	0.305	< 0.001	1.020	0.945	1.035	0.917	0.866	0.607
Ages 55 to 64	0.515	< 0.001	0.249	< 0.001	0.718	0.276	0.814	0.524	0.533	0.033
Ages 65 or more	0.453	< 0.001	0.250	< 0.001	0.742	0.332	0.593	0.116	0.494	0.015
Females	0.981	0.786	0.838	0.215	1.182	0.268	0.985	0.917	1.015	0.915
Some college	1.174	0.089	1.306	0.161	0.923	0.745	1.335	0.129	1.131	0.464
Bachelor's degree	1.178	0.063	1.252	0.224	1.225	0.238	1.865	0.003	0.811	0.215
More than bachelor's degree	1.273	0.063	1.592	0.054	1.340	0.316	0.952	0.863	1.164	0.568
Income quintile	0.958	0.111	0.960	0.472	0.917	0.108	0.991	0.876	0.975	0.640
Student (H2)	0.925	0.651	0.869	0.697	0.590	0.154	1.529	0.294	1.089	0.784
Deepfake understanding	1.258	< 0.001	1.252	< 0.001	1.314	< 0.001	1.253	< 0.001	1.186	0.001
Political interest	1.510	< 0.001	1.477	< 0.001	1.709	< 0.001	1.401	< 0.001	1.496	< 0.001
Left-wing	1.136	0.160	1.446	0.060	0.911	0.637	1.109	0.587	1.163	0.353
Right-wing	1.039	0.646	0.871	0.376	1.188	0.323	1.008	0.965	1.219	0.251
Canada (RQ1)	1.044	0.643								
UK (RQ1)	0.750	0.003								
France (RQ1)	1.381	0.001								
Nagelkerke R-squared	0.130		0.186		0.148		0.132		0.091	
<i>n</i>	3,926		1,033		914		911		1,068	

Notes: The reference groups are youth (those aged 18 to 24 years), males, those with high school or less, non-students, those in the centre or reporting no ideological leanings, and the US; missing cases are due to a filter—only those who reported seeing misinformation were asked this follow-up question; the table reports odds ratios; when the odds ratios are greater than 1.00, the relationship is positive; when the odds ratios are less than 1.00, the relationship is negative.

Table 5. Logistic regression of reporting misinformation to the social media company/platform.

	Pooled		US		UK		France		Canada	
	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>	<i>ExpB</i>	<i>p</i>
Ages 25 to 34 (H1)	0.857	0.268	0.705	0.166	0.907	0.750	1.530	0.195	0.582	0.055
Ages 35 to 44 (H1)	0.661	0.006	0.502	0.013	0.779	0.452	1.180	0.634	0.421	0.006
Ages 45 to 54	0.384	< 0.001	0.228	< 0.001	0.440	0.023	0.672	0.280	0.336	0.001
Ages 55 to 64	0.220	< 0.001	0.109	< 0.001	0.455	0.044	0.261	0.001	0.180	< 0.001
Ages 65 or more	0.127	< 0.001	0.051	< 0.001	0.224	0.001	0.296	0.004	0.093	< 0.001
Females	0.973	0.763	0.837	0.314	0.961	0.841	1.107	0.589	0.966	0.852
Some college	1.158	0.229	0.853	0.523	1.099	0.759	1.335	0.225	1.612	0.036
Bachelor's degree	1.043	0.703	0.774	0.265	0.995	0.984	1.274	0.298	1.284	0.264
More than bachelor's degree	1.052	0.747	0.938	0.823	1.383	0.340	0.659	0.250	1.299	0.455
Income quintile	0.913	0.008	1.009	0.896	0.851	0.022	0.851	0.027	0.942	0.388
Student (H2)	0.985	0.930	0.743	0.387	1.320	0.486	1.096	0.818	0.912	0.781
Deepfake understanding	1.341	< 0.001	1.318	< 0.001	1.357	< 0.001	1.424	< 0.001	1.239	0.001
Political interest	1.371	< 0.001	1.531	< 0.001	1.347	0.013	1.305	0.011	1.285	0.019
Left-wing	0.936	0.576	1.174	0.499	1.116	0.684	0.616	0.061	0.909	0.663
Right-wing	1.553	< 0.001	1.496	0.039	2.795	< 0.001	1.142	0.526	1.201	0.407
Canada (RQ1)	0.755	0.018								
UK (RQ1)	0.808	0.080								
France (RQ1)	1.021	0.864								
Nagelkerke R-squared	0.214		0.321		0.208		0.210		0.154	
<i>n</i>	3,926		1,033		914		911		1,068	

Notes: The reference groups are youth (those aged 18 to 24 years), males, those with high school or less, non-students, those in the centre or reporting no ideological leanings, and the US; missing cases are due to a filter—only those who reported seeing misinformation were asked this follow-up question; the table reports odds ratios; when the odds ratios are greater than 1.00, the relationship is positive; when the odds ratios are less than 1.00, the relationship is negative.

5. Conclusion

5.1. Digital Resilience, Misinformation, and Crises

Digital resilience involves using digital tools to address social, political, and environmental threats and shocks (Tomkova, 2020). In 2021, the pandemic was a salient crisis, but the climate crisis continued to be a pressing issue, with European war and Middle Eastern conflicts emerging soon after. Young people have spent their formative years in a continuous state of crisis. The uncertainty surrounding these crises has increased the need for information (Van Aelst et al., 2021), but also provided a large audience for misinformation. In response, young adults engaged in practices related to digital resilience, particularly those aimed at countering misinformation.

Much of the work on misinformation has focused on exposure to and sharing of misinformation. In contrast, this study makes a distinctive contribution to understanding the countering of misinformation, particularly using fact-checking websites, verifying misinformation against other sources, and reporting misinformation to social media platforms. While the use of fact-checking websites (Chia et al., 2024; Park, 2024; Robertson et al., 2020) and checking misinformation against other sources (Chang, 2021; Goyanes et al., 2025) have been studied, the reporting of misinformation to social media platforms has been rarely studied in the scholarly literature. Yet, the reporting of misinformation has taken on new importance, as social media platforms terminate their funding for fact-checking initiatives and, instead, rely on user reports (McMahon et al., 2025; Ofcom, 2023, 2024). Given the challenges of legislating content moderation (Chakravorti, 2025), digital literacy programming has become increasingly important in building resilience to misinformation (Huang et al., 2024; Lu et al., 2024).

5.2. Age Differences in Digital Resilience to Misinformation

This study adopts a generational perspective (RQ1), examining differences in access to digital literacy programs and diverse formative experiences due to crisis experiences. This approach contrasts with theorizing and modeling linear age effects. Indeed, the scholarship on age and misinformation yields mixed results when age is modelled as a linear effect (Bachmann et al., 2024; Boulianne & Hoffmann, 2024; Hoffmann & Boulianne, 2025; S. Lee et al., 2023; T. Lee et al., 2023; Neyazi et al., 2022). A generational analysis helps to explain the discrepant findings—age effects are not linear, but instead marked by generational experiences.

The survey documents that the youngest generations of adults (18- to 24-year-olds and 25- to 34-year-olds) are the most likely to engage in digital resilient practices. In part, their greater engagement can be attributed to increased exposure to digital literacy training as part of their schooling. However, the other explanation is the structural conditions in which they live. They are more likely to be exposed to misinformation due to their greater use of social media. Social media use is a significant factor in exposure to misinformation (Bachmann et al., 2024; Boulianne et al., 2022; S. Lee et al., 2023; T. Lee et al., 2023). With greater exposure comes greater opportunities (or prompts) to engage in practices demonstrating digital resilience.

Consistent with other studies, this article documents that younger age groups are more likely to use fact-checking websites (Chia et al., 2024; Robertson et al., 2020; cf. Park, 2024). These age group differences reflect a general preference for online news and information sources over offline sources

(Kalogeropoulos et al., 2026) and a distrust of traditional media as a source of information (Fletcher et al., 2025; Kalogeropoulos et al., 2019). In addition, young people are more likely to report familiarity with and the usefulness of fact-checking sites (Lyons et al., 2020; Robertson et al., 2020). Finally, these age group differences can be explained by the level of access to digital literacy programs, which encourage the use of fact-checking websites.

5.3. Digital Literacy

The study uses current student status as a proxy measure of exposure to digital literacy training (H2). Contrary to the hypothesis, being a student did not increase the use of fact-checking sites. The relationship was negative and statistically significant in Canada. As such, despite the MediaSmarts example provided in the introduction, Canadian students are not using fact-checking sites. There are two possible explanations—one is a lack of awareness, and the other is a lack of Canadian-specific content on fact-checking sites. Many fact-checking sites are available in the US, focusing on American content, which explains why US respondents report greater use of these sites, according to this survey (Figure 1; Table 3). Canada does not have a Snopes, Politifact, etc. There are some small-scale initiatives, but nothing on the same scale as those in the US media sphere. The lower use of fact-checking sites among Canadians, particularly Canadian students, could be attributed to a lack of awareness, but it can also reflect the absence of large, Canadian-specific fact-checking sites.

Further research might assess digital literacy training more directly. The survey could ask if the respondent had received digital skills training, when, and on what topics. While the details may be difficult for respondents to recall, this information would be valuable for assessing the effects of digital literacy training. In 2021, when these data were collected, citizens likely relied on Google search results to check information, assuming they did not know the URL for a fact-checking site. In 2025, they are likely to be exposed (unless they possess the digital skills to opt out) to Google's AI-generated summaries of information. These AI-generated summaries are not always transparent about their sources, making the summaries vulnerable to misinformation. Digital literacy programming needs to tackle a new dimension—AI literacy skills.

As noted, there is little scholarly attention to the reporting of misinformation to social media platforms or technology companies. Indeed, the MediaSmarts digital literacy training does not mention the need to report misinformation. Ofcom surveys suggest that young people are less likely to report harmful content compared to older people (Ofcom, 2023, 2024). This cross-national survey suggests otherwise: Young adults are more likely to report misinformation compared to older age groups. Young people's greater digital skills may enable them to navigate the process of reporting misinformation. As noted, the reporting process differs by platform and changes regularly. Furthermore, the terminology used in the reporting process differs and requires understanding the difference between misinformation and other harmful content, such as hate speech and harassment.

The Ofcom studies raise another issue: Why bother reporting when only 5–6% of the problematic content is removed (Ofcom, 2023)? If users were aware of the low response rate to complaints of harmful content, they might not see the value in spending their time reporting it. As noted, social media companies are increasingly relying on users to report this content (McMahon et al., 2025). Chakravorti (2025) describes the challenge of getting platforms to moderate content, concluding that the government's regulatory efforts in one country could result in higher exposure to misinformation in other countries where governments are not regulating content. Instead, Chakravorti (2025) recommends digital literacy training.

5.4. Cross-National Differences in Digital Resilience to Misinformation

In terms of cross-national differences (RQ1), the theoretical claims suggest that the US could be distinctive due to political polarization and large economic incentives (Humprecht et al., 2020), but France could also be unique due to higher uncertainty avoidance (Hofstede, 2025; Huang et al., 2024) as well as lower social media use and media trust (Newman et al., 2024). The US is exceptional in the higher use of fact-checking sites (Figure 1; Table 3), given the availability of these different websites. However, France is distinctive in its higher rates of verification (Figure 3; Table 4), which aligns with the uncertainty avoidance argument. Respondents from France seek out additional sources to verify suspicious information as part of reducing the uncertainty associated with suspicious information.

In terms of reporting misinformation to platforms, this activity is rare in all countries, but it is lowest in Canada (Figure 4; Table 5). Existing theories do not establish an expectation for Canada to be distinctive in this regard. However, the findings clearly indicate a need for interventions. For example, MediaSmarts programming could be revised to include training on various methods for reporting this content to platforms or other authorities. Given the platforms' low rates of removing harmful content, Canada and other countries might consider offering a separate reporting process, such as that provided through Ofcom in the UK.

The survey relies on self-reports of countering misinformation: using fact-checking sites, checking misinformation against other sources, and reporting to social media platforms. Future research could use web tracking data to assess the engagement in these activities and offer details on these practices. Despite this limitation, this study provides unique insights into digital resilience by examining generational and cross-national differences in resilience to online misinformation. The article discusses the role of digital literacy programming in building digital societal resilience. To understand generational differences across the globe, studies would need to consider the availability of digital training programs and how these may differ in content and format. The data were collected during a time of great crisis and may not apply in more settled times. In a period of multiple crises, citizens require an inventory of practices to cope with the threats to the information environment.

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Conflict of Interests

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Data Availability

Replication and data files are available at <https://doi.org/10.6084/m9.figshare.30837497>

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Community-Based Communication Technologies and Environmental Disinformation: Digital Resilience Under Far-Right Threats

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Abstract

Amid the polycrisis of Covid-19 pandemic and disinformation, rural Traditional Peoples and Communities in Brazil demonstrated remarkable resilience. This article examines the social mobilization strategies developed by 33 communities between 2020 and 2022, highlighting the community-based communication technologies used for collective action. Traditional Peoples and Communities are local groups with territorial ties and empirical knowledge who are recognized as key actors in environmental and natural resource protection. Although they play a crucial ecological role, there is a research gap on how these communities developed communicative strategies to strengthen resilience against disinformation during the pandemic. Guided by participatory and action research epistemology, the study involved 274 family representatives across nine Brazilian states from the Atlantic Coast, combining a multi-method approach. Data collection included questionnaires quantifying media access and internet usage alongside conversation circles and community mapping documenting communication practices. The results make explicit that Traditional Peoples and Communities faced two main types of disinformation: regarding Covid-19 vaccination and related to land use and speculation. In a context of limited digital connectivity, they developed communal internet practices—such as broadband sharing—that supported collective organization and information exchange. Besides, two experiences stood out: community health workers’ efforts to counter vaccine disinformation, and community leaders’ use of online meeting platforms to promote social mobilization in the face of environmental disinformation. Findings underscore how community-based communication technologies can foster political agency and strengthen resilience against disinformation.

Keywords

Brazil; community-based communication technologies; Covid-19; disinformation; environmental disinformation; far-right; Traditional Peoples and Communities

1. Introduction

Our article analyzes the social mobilization strategies and community-based communication technologies employed by 33 rural Traditional Peoples and Communities (*Povos e Comunidades Tradicionais*, hereafter TPC) during the Covid-19 crisis in Brazil (2020–2022). TPCs are diverse local groups that maintain strong ties to the territory and hold empirical knowledge, widely acknowledged as key actors in environmental and natural resource protection (Food and Agriculture Organization, 2024). Their contributions to sustainability are formally recognized in Brazilian law, specifically in Decree 6.040/2007, which established the national policy for the sustainable development of TPCs. Since TPC territories are rich in natural resources, these communities have been targets of land use speculation and are exposed to disinformation threats (Figueira & Távora, 2025; Laia, 2025; Medeiros et al., 2023).

Disinformation strategies are well documented (Bennett & Livingston, 2018; Quandt et al., 2025; Wardle & Derakhshan, 2017), but little research has examined how rural communities affected by disinformation use communication technologies to foster resilience against it. To address the gap, our article investigates the following research question: How did TPC along Brazil's Atlantic coast structure community-based communication technologies, both online and offline, in response to the pandemic and disinformation polycrisis (2020–2022)? A total of 274 family representatives from 33 TPCs across nine Northeastern states participated in the project for two years.

Section 2 begins by outlining how we conceptualize disinformation (Bennett & Livingston, 2018; Quandt et al., 2025; Wardle & Derakhshan, 2017) and how these phenomena manifested in the Brazilian context during the pandemic with the prominence of far-right politics (Albuquerque et al., 2024; Ferreira & Alcântara, 2023; Hunter & Power, 2019). Particular attention is given to the prominence of environmental disinformation and information disorder on land use, a defining feature for the Brazilian case (Figueira & Távora, 2025; Medeiros et al., 2023, 2024; Rajão et al., 2022; Recuero & Soares, 2020; Regattieri, 2023; Santini et al., 2025)

Section 3 examines the Latin American scholarly debate on community-based communication technologies (Freire, 2021; Paiva, 2003, 2022; Peruzzo, 2021, 2022; Sodr , 2014). This body of work conceptualizes communication as extending beyond media devices to encompass practices oriented toward political agency and social mobilization in the face of vulnerabilities, across different loci of interaction, either digital or analog.

In section 4 we set out the premises of the participatory approach and details the data collection. The research is epistemologically grounded in participatory and action research methodologies, guided by an ethical commitment to fostering social change (Fals Borda, 1987; Freire, 2021; Peruzzo, 2021). Within this framework, community representatives are involved in research design and data collection, co-producing knowledge as “activist-researchers” who conceptualize, design, and implement the research process. In total, 40 women acted as activist-researchers.

Section 4 also outlines the multi-method approach to data collection. Quantitative data on device use for internet access and on community internet practices were obtained through questionnaires (see Supplementary File). Qualitative data, focused on documenting experiences with community-based

communication technologies, drew on two methodologies: facilitated conversation circles and community mapping of communication practices.

In Section 5, we present quantitative data on internet use alongside qualitative findings showing that participants faced two main forms of disinformation: (a) disinformation about the Covid-19 vaccine; and (b) disinformation related to land use, particularly concerning the expansion of energy projects during the pandemic. Among the community experiences mapped, two stood out as especially significant and coherent with our investigation: (a) the role of community health workers (CHWs) in countering vaccine-related disinformation, and (b) the use of online meeting platforms to mobilize the community in response to threats related to land-use and environmental disinformation. Finally, we reflect on the limitations of the research and outline potential next steps for scholarly debate on the topic.

2. Far-Right Disinformation During the Pandemic in Brazil

In the context of the current polycrisis, disinformation has become a key instrument worldwide, intensified by an opaque, hypermediated, and hybrid media ecosystem. According to disinformation scholarship (Bennett & Livingston, 2018; Quandt et al., 2025; Wardle & Derakhshan, 2017), the concept refers to the intentional dissemination of false, distorted, or manipulated information with the purpose of causing harm. It may involve fabricating content, using misleading contexts, or manipulating real data to create confusion, shape perceptions, and influence social or political decisions. It intertwines true and false elements in contexts that appear credible. A disinformation scenario is characterized by overlapping flows of falsehoods and the strategic orchestration of information designed to deceive or confuse populations.

Disinformation has been a defining feature of the Bolsonarist far-right in Brazil (Albuquerque et al., 2024; Regattieri, 2023). As evidenced by Albuquerque et al. (2024), Ferreira and Alcântara (2023), and Hunter and Power (2019), the far-right in Brazil combines radical right-wing ideology, conservative values, illiberal agendas, populism, and authoritarian tendencies. It consolidates power through personalized leadership rather than institutional parties and is marked by militarism and anti-establishment rhetoric. Jair Bolsonaro, Brazil's president from 2019 to 2022, is their main leader, and his project expresses nostalgia for the 1964–1985 military regime as well as hostility toward minorities, environmentalists, and human rights activists.

Analyzing the landscape in Latin America and the Caribbean, Urbano et al. (2024) identified the relevance of environmental disinformation. This finding is highly relevant to our study as it often involves manipulating information about territories and resources belonging to TPC. In Brazil, environmental disinformation is marked by the strategic production and circulation of misleading narratives and attacks against environmental social movements and Indigenous and local communities, alongside historically manipulated official data on territorial occupation, environmental impacts, and development projects, aimed at legitimizing land grabbing and the expansion of energy and agribusiness ventures in the country (Figueira & Távora, 2025; Laia, 2025; Medeiros et al., 2023, 2024).

Brazilian scholars have documented the prevalence of environmental content within disinformation narratives during the pandemic. Santini et al. (2025), for example, demonstrate how far-right political actors used WhatsApp and Telegram to amplify anti-ecological narratives that co-opt the notion of sustainability, promoting direct attacks against TPCs, including Indigenous groups, and rural social movements. Likewise,

Távora (2024) and Medeiros et al. (2024) show how the Meta Ads Library has been employed to propagate hate speech against ecological social movements—portrayed as obstacles to “national progress”—and to disseminate greenwashing narratives. Regattieri (2023) and Recuero and Soares (2020) document the far-right’s use of environmental disinformation during crises such as the firestorms in protected areas, like the Amazon and Pantanal, identifying the deployment of artificial intelligence through social bots on Twitter and coordinated behavior on Facebook. Rajão et al. (2022) also examine the extensive use of manufactured environmental controversies by major far-right political actors.

In the context of Covid-19, Brazil became a hotspot for disinformation campaigns that affected public perceptions of the virus, vaccines, and government measures. Disinformation circulated widely across social media platforms, with WhatsApp playing a prominent role, and exploited political polarization, fear, and uncertainty. Key narratives included downplaying the severity of the virus, promoting unproven treatments (e.g., hydroxychloroquine), and questioning the safety and effectiveness of vaccines. These campaigns also targeted Indigenous and vulnerable communities, compromising public health interventions and contributing to higher infection and mortality rates in rural areas (Ferreira & Alcântara, 2023; Ricard & Medeiros, 2020).

Although far-right strategies are well documented, as discussed above, there is still a research gap regarding how local communities facing disinformation during the pandemic engaged with, developed, and deployed digital technologies and communicative practices to foster resilience. Communities across Latin America remain vulnerable due to limited technological infrastructure and restricted digital access, yet they also inherit deep traditions of strength, resilience, and resistance (Freire, 2021; Peruzzo, 2021). These communities perceive and practice communication as both a tool for mobilization and a mode of civic participation, an understanding that constitutes the epistemological foundation of this article, as elaborated below.

3. Community and Communication: Epistemological Foundations and Practices

TPCs in Latin America have a long-standing tradition of agency in resisting communication monopolies and land-related conflicts. They have consistently employed diverse communication strategies for self-organization, integrating digital and infrastructural activism with traditional modes of community engagement, mobilization, and conflict resolution (Freire, 2021; Paiva, 2003, 2022; Peruzzo, 2021, 2022; Sodr , 2014).

Communication experiences in territories with limited technological infrastructure and digital access, such as TPC in Latin America (Comiss o Econ mica para a Am rica Latina e o Caribe, 2018, 2020), underscore the need to research communication as a process of sociability and interaction rather than solely as a functional or informational activity mediated by devices. Sodr  (2014) conceptualizes communication as a cohesive community bond and a condition for organizing collective life, framing it within the epistemology of the “commons.” This perspective conceives of communication not merely as information transmission but as a dynamic process that generates and sustains social ties. The notion of the commons denotes a symbolic, ethical, and political space, collectively constructed through in-person community practices and engagements with communication technologies. As such, communication is not confined to media or digital platforms; it emerges as a foundational act that underpins diverse forms of social coexistence.

According to Sodr  (2014, p. 191), restricting the scope of communication to media systems or digital devices constrains the epistemological breadth and overlooks its inherent complexity. This reductionist approach tends to center scholarly attention on monopolistic media markets, thereby marginalizing more diverse and communitarian forms of communication. In contrast, the epistemological perspective adopted here embraces communicative processes rooted in local communities, resonating with the communitarian epistemology of communication (Paiva, 2003, 2022), and with pedagogical approaches to popular and community-based communication (Freire, 2021; Peruzzo, 2021, 2022). Paiva (2003) argues these communicative practices are shaped by the interests of local actors in narrating their own realities and are defined not by the services provided, but by their underlying social project, articulated through a clear commitment to mobilization and the active exercise of citizenship (Paiva, 2003, p. 126).

In line with Sodr 's perspective, such an approach also challenges the sender-receiver binomial as the basis of communication. Community communication, by contrast, refers to locally embedded modes of organization and relationality, where participants are not senders or receivers, but co-producers of meaning. Therefore, it transcends alternative uses of media, manifesting instead through interaction in community life.

The emphasis on community communication beyond the realm of media is reinforced by Peruzzo (2022), who comprehends the communicative process as intertwined with dynamics of consciousness–organization–action. These dimensions are rooted in structural bonds like community associations and social movements, where participatory protagonism serves as the core methodological approach. At the same time, this form of communication embodies struggles for human and citizenship rights as well as efforts to transform lived realities (Peruzzo, 2022, p. 57). By fostering collective, interpersonal, and intergroup relations—cultivating bonds and coordinating initiatives—community communication unfolds through direct, face-to-face interaction and mediated formats, bridging ancestral knowledge with contemporary digital technologies (Peruzzo, 2022, p. 69).

The theoretical and conceptual contributions of Sodr , Paiva, and Peruzzo materialized in a variety of community-based communication initiatives during the Covid-19 pandemic, which generated and disseminated content across multiple platforms and media. By mapping these activities in different regions of Brazil, Terso and Melo (2021) identified similar features among them: a critical stance toward individualism as a dominant value, the affirmation of the commons as a guiding organizational principle, and the integration of offline and online practices aimed at decentralization and expansion of informational access.

Communities across the country mobilized a range of strategies: Offline tactics, such as posters affixed to the walls of Rio de Janeiro's *favelas*, boats with loudspeakers navigating Amazonian rivers, and motorcycles outfitted with sound systems in city centers, were combined with digital tools such as WhatsApp audio messages, Instagram live streams, and videos uploaded to YouTube. As Terso and Melo (2021) note, the aim was not to replace existing communicative practices but to engage with and build upon the traditions already present in those territories.

The article was developed based on this epistemological framework, and the Section 4 outlines the methodologies employed.

4. Methods and Premises

We applied a participatory methodology rooted in the tradition of participatory action research in Latin America and were informed by reflections on conscientization, organization, and action (Fals Borda, 1987; Freire, 2021; Peruzzo, 2021, 2022). A key methodological choice was the incorporation of activist-researchers, conceptualized by Fals Borda (1987) as *investigadores populares*, in which research participants take on the role of researchers themselves. In the project, this role was filled by 40 women from the TPC who acted as multipliers and educators, engaging as local focal points, and participating in every phase of research from planning to implementation, assuring community members were protagonists in systematizing their own knowledge and practices.

The research design was developed to ensure the communities' active and leading role—from design and content to language and desired outcomes. This approach ensured active collaboration between community members and academic researchers, seeking to foster participation throughout the process, challenge structural inequalities in knowledge production, and reinforce civic engagement, consonant with Fals Borda's (1987) vision of research as a praxis oriented toward social change.

From an ethical standpoint, the research design explicitly rejected extractivist practices that have historically characterized academic work in these territories, particularly in Latin America (Freire, 2021). Extractivist research involves practices in which data and findings are unilaterally gathered without meaningful communication with participants and where the benefits of the research are not equitably shared with the communities that contribute their knowledge and labor (Gorman, 2024).

4.1. Data Collection

The data collection combined qualitative and quantitative strategies. It included questionnaires designed to quantify media access and internet use (see Supplementary File), as well as conversation circles and community mapping to document community-based communication practices. The questionnaires and the application methodology were co-created in partnership with the activist-researchers. This co-creation took place specifically during a conversation circle titled Popular Methodologies in Times of Pandemic, which was dedicated to this purpose.

The questionnaires comprised four sections: (a) general household information; (b) internet access and use; (c) access issues during the pandemic; and (d) consumption of other media and broader relationships with technology. The first section gathered data on the number of household members, age groups, education levels, and income (optional question, to preserve household autonomy). The second section, on internet access and use, asked participants about the technological devices available in the household, the presence of a home internet connection, frequency of use, service costs, and the websites and applications most frequently accessed. The third section addressed problems encountered during the pandemic including connection quality, digital access to government benefits, and access to information on prevention measures. Finally, the fourth section asked about access to other media (such as television and radio) and the types of content most consumed.

The questionnaires were answered by 173 people from 33 rural communities in the nine states of Brazil's Northeast region: Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, and Sergipe. Prior to administration, the activist-researchers read and recorded the informed consent statement, which detailed the research objectives and guaranteed participants' anonymity and right to withdraw at any time without justification. Data collection prioritized women respondents and employed a hybrid format: Some participants completed a digital version via the open-source platform RIOS, while others filled out printed questionnaires in person with the support of activist-researchers. The quotes presented here were translated by the authors.

Below (Figure 1) is a photographic record taken by one of the activist-researchers during the interview process.



Figure 1. Questionnaire administration by activist-researchers. Source: *Intervozes* (2022).

Qualitative data were gathered through six conversation circles, engaging 40 women from the 33 communities, with participants rotating across sessions. Each circle employed a methodology of discussing challenges related to a focal point—such as the pandemic, disinformation, or environmental justice—and mapping the online and offline community-based communication technologies used to build resilience against such threats. The circles were envisioned as spaces for learning, exchanging, and capacity building in territorial governance and research methodologies. The topics addressed were:

1. Experiences and methodologies for mapping territories and the internet;
2. Popular methodologies in times of the pandemic;
3. Community internet networks: definition and construction;
4. Between the ancestral and the digital: the transformation of technology and implications;
5. Communication and territory: public policies on ICT access and video as evidence of rights violations;
6. Technologies, women, and territory: which technological pathways and forms of internet access are possible to support women and the self-determination in TPC?

To ensure broad participation and territorial representativeness, online conversation circles were supported by community leaders who helped to relocate participants from areas with limited digital access to venues with more robust ICT infrastructure. This approach aimed to connect groups separated by social distancing measures promoting integration, mutual learning, and collective reflection on pandemic-related

disinformation. Nonetheless, the online format posed significant challenges to participation due to persistent limitations in internet access and varying levels of media literacy.

The pedagogy of the conversation circles fostered culturally rooted dialogue, integrating local storytelling and cultural references as core components of the learning experience. Each session followed a three-part structure. Firstly, each woman would bring material objects or symbolic references from their territories related to the topic. This was followed by an open dialogue where experiences, challenges, and potential solutions were shared and co-created. Finally, after the circle, a graphic visual representation of the conversation was produced and shared with the wider community to visualize key themes, register participants' perspectives, and consolidate the discussions.

Figure 2 depicts Conversation Circle 4, titled *Between the Ancestral and the Digital: The Transformation of Technology and Implications*, which was led by women from the city of Alagoa Grande in the state of Paraíba. At its center, symbolic objects are arranged on a cloth: drums, plants, harvested food, flowers, footwear, and everyday items. These objects evoke memorial practices and embody the communicative dimensions experienced by TPC. The drum, for instance, represents an ancestral technology that signifies rhythm and memory; the plants and food anchor the dialogue in territory, care, and subsistence; and the circular formation of the participants expresses principles of collective decision-making.



Figure 2. A conversation circle with the TPC. Source: Intervezes (2022).

In this circle, a participant pondered on the relationship between ancestral and digital technologies, acknowledging the role of her religious community as a broker for internet use:

It became clear that owning a computer was insufficient without appropriation. Despite possessing the device, I encountered operational barriers. This led me to bring it to the *terreiro* [an Afro-Brazilian religious temple] to acquire the necessary skills together with other members of the community. (S.B., community member, Paraíba)

Such considerations emerged across all six circles and were discussed among the groups, who shared different strategies for overcoming structural barriers. A graphic visualization of Circle 4 is presented in Figure 3.



Figure 3. Graphic visualization of conversation Circle 4. Source: Interozes (2022).

The use of graphic visualization sought to synthesize the conversations visually, supporting communities in recalling key discussions and enabling the dissemination of outcomes to a wider audience. This approach operated as a tool for constructing collective memory and social meaning, reinforcing shared learning and extending the dialogue beyond the immediate encounter. As such, graphic visualizations form part of the broader repertoire of community-based communication technologies developed by TPC in Brazil (Trombini & Motta, 2025).

Quantitative and qualitative data were gathered concurrently, and the research design did not intend for these data to directly inform one another. The quantitative component sought to delineate general patterns of technology access and usage by the communities, thereby establishing an evidence-based framework for future public policy advocacy on internet access. Conversely, the qualitative component sought to map community-based communication technologies through an iterative process, wherein the very act of systematizing and documenting experiences fostered critical reflection on their inherent potentials and limitations. This way, the participatory premise ensured that the data collection process itself functioned as a mode of knowledge production, capacity building, and community mobilization.

Having outlined the methodological approach and premises, Section 5 presents our findings. First, we analyze the quantitative data on internet access and use followed by an exploration of two key community-based communication experiences mapped during the conversation circles.

5. Results

The results are situated within a broader context of threats and inequalities deeply informed by the 274 families from 33 communities who contributed to data collection.

5.1. Quantitative Overview of Internet Use Among Research Participants

On average, families spend up to USD 40 per month on connectivity. For many households living on a minimum wage income (USD 278/month), this represents around 15% of their monthly earnings. In remote or mountainous regions, costs can exceed USD 100 due to additional expenses for equipment installation and maintenance, like towers and technical support. These amounts far surpass the levels recommended by the International Telecommunication Union (2025) which stipulate that internet services should not cost more than 2% of a family's per capita monthly income, highlighting the socioeconomic barrier these communities face in accessing digital connectivity.

Wi-Fi and mobile broadband data plans were the most common forms of internet access, reported by 59% of families. In 28% of cases, connectivity infrastructures had been installed as compensatory measures associated with large projects in their territories, such as wind farms or railways. Among households without a home connection, 27% improvised access by capturing neighbors' signals. Fixed broadband (Wi-Fi) was particularly prevalent in households with a stronger presence of women, suggesting their leading role in debates and decisions about digital access in families and communities.

In Figure 4, results show that among households with internet access, the primary device used was the mobile phone (70,7%) followed by computers and/or mobiles (7,1%). Mobile phones were typically shared within the family, with most households owning just two devices, one reserved for use at home and the other for activities outside, such as selling goods in urban markets.

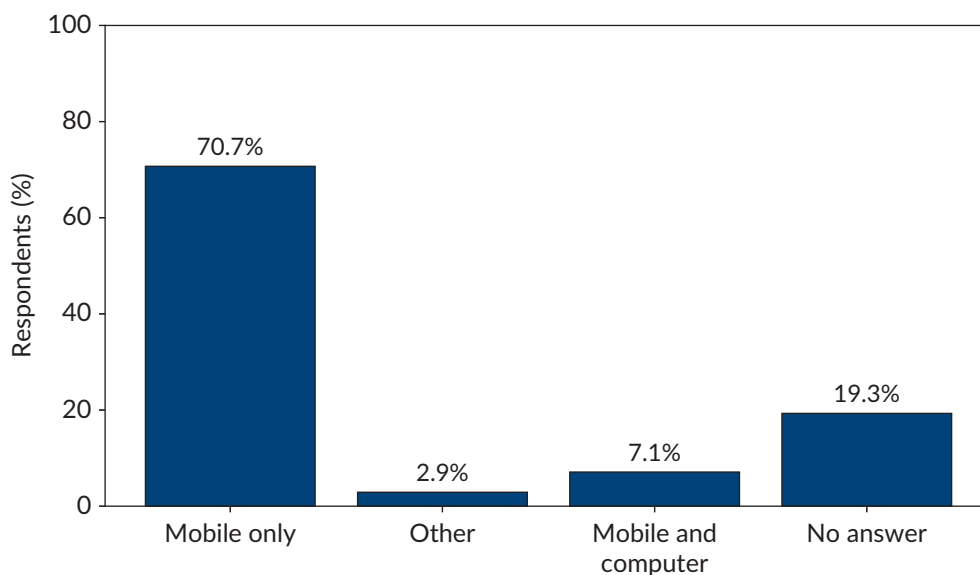


Figure 4. Devices used for internet access.

The predominance of mobile phones as the main means of internet access posed significant barriers to the use of more complex applications and services. During the pandemic, 61% of families reported an increased need for digital tools to support remote education and 54% to access health information. However, limited media literacy and the ergonomic constraints of mobile devices often impeded effective use. These challenges led to exclusion but they also gave rise to community-based support networks. More experienced individuals and CHW acted as facilitators, coordinating collective strategies to help others navigate digital

services through practices of solidarity and mutual learning. Given the strong link between digital access, education, and community engagement, women stood out as the most frequent and active users of connectivity services.

During the pandemic, 74% of households reported having daily internet access, using it at least five days a week, while 26% lacked reliable connectivity. This uneven pattern indicates that, although the internet became part of everyday practices, infrastructural limitations and financial costs constrained consistent use. In many cases, access was intermittent or mediated through collective arrangements, reflecting a hybrid digital environment in which connectivity functioned not only as a resource but also as a limitation in community life.

Besides, environmental factors were identified as challenges to connectivity. Over 60% of households reported occasional or frequent internet disruptions during rainfall, underscoring the need to distinguish between nominal access and meaningful connectivity. Signal availability was affected by geographic and meteorological conditions while usage was further constrained by data caps in the case of mobile broadband.

In terms of platforms, everyday use was dominated by messaging applications (92%), social media (88%), and search engines (84%), followed by streaming services (67%) and e-learning platforms (44%). Messaging applications, particularly WhatsApp in Brazil, often replace traditional telephony and serve as essential communication tools in areas with weak infrastructure.

Work-related applications were used by 26% of respondents, while videoconferencing applications reached 36%. These figures likely express the low level of digitalization in local work activities as well as the technical and ergonomic limitations of mobile devices and unstable connectivity, which remain persistent challenges in TPC territories. Regarding social media, as presented in Figure 5, Facebook (80%) was the most frequently mentioned platform, followed by YouTube (74%), Instagram (63%), and TikTok (30%).

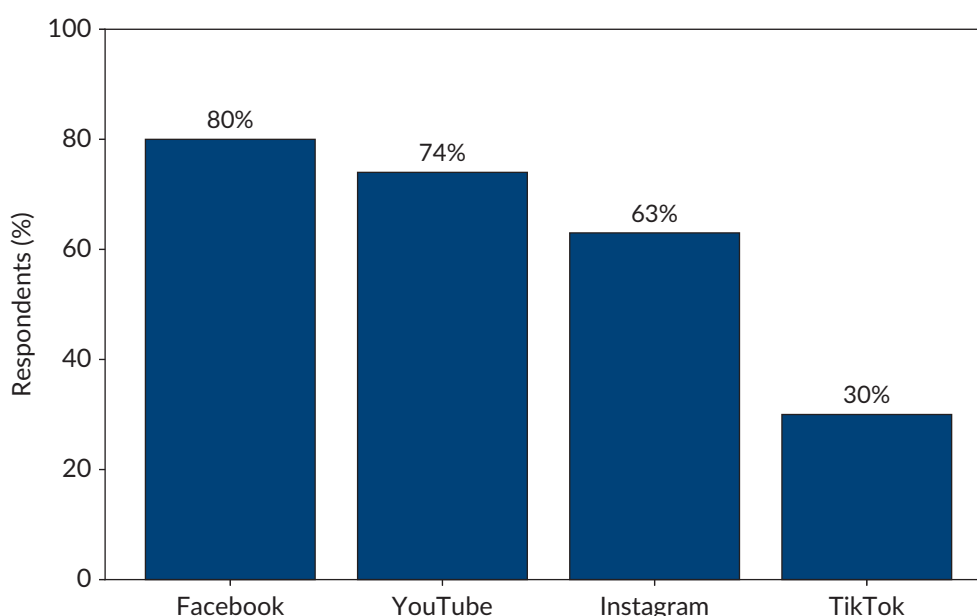


Figure 5. Social media applications used by families.

Facebook is well consolidated in rural territories, possibly due to its lower data consumption, ease of use, and multifunctional design that combines news, community groups, and interpersonal communication. YouTube gained relevance as both an entertainment and educational resource offering tutorials, religious services, and cultural content that proved valuable during periods of social distancing. By contrast, Instagram (63%) and TikTok (30%) appeared less central, perhaps because of their emphasis on visual aesthetics, influencer culture, and rapid trends that appeal more to younger audiences than to intergenerational, community-oriented practices. Overall, this distribution suggests that families gravitated toward platforms offering the broadest mix of accessibility and multifunctionality, integrating them into everyday routines in line with local practices and infrastructural conditions.

Figure 6 indicates that a substantial share of families relied on emergency strategies to secure internet access.

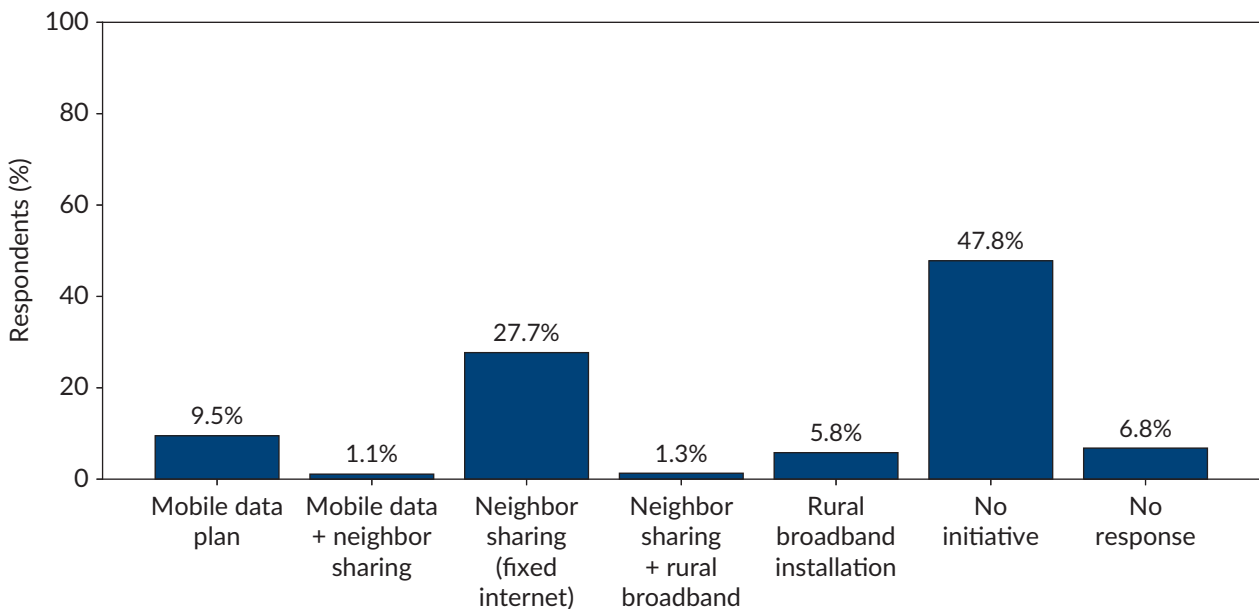


Figure 6. Emergency strategies for internet access adopted by TPC.

The most notable emergency strategy was sharing fixed broadband internet with neighbors, adopted by 27.7% of families. The fact that more than a quarter of households depended on neighbors for connectivity stresses the urgent need to expand equitable internet access and the vital role of local solidarity networks in compensating for gaps left by public policy and market-driven infrastructure.

Despite the adoption of diverse strategies for internet use, a digital divide persists in TPC territories, most visibly in the limited availability of devices. In some communities, such as the *quilombola* territory of Sumidouro in the state of Piauí, there is not a single computer available. This infrastructural deficit poses a serious obstacle to remote education, access to digital platforms, and participation in virtual meetings and public debates, which have become essential forms of mobilization in contemporary information societies.

Communitarian strategies remain a defining feature of life in TPC territories: Only 7% of respondents reported not engaging in any form of collective activity. Most communal practices are tied to cultural and political representation, signaling high levels of social organization and agency. The use of digital

infrastructure is likewise oriented toward creating safe, self-determined spaces, grounded in diverse knowledge and practices, to counter disinformation, racism, misogyny, and environmental injustice.

5.2. Community Mapping

Community mapping consisted of gathering and systematizing information about communication experiences already developed by the communities. Through the community mapping, we identified four principal domains of practice: (a) the use of WhatsApp communities and open-source mapping tools to strengthen “houses of seeds,” where non-transgenic seeds are stored for food production; (b) agroforests and kitchen gardens that sustain healthy diets, organize self and collective care, and allowed limited in-person interaction while observing social distancing measures; (c) the use of digital devices to commercialize food in local markets and fairs, where goods and information circulated across the wider community; and (d) the recording and online sharing of ancestral dances, such as *coco de roda* and *ciranda*, as a form of interaction and communication for those unable to attend in-person cultural events, helping to meet ongoing cultural needs during periods of distancing.

Furthermore, two experiences illustrate our argument on the Covid-19 polycrisis, marked by disinformation about vaccines, land use, and the environment. The first experience concerns the role of CHWs in combating vaccine disinformation; the second involves environmental disinformation and the mobilization of local communities to advocate for better communicative practices around the implementation of renewable energy projects in a context of misleading narratives about risks and opportunities.

5.2.1. CHWs and Reliability of Vaccine Information

Embedded in the territory through Brazil’s Unified Health System (*Sistema Único de Saúde*, which guarantees universal healthcare access for the entire Brazilian population), particularly the Family Health Strategy, CHWs sustain continuous face-to-face contact with households, know local leaders and routines, and translate technical instructions into locally meaningful terms. For many TPCs in rural Brazil, they are the first point of contact with the Unified Health System and the primary way communities access and relate to the system (Lotta et al., 2022). This territorial reach and relational trust made CHWs frontline brokers during the Covid-19 crisis when vaccine disinformation spread via messaging applications (Ferreira & Alcântara, 2023; Hunter & Power, 2019).

Through community mapping, we documented how CHWs mitigated the impact of vaccine-related disinformation circulating via WhatsApp voice memos. Recurrent false claims raised in conversation circles included that “two elderly people died because of the vaccine,” that “the vaccine would dry up breast milk,” and that “the vaccine causes infertility in young people.” A key practice identified was the organization of collective listening sessions in which CHWs played the memos together with families to unpack inaccuracies and manipulative cues. Efforts to counter distrust went beyond debunking: CHWs combined these explanations with day-to-day follow up on post-vaccination effects and active monitoring via offline communication networks, fostering a form of media literacy that strengthened confidence in vaccination.

During the pandemic, when digital channels assumed outsized importance, the in-person presence of CHWs opened spaces for contestation, mediation, and dialogue around circulating information. Doorstep visits,

front yard conversations, and small meetings in community venues enabled residents to voice doubts, negotiate meanings, and cross-check what they “had heard on WhatsApp” against clinical protocols and local epidemiological data.

Amid pervasive disinformation, information sharing among CHWs became a form of care and collective support grounded in critical uses of online media and offline practices—evidence of the localized appropriation of community-based communication technologies. These interactions prebunked rumors and reconfigured information flows by bringing evidence-oriented dialogue into everyday life and coupling explanations with concrete services (appointments, transportation, vaccination cards), which improved accountability and follow-through. In territories with limited connectivity, this face-to-face, trust-based work within the Unified Health System framework proved decisive for effective communication and social mobilization. As a result, reliable information reached places that would otherwise have been hard to access.

5.2.2. Environmental Disinformation and Mobilization Over Land Use for Renewable Energy Projects

The abundance of natural resources in Brazil—particularly in TPC territories rich in land, sun, wind, and water—makes these areas highly attractive for energy-related industries while simultaneously increasing their vulnerability to economic land speculation. This dynamic is further shaped by the implementation of International Labor Organization Convention No. 169, which requires free, prior, and informed consultation with affected communities before any project is undertaken (Food and Agriculture Organization, 2024). Although this safeguard is essential for participatory decision-making, it has also become a point of dispute as economic and political actors often seek to bypass or manipulate the consultation process (Rojas Garzón, 2009). Such projects have been widely associated with conflicts in TPC territories (Cavalcante et al., 2025), while community leaders and social movements have become targets of disinformation campaigns designed to undermine mobilization and facilitate corporate land use (Laia, 2025; Medeiros et al., 2023, 2024; Santini et al., 2025).

Rajão et al. (2022) demonstrate that the far-right government relaxed environmental regulations during the pandemic, facilitating the expansion of extractive projects into protected territories without proper technical assessment. In the states of Piauí and Sergipe, participants reported that renewable energy initiatives, including green hydrogen production and wind farms, continued to advance despite pandemic restrictions, creating overlapping crises between the health emergency and the need to participate in territorial decision-making. Through community mapping, we documented how local leaders mobilized families affected by these projects which moved forward amid the spread of disinformation circulating by word of mouth and via WhatsApp.

Two dynamics stood out among the forms of disinformation identified. The first was the circulation of contradictory information about the risks and benefits of renewable project expansion, involving deliberate efforts to confuse public opinion by blending overly technical data with false claims about the threats posed to the communities. The second dynamic involved influential local actors who, through privileged access to government bodies or corporate representatives, used distorted information to advance their own interests, often spreading confusing narratives about the projects’ opportunities with little regard for their broader impacts on local populations and biodiversity.

In response, community leaders established commissions to circulate reliable information, considering restrictions on in-person activities. These commissions, which included representatives from the community, government, and industry, organized a series of hybrid meetings via Zoom and Google Meet to advocate for improved information practices and to expose the disinformation they were facing. One participant noted that the notion of “development” was consistently invoked to downplay the risks associated with the projects and to portray their cultural practices as obstacles to progress: “What we experience, from our territories, is that most technologies designed by the energy corporate sector violate ancestral practices of community and socio-environmental coexistence. And all of this happens under the discourse that it is something “necessary for development” (V.S., member of a rural community in Sergipe).

Participants emphasized that the establishment of the commission and the use of digital platforms facilitated reflection on the information circulating about project expansion. This, in turn, helped strengthen territorial and cultural bonds and increased transparency in negotiations. Another participant observed that:

Many wind farms appropriate our land and cause various forms of disturbances affecting animals, plants, and the physical and mental health of our families. Dominant discourses present these projects as producers of sustainable energy, but this claim does not hold in our lived experience, since they have not been sustainable for us. (A.C., member of a rural community in Paraíba)

The creation of the commission and the use of digital meeting platforms thus served to clarify false or misleading content and also to share and collectively construct local perspectives on sustainability and clean energy.

6. Discussion

During the pandemic, when TPC faced overlapping crises, they responded by developing a range of community-based communication technologies to build resilience. The collective dimension was a defining feature of internet and communication technologies use among the TPC that participated in the research, characterised by an emphasis on sharing rather than individual use or access: for instance, families temporarily moving to neighbors’ homes with better internet connections in order to take part in digital training sessions and mobilizations.

These findings are consistent with previous research on community communication (Freire, 2021; Paiva, 2003, 2022; Peruzzo, 2021, 2022), which demonstrates that communities’ collective practices long predate digital devices and become intertwined with communication technologies, online and in person. Participants also recognized these features, describing the sharing of devices or internet access as a tradition passed down through generations.

Our results align with the TIC Domicílios 2021 survey (Centro Regional de Estudos para o Desenvolvimento da Sociedade da Informação, 2022) which quantifies internet access in rural areas and found that 27% of rural households in Brazil share internet connections with neighbors, compared to 16% in non-rural areas. While sharing can be seen as positive in a context of low connectivity, the findings suggest that sharing is shaped not only by cultural or ethical preferences but also by persistent digital inequalities experienced by TPC, despite improvements in national connectivity indicators during the pandemic (Centro Regional de Estudos para o Desenvolvimento da Sociedade da Informação, 2022; Melo, 2023).

According to the TIC Domicílios 2021 survey (Centro Regional de Estudos para o Desenvolvimento da Sociedade da Informação, 2022), internet use in rural areas increased from 53% in 2019 to 73% in 2021, yet 30% of rural households still lacked a connection, mainly due to cost (28%) and limited digital skills (26%). However, the project data reveal a more nuanced reality: Only 7% of households have a computer, and over 60% reported occasional or frequent internet disruptions during rainfall. These results provide evidence that digital exclusion overlaps with historical marginalisation. To overcome limitations, our findings call attention to the importance of policies that address not only connectivity gaps but also the socioeconomic and territorial inequalities that shape technology access and appropriation.

Solidarity networks also emerged in the role of the CHWs as digital brokers, confirming the hybrid use of online and offline communication, as well as the importance of traditional forms of social mobilization where state provision fails. In this regard, communication combines the transmission of information with a cohesive social bond, as argued by Sodré (2014). CHWs served as frontline brokers against vaccine disinformation through home visits and collective listening sessions, rebuilding trust in scientific information and vaccination. While previous evidence has shown that prebunking strategies might reduce discernment between reliable and unreliable information (Guess et al., 2020) and diminish general trust in media (Hameleers et al., 2022), our findings indicate that, when prebunking is tied to context-specific measures and rooted in local mediators, it is perceived as useful.

Regarding practices to build resilience against environmental disinformation, leaders criticized false narratives that framed energy project expansion solely as “development,” thereby obscuring associated risks. This aligns with Santini et al. (2025) and Medeiros et al. (2023), who point to how “development” narratives and portrayals of TPC practices as “obstacles to progress” are mobilized in environmental disinformation. It also aligns with Figueira and Távora (2025), who showed that information disorder around land use has historically shaped its exploitation in the country. In response, leaders organized communicative commissions to confront them, discuss, and build perspectives on sustainability that take into account local culture and empirical knowledge. This is consistent with Laia’s (2025) argument that TPCs build resilience against disinformation not only by correcting false content but also by consolidating local and contextual knowledge.

In line with the ethical premise of the participatory and action research methods (Fals Borda, 1987; Freire, 2021; Peruzzo, 2022), the project went beyond data gathering to catalyze political participation and digital rights advocacy as instruments for securing other fundamental rights. Tangible outcomes included support for the election of a rural worker affiliated with Rural Working Women’s Movement of the Northeast to the Brazilian Council for the Universalization of Telecommunications Services, and the participation of a *quilombola* woman leader from the National Coordination of Black Rural Quilombola Communities as a facilitator at the 11th Brazilian Internet Forum in 2021. These results underscore that digital rights constitute a core dimension of wider struggles for justice, autonomy, and democracy in Brazil.

7. Conclusions

The project mapped TPCs’ use of community-based communication technologies and systematized the forms of social mobilization both online and offline. Grounded in Latin American communication studies, its epistemological lens understood communication not as mere information transmission but as a community

bond, a mediation of political agency, a space for exercising citizenship and self-organization amid conditions of vulnerability.

Overall, the findings reveal sustained resistance and resilience by TPC during Brazil's recent far-right federal government (2019–2022). In a context marked by disinformation and pandemics, TPC developed practices to consolidate mobilization and deepen collective self-awareness. They adapted digital tools to meet everyday needs, blending older and newer technologies in hybrid, flexible, and creative ways to build resilience.

This article addresses a critical gap by examining how rural communities developed resilience strategies in the face of far-right disinformation and has shown that, in Brazil, digital rights are inseparable from broader struggles for justice, autonomy, and participation. Communities' capacity to innovate and adapt, braiding the ancestral with the digital, underlined their central role in confronting the polycrisis and challenging disinformation. Much like an ecosystem's interdependence, our findings suggest that the resilience of TPC rests on dense communication networks that act as a social immune system, fortifying communities against threats while sustaining their cultures and claims to sovereignty. Future research could build on our results by incorporating these perspectives into structured quantitative analyses or by deriving insights that enable a more granular exploration of the qualitative processes described here.

Our study presents limitations that should be considered. First, regarding the representativeness of the studied population, despite a high response rate among participants (173 out of 274 families involved), the use of non-probabilistic sampling limits the generalizability of the findings, so the results should be understood as context-specific. A second limitation concerns the scope of the community mapping. Although the study was able to document important communicative practices, these represent only a fraction of the experiences carried out by TPC. Constraints related to time and the broader polycrisis restricted the possibility of compiling a larger and more comprehensive set of practices developed in these territories.

Finally, the interview results, together with the observations derived from community mapping, reveal a tension between the private model of digital connectivity—centered on individual or household access—and the collective practices observed in TPC territories. As previously discussed, in the absence of sufficient financial resources to pay for private internet plans in each household, families organized networks of solidarity to ensure that as many people as possible could access the internet. This situation stresses the need for a more critical discussion on national internet penetration indicators and points to the potential for a public digital connectivity policy that, inspired and informed by TPC practices, is grounded in collective access. In other words, beyond merely granting private companies the right to provide internet services, public policies could provide connectivity plans that include, for example, the installation of community hotspots.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The data used for this research can be requested via email.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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Targeted for Speaking Out: Gendered Disinformation and Digital Resilience in Bangladesh's Polycrisis

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Abstract

This article examines how disinformation and harassment targeted women activists since Bangladesh's July–August 2024 mass uprising—and how they responded. Focusing on Facebook and Telegram—central since the uprising—we show how vigilantism and misogyny turned these spaces into hypermediated battlegrounds. Sexualized slurs and visuals, fabricated scandals, and moral shaming worked as coordinated repertoires that blurred truth and falsehood, delegitimized participation, and spilled into offline intimidation. Based on semi-structured interviews with 25 activists and a feminist critical discourse analysis of social media artifacts, this study engages networked misogyny, digital vigilantism, and digital social resilience. It contributes, first, empirical evidence of gendered disinformation as violence that weaponizes visibility, mobilizes audiences as enforcers, and reconfigures reputations across online/offline spheres; and second, an account of resilience as collective and relational rather than solely technical or individual, while exposing platform and institutional failures. The analysis advances Global South feminist perspectives and recommends more context-specific interventions toward disinformation and resilience.

Keywords

Bangladesh; digital resilience; digital vigilantism; Facebook; gendered disinformation; Global South; misogyny

1. Introduction

In July–August 2024, Bangladesh experienced its largest uprising since independence. Beginning as student protests against the restoration of a long-contested public sector job quota—reserving 30% of government jobs for freedom fighters' descendants and considered inequitable—they quickly escalated into nationwide reform demands. Many viewed the quota as benefiting some groups while disadvantaging others from less

privileged backgrounds. Police crackdowns, mass arrests, around 1,400 deaths, and repeated internet shutdowns intensified this cross-societal uprising, ultimately ending the 15-year Awami League-led government rule and leading to the installation of an interim government (Office of the United Nations High Commissioner for Human Rights, 2025). Protesters used social media for documentation and coordination; it simultaneously became a space of mobilization *and* suppression. For the first time in Bangladesh's history, women marched at scale, led frontline barricades, and became the uprising's defining symbols (Begum, 2025). Their heightened visibility also made them immediate targets of digitally mediated misogynistic attacks (Akhter, 2025). Harassment, disinformation, and sexualized attacks, rooted in patriarchal norms, weaponized shame and moral panic to restrict their political participation (Judson et al., 2020; Sessa, 2020).

These dynamics unfolded amid what we conceptualize as “polycrisis” (Morin & Kern, 1999): overlapping political, economic, and civic-rights pressures intensifying one another. Following the caretaker system's abolition and successive elections with irregularities, boycotts, and constraints on opposition activity, Bangladesh's state power had increasingly become centralized, civic space narrowed, and public trust eroded (Office of the United Nations High Commissioner for Human Rights, 2025). Furthermore, widening economic inequalities, youth unemployment, and grievances over job quotas intensified discontent. Online spaces also became key arenas for acute gendered attacks.

Existing scholarship has documented Facebook-based gendered disinformation during elections (Baksh et al., 2024) and the vulnerability of women journalists to misinformation (Parvez, 2025). Violence and intimidation are deeply embedded in Bangladesh's political culture, disproportionately limiting women's participation (Paasilinna, 2016). But these studies largely quantified abusive content or treated gendered attacks as a subcategory of “misinformation.” Less attention has been given to activists' own lived experiences and how resilience operates within polycrisis. Furthermore, the aftermath of the uprising, with intensified attacks (Akhter, 2025), demands more scrutiny. We therefore ask how women activists experienced attacks, how these harms influenced their visibility and safety, and how they practiced resilience in response.

Gendered disinformation—false, distorted content weaponizing stereotypes to discredit women and gender minorities—should be considered violence rather than merely a falsehood problem (Gehrke & Amit-Danhi, 2025). It thrives in upheavals, particularly when women challenge dominant political narratives (Judson et al., 2020; Otieno, 2024; Sen & Jha, 2025; Veritasia et al., 2025), and serves strategic political goals. It both spreads falsehoods and mobilizes shame and humiliation to weaken resilience. It differs from hate speech, harassment, and incivility, which are abusive or discriminatory but do not necessarily involve intentional deception, reputational fabrication, or coordinated circulation. Visual manipulations (e.g., memes, edited screenshots, and deepfakes) aim to evoke shame, disgust, and moral outrage, reinforcing gender norms and nationalist scripts that cast women as immoral, “Western,” or destabilizing (Sen & Jha, 2025). Remedies like fact-checking and media literacy are limited because disinformation is structural, pervasive, and affective. Political falsehoods often resurface in slightly modified forms even after correction (Larraz et al., 2024). By extension, we can expect gendered disinformation to show similar persistence in patriarchal societies. Evidence from authoritarian, conflict contexts shows that corrective efforts have little impact (Badji et al., 2024).

We treat gendered disinformation against activists as violence, deliberately using force or power to intimidate or suppress participation for political ends and likely to cause psychological harm or coercion

(Krug et al., 2002). In Bangladesh's current context, through pornified deepfakes, impersonation, and fabricated scandals, it has been employed to "discipline" dissenting women and deter their civic visibility. These on-platform harms trigger severe real-world consequences, e.g., offline intimidation, family fallout, and professional damage, aiming for a chilling effect on participation. Thus, gendered disinformation is not incidental hostility but a *modality of violence* enacted through digital infrastructures. We find that, since the uprising, it has intensified, taking sexualized and more acute forms, seeking to erode women activists' legitimacy. Activists resisted through collective reporting, counter-speech, emotional solidarity, and deliberate re-engagement. Thus, we highlight lived experiences in a post-uprising transitional context and advance feminist, context-specific resilience as a *shared* ongoing struggle rather than only an individual trait.

2. Literature Review

Gehrke and Amit-Danhi's (2025) "triangle of violence" connects creators, targets, and audiences, showing how mis/disinformation, including visual and AI-assisted forms, inflict harm through reputational damage and witnessing effects, presenting disinformation as structural and patterned violence. Attacks also serve as semiotic violence—the use of words, symbols, images, metaphors, visual manipulations, or bodily representations to degrade, delegitimize, or discipline women in public life (Krook, 2020, Chapter 16)—that normalizes patriarchal norms and inhibits participation (Hedling, 2024). Similarly, false and misleading content function as a long-term misogynist strategy to reproduce women's historical exclusion from decision-making (Gehrke, 2023; Sobieraj, 2020). So, gendered disinformation, a specific form of violence against women in politics, needs conceptual precision in how it is studied and addressed (Bardall, 2022). Hameleers (2025) further demonstrates how visual disinformation often relies less on fabrication and more on the deceptive re-contextualization of authentic visuals, making it harder to detect and counter in gendered contexts. In our framework, harassment refers to abusive, derogatory content, whereas disinformation requires an element of intentional deception/manipulative reframing (e.g., fabricated quotes, falsified visuals, altered screenshots) aimed at damaging credibility.

Scholarship has recently begun differentiating gendered disinformation from adjacent phenomena. Peer-reviewed work remains limited, as much early definitional and practical leadership emerged from NGOs and policy reports (Gehrke & Amit-Danhi, 2025). A review finds only 14 of 143 studies mention gender (Alcântara & Valentim, 2023). Recent work urges greater focus here (Agajanian & Moran, 2025). Global South contexts are also underrepresented (Badrinathan & Chauchard, 2023). Together, these gaps motivate our empirically grounded, context-specific intervention.

Following Banet-Weiser and Miltner (2016), we define networked misogyny as not merely individual hatred but a collective, platform-enabled, virulent policing of women. During elections, gendered disinformation intertwines with misogyny, racism, xenophobia, and foreign information manipulation to undermine women's legitimacy ("Gendered disinformation," 2024), producing psychological and reputational harms that suppress political participation. Disinformation intensifies existing racialized and gendered narratives (Marwick et al., 2023). Multimodal, especially visual, forms remain understudied (Gehrke & Amit-Danhi, 2025). Digital vigilantism—operationalized here as the coordinated, user-led monitoring, shaming, doxing, and reputational punishment—operates as extralegal punishment of individuals for perceived social or political transgressions (Trottier, 2017). Bangladesh's limited participation in the #MeToo movement further

highlights how patriarchal norms, taboos, and fears of retaliation limit women's ability to speak out, despite digital access (Moitra et al., 2020).

Across India (Sen & Jha, 2025; Vincent & Kumari, 2023), Pakistan (Javed, 2025), Kenya (Otieno, 2024), South Africa (Martiny et al., 2024), and Italy (Esposito & Semenzin, 2025), election cycles and cross-platform dynamics amplify harassment, smear campaigns, deepfakes, and technology-facilitated gender-based violence, affecting professional well-being and depressing activism. Bangladeshi women journalists face sexualized misinformation and religious shaming (Parvez, 2025). Tropes of seduction, betrayal, and foreign loyalty persist (Sen & Jha, 2025). Such harms undermine electoral integrity and democratic participation (Veritasia et al., 2025). Globally, 73% of surveyed women journalists report online violence, with 41% linking abuse to false information with offline consequences (Posetti & Shabbir, 2022).

Tomkova (2020) conceptualizes digital social resilience as mobilization, solidarity, and moral purpose under hybrid threats. Bangladeshi projects—Protibadi, ProtibadiNext, and Unmochon—document abuse and build informal support networks (Sultana et al., 2021). Despite being innovative, these designs show the limits of techno-fixes in the absence of social and institutional change, because they are unevenly accessible. Feminist perspectives reframe resilience as a relational, collective process, rooted in care, solidarity, and infrastructural repair, rather than individual “bounce-back” logics (Gill & Orgad, 2018; Gregoratti et al., 2024), emphasizing collective protection. Addressing platformized toxicity, therefore, requires multi-point interventions: mitigating spread, weakening illegitimate authority signals, and reducing harm through solidarity networks (Recuero, 2024). Platforms simultaneously exacerbate coercive control and hold potential for prevention (Dragiewicz et al., 2018). Traditional fact-checking largely fails to address symbolic and affective harms, as gendered disinformation circulates through emotion, belonging, and performativity rather than verifiable claims (Bardall, 2022).

Collectively, research shows that we know little about how disinformation, misogyny, and vigilantism interact in polycrisis and how targeted women themselves interpret, endure, and resist these harms, especially in Global South contexts. We address these gaps with the following research questions:

RQ1: How have women activists experienced gendered disinformation and harassment online since Bangladesh's uprising?

RQ2: How have these digitally mediated harms impacted participation, visibility, and sense of safety within a hypermediated polycrisis?

RQ3: What strategies and meanings of digital resilience have emerged among targeted women, particularly in response to emotionally charged abuse?

3. Theoretical Framework

Since the uprising, intensified gendered attacks—coordinated rather than random (Jankowicz et al., 2021)—have used cultural norms to police women's visibility and delegitimize authority, showing how digital vigilantism and networked misogyny intersect. Simultaneously, activists and allies enact forms of digital resilience, countering erasure. Digital vigilantism explains the mechanics of gendered attacks. It often has

political goals (Trottier, 2017). Partisan networks mobilize ordinary users to dox activists, circulate manipulated content, and stage synchronized pile-ons. Visibility becomes weaponized, as the digital presence required for organizing is turned into a harm vector. Networked misogyny supplies the ideological script (Banet-Weiser & Miltner, 2016). This modality is not spontaneous but an *organized* backlash. Smear campaigns recast the activists as immoral, sexually deviant, or traitorous. If vigilantism provides the *method*, then misogyny is the *justification*, turning scattered abuse into a coherent project of disciplining women's political participation.

These dynamics gain full meaning when we situate them in the polycrisis. Crises rarely unfold in isolation but overlap and intensify one another (Morin & Kern, 1999). Since 2024 in Bangladesh, overlapping crises, e.g., political instabilities, civic-rights pressures, and platform toxicity, created a context where disinformation and harassment could thrive. Plus, platforms are not neutral but infrastructures, magnifying incendiary content and harm. Paradoxically, platforms can also enable counter-hegemonic mobilization.

Here, digital social resilience becomes critical. Following Tomkova (2020), we consider it both recovery and sustaining social cohesion under hybrid threats, not only individual or technical, but a feminist counter-power. It insists on women's continued presence in public life. We view the uprising as a socio-discursive rupture. Figure 1 shows our conceptual framework, where each square is the continuation of the previous one.

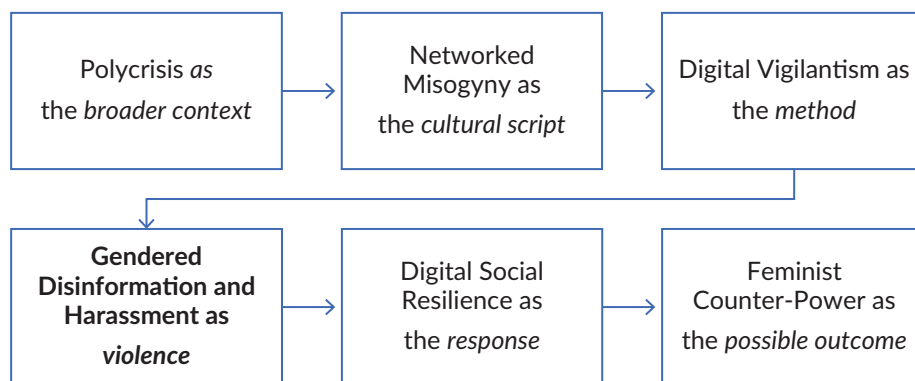


Figure 1. Conceptual framework.

4. Methodology

This study is qualitative and abductive to understand the nature of attacks against women across Facebook and Telegram. We define *women activists* as those who self-identify as activists, engage online or offline in dissent or mobilization, and challenge authority, injustice, or gender-based repression, including both formal organizing (student/party-based) and informal actions (protests/digital resistance; Norris, 2009). To identify gendered disinformation, we only documented content meeting all three criteria:

- Falsity/distortion (e.g., fabricated allegations, manipulated visuals);
- Gendered stereotype (claims using norms of purity, modesty, nationalism, morality);
- Strategic reputational harm (discrediting political participation rather than expressing anger/insult).

4.1. Data Collection Methods

We conducted 25 in-depth interviews, selected through purposive sampling, with activists directly/indirectly attacked online. Recognizing the emotionally charged, context-dependent nature of these experiences, our primary method, semi-structured interviews, allowed participants to narrate experiences in their own words. We followed feminist traditions, considering activists epistemic agents whose situated knowledge constitutes essential data (D'Ignazio, 2024). They were diverse: from ages 20–45; affiliations across student political wings, political parties, feminist organizations, rights-based groups (for a detailed breakdown, see the Supplementary File); and across major divisional cities. We collected age because younger activists faced different familial-institutional constraints vis-à-vis older, party-embedded figures. We used open-ended questions on experiences, harassment, and resilience (see Table 1). Conducted in Bangla (May–August 2025) in person/via Zoom, interviews lasted 45–75 minutes (one lasted 125). We audio-recorded, manually transcribed, translated, and coded the sessions to preserve nuance. We cite participants by number (e.g., P1 refers to Participant 1). The complete protocol, detailed operational definitions, and ethical considerations are in the Supplementary File.

Table 1. Guiding themes.

Theme	RQ(s)
Changes since uprising; key platforms	RQ1
Attack types (insults/deepfakes/impersonation/sexualized/appearance-based memes/videos)	RQ1
Coordination (spontaneous vs. organized/political/ideological/cross-target patterns)	RQ2
Participation impacts (self-censorship/withdrawal/willingness to speak)	RQ2
Immediate responses (blocking/reporting/deleting)	RQ3
Support systems (informal networks/institutional/legal/tech support/meanings of resilience)	RQ3
Roles (for platforms/communities/state)	RQ3
Reflections on specific posts/episodes	RQ1, RQ2

We analyzed social media artifacts, posts, and announcements, posted from August 2024 to September 2025—all publicly accessible—as our secondary method. We focus on Facebook and Telegram because, since the uprising, they have been the primary arenas of activism and harassment, as confirmed by all interviewees. We systematically monitored high-visibility public pages, groups, and channels central to political communication. Using a combined keyword and seed-page strategy in both Bangla (predominantly) and English to locate relevant posts and snowballing from engagement trails, we narrowed the corpus from the initial 312 artifacts to 100. We used four inclusion criteria:

- Virality (engagement metrics—reactions, comments, views, shares, thresholds);
- Severity of harm (reputational, sexualized, or safety-related attacks);
- Clear identifiability of an *activist-as-target*;
- Completeness and analyzability of the content (e.g., excluding items deleted before systematic archiving).

Our dataset is uneven (80 from Facebook, 20 from Telegram) because Facebook remains the main site of (visible) political communication, while Telegram’s (semi-)closed channels limited access. We archived Facebook content via screenshots and “Save” and manually stored Telegram content, redacting all identifying information. We categorized platform, attacker/sources/target type, and thematic/technical features. Sources ranged from anonymous users to coordinated groups.

4.2. Analysis Strategy

We integrated thematic coding of interviews (Braun & Clarke, 2006) with feminist critical discourse analysis (FCDA; Lazar, 2007) of social media texts. We adopted FCDA as it extends critical discourse analysis by focusing on gender, power, and violence and is better suited to our emphasis on misogyny, semiotic attacks, and gendered disinformation (e.g., Vincent & Kumari, 2023).

We utilized a poststructuralist lens to understand misogyny as structural and how language constitutes violence, and interpreted discourses that framed dissent as deviance, activism as betrayal, and meme culture mobilizing disgust and ridicule, while acknowledging the materialist reality of platform economies commodifying outrage. We coded transcripts, mapping punishment, doxing, self-censorship, withdrawal, fatigue, and adaptation themes, and chose quotations for thematic salience and richness. FCDA (illustrated in Figure 2) traced how social media discourses attempted to discipline, shame, and silence women by emphasizing gender relationality and multimodal meaning-making, and was operationalized through:

- Identifying discursive strategies (moral policing, sexualized insinuations, reputational attacks);
- Conducting multimodal analysis of visuals and symbols as semiotic resources;

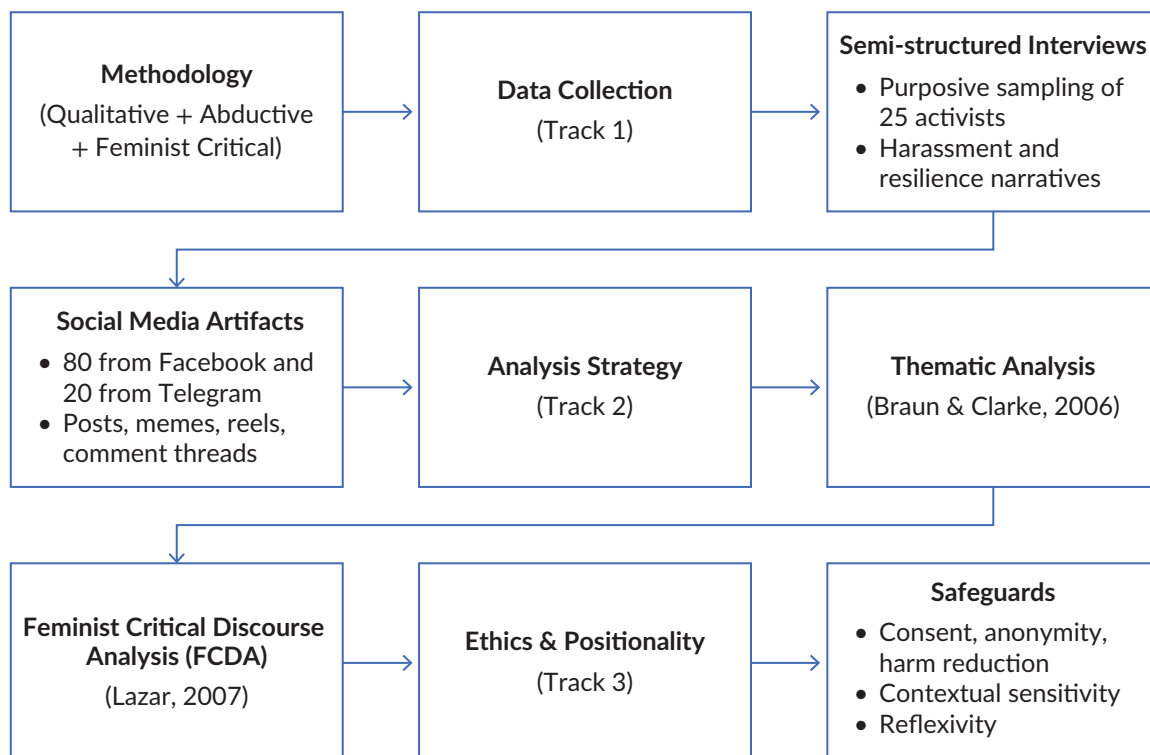


Figure 2. Research design.

- Tracing how they might mobilize audiences as *enforcers* of gender norms, thus reproducing gendered power asymmetries;
- Examining interdiscursivity across patriarchal, religious, and political discourses.

We examined every artifact for how linguistic and visual signs reproduced gendered power and harm (Krook, 2020, Chapter 16), i.e., moral positioning, delegitimization, and multimodal cues (e.g., news-template mimicry), allowing us to interpret gendered disinformation as a practice with strategic political goals.

We assessed intercoder reliability using Cohen's κ on a 15% pilot data subset. Reliability was substantial for both interviews ($\kappa = 0.80$) and artifacts ($\kappa = 0.76$). We resolved remaining discrepancies through discussion, after which coding proceeded independently. We reached thematic saturation around Interview 21 and the 93rd artifact, with subsequent cases only contributing stylistic variation. We retained all interviews and artifacts to preserve demographic and platform breadth.

4.3. Ethics and Positionality

As a non-interventionist qualitative study involving observation and interviews, Institutional Review Board oversight was not required under local practice. However, recognizing the sensitivity, we adhered to feminist ethical protocols of empowerment, reflexivity, reciprocity, and care (Kingston, 2020) as a rigorous alternative to standard practices. We prioritized “do-no-harm,” utilizing encrypted written/verbal consent, anonymization, and continuous distress monitoring. Furthermore, to prevent re-victimization and re-circulation, we analyze descriptively but do not reproduce the original, crude, often non-consensual visual artifacts.

We are Bangladeshi, in our mid-20s, and speak Bangla fluently. All interviews were conducted by one interviewer with prior activism experience. This positionality influenced disclosure quality: Several participants viewed the interviewer as a trusted insider rather than a detached researcher, enabling unusually candid discussions of trauma and harassment. A different interviewer may not have generated such layered insights. To mitigate insider bias, we maintained reflexive memos and actively sought negative cases, challenging our emerging interpretations. However, our backgrounds may have made us more aware of certain dynamics while overlooking others.

5. Findings

5.1. RQ1: Experiences of Gendered Disinformation and Harassment

Since the uprising, online attacks have had three dimensions: coordination and personalization, the weaponization of institutional legitimacy, and the convergence of ideological camps in policing women's visibility. For example, P13, long active in cultural work, described a “180-degree change” after she spoke politically: “Everything changed overnight. Many attack and hurt me online, even people I don't know.” P23 faced organized character attacks: false allegations of affairs and sexualized disinformation targeting her spouse. Rumors reached her workplace; she was followed after hours—a “wake-up call” that intimidation had moved offline.

Victim-blaming also compounded abuse, reframing harassment as the target's fault. P19, a physician and activist, described intra-party disciplining. She recalled senior political figures asking her, “Why are fake IDs

only opened on you?” This question exemplifies deep-rooted misogyny, shifts responsibility from perpetrators to the target, and reproduces institutional-patriarchal power. The question of why she maintained a Facebook account at all forces her to defend against the very attacks aimed at silencing her. It reframes women’s mere presence as transgressive. A fabricated call and uncritical relays by national dailies amplify further abuse by borrowing institutional legitimacy and legacy media credibility. A falsified audio clip attributed to P15 changed how she was seen: “After that, all comments are sexualized, connecting everything to that event.” One fabrication set a frame for later appearances.

P20 stressed coordination: “100% organized and linked to political actors against my views. Till now, I haven’t found one neutral person criticizing me like this.” She pointed to networked misogyny as politically driven. P17 reported impersonation and unauthorized image use—fake profiles with her photos, promotional edits without consent, and manipulated, sexualized images—intensifying since 2024. Filing an official complaint took time and yielded little; blocking became her main tactic. P2 described escalation against women specifically: “Before [the uprising], many people expressed sympathy for women activists. But after, online reactions turned *against* women.” She linked harms to Facebook bots and coordinated real accounts spreading sexualized insults, appearance-based bullying, and political delegitimization.

Formatted within news-style graphics, visual disinformation often portrayed activists in fictitious “immoral/compromising” situations. P1’s photograph was digitally reframed within mainstream media templates and paired with suggestive texts about invented “promiscuity.” This deceptive (re)construction, borrowing the authority of news, formal composition, and language, and attempting to blur truth and falsehood, exemplifies semiotic violence (Krook, 2020, Chapter 16). FCDA highlights how this process weaponizes legitimacy to activate gendered moral categories and incite public shaming. By simulating authority through “official” cues—like breaking-news banners, cropped headshots, and declarative captions—these artifacts naturalize accusations as credible facts. These semiotic markers lower scrutiny and accelerate moral condemnation, thereby reproducing unequal legitimacy thresholds for women.

P25 saw spikes in abuse after sensitive speeches that undermined competence: “Intimidation, punishment, politically discredit...whenever women go against social norms.” Women *across* parties were targeted once they voiced dissent. Additionally, after receiving public recognition for her work, P7 faced a barrage of comments alleging the achievement was due to sexual favors, turning professional merit into personal scandal.

P6, a university student, confirmed attacks cut across ideology: “It doesn’t matter what party you belong to....The problem is that you are a woman who dares to participate politically.” Attacks on opposition leaders and professionals were so vulgar that others avoided their content. Moral policing crossed ideological lines: Islamist-leaning critics policed dress/modesty, while secular users attacked P1 for wearing hijab. Opposed camps converged on disciplining women’s visibility. Social media posts show continued escalation. Doxing pushed harms offline. After her number circulated, P21 blocked unknown callers to stop harassment. It illustrates how technology-facilitated gender-based violence becomes ongoing, resource-draining surveillance.

During university union elections, a male student’s publicly documented call for a “gang-rape procession” targeted a female student who filed a legal writ challenging a candidate’s eligibility, mobilizing threats of collective assault. The message was clear. Political participation carries threats of bodily harm for women.

Digital vigilantism, at its most dangerous, reflects broader hostility to women beyond party lines. Election cycles produced visual disinformation against women in authoritative positions. AI-generated images paired academics with their students. Alongside tropes like “step-mom,” “sugar-mommy,” and “bed-hopper,” these fabrications collapse professionalism into scandal, undermining women administrators (Krook, 2020, Chapter 16) and warning others away from public roles.

Deepfakes mocking protest gestures, pornified captions sexualizing ordinary photos, incest-coded taunts commodifying women’s bodies, “revenge”-style private chat exposes as reputational blackmail, and fabricated portraits casting women as indecent were recurring tactics. Deepfakes and doctored videos, though rarer, carried a disproportionate impact. Engagement metrics show that defamatory content spread quickly and amplified offline intimidation.

5.2. RQ2: Impacts on Online Participation, Visibility, and Safety

Online harms influenced how women participate politically. Harassment became a central factor in whether and how they spoke out. P13 shut down Facebook comments to reduce abuse—prompting backlash (“Why is the comment section off?”), turning a safety step into new grounds for delegitimization. The falsified audio clip (see Section 5.1) intensified this. Coverage of P15’s speeches and panels became flashpoints, with comments recasting her as scandalous and eclipsing her professional identity.

Offline risks deepened insecurity. P14 was followed after being recognized online; some colleagues urged her to “step back.” Her professional legitimacy also suffered. P11 noticed a broad chilling effect: “Women became reluctant to voice their opinions. Attacks make women silent.” P18 saw the same trend *across* parties: “Whenever women go against social norms, they are intimidated, punished, or politically discredited.” Abuse spiked around women’s speeches. Joining a party intensified the chill: Women’s critiques were discounted as “party talk,” showing how harassment and labeling narrow legitimate speech.

Timeliness of fact-checking also mattered. When rumors spread unchecked, delayed corrections rarely repaired damage. Disinformation “stuck” and became long-term baggage. Several participants said delayed verification cannot erase such narratives. By contrast, a “fake” Facebook ID used to discredit a woman’s complaint by spreading disinformation was quickly debunked by an independent fact-checker, preventing escalation. It enabled her to re-engage. Although based on selected activists’ accounts and not statistically generalizable, Figure 3 shows the perceived importance of community-based independent fact-check timeliness in Bangladesh.

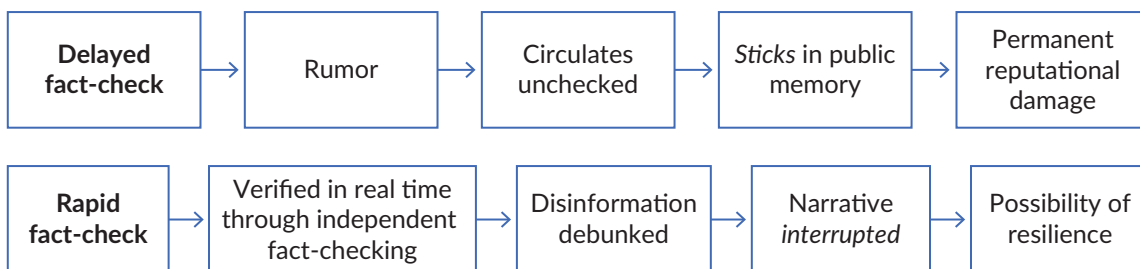


Figure 3. Participants’ perceptions of fact-check timeliness (not generalizable).

Family surveillance added further pressure. P3 recounted:

My father forbade me from running in the election, my mother cried over vulgar reels, and I hid from cameras, withheld photos, and concealed an attack from my family. The abuse damaged my reputation, strained family ties, and forced invisibility.

Institutions failed to protect. P13 reported harassment by a government employee and was told nothing could be done: “Someone more politically powerful might have gotten justice...but I didn’t.” Powerful men saw swift action; women did not. Platforms further compounded vulnerability. P21 identified Facebook as the more hostile of the two focal platforms, citing bots and coordinated accounts. Harassment spiked when women challenged sensitive issues, showing the mix of misogyny and polarization.

Social media analysis aligns with these accounts. Memes and manipulated images reframed leadership as scandalous. Algorithms rewarded outrage, and encrypted channels enabled unchecked abuse. Out-of-context YouTube clips exposed women to further hostility. Even beyond partisanship, harassment operated as bait. As P19 mentioned, attackers “get clicks by attacking me, making a product out of me,” showing how attacks are commodified within platform economies.

As P6 noted, hostile comments dominated coverage. P1 faced a bind: Visibility triggered misogynistic reframing, while withdrawal drew accusations of weakness. P4 described increased family rejection and surveillance. Even as she continued activism, it heightened vulnerability. Furthermore, the gang-rape incitement drew complaints and condemnation. Yet, screenshots kept circulating in private groups. AI-generated images likewise turned routine duty into scandal. Hundreds of comments sexualized the academic and questioned impartiality, converting service into reputational liability. Platform virality and weak enforcement kept women in constant exposure.

Across generations, severity was clear. Senior figures and students reported distress affecting sleep and prompting thoughts of withdrawal. P16 mentioned, “If even senior women get distressed...imagine how much it harms younger women.”

Women continually negotiated safety. Unequal power relations shaped their responses. Platform and state failures created an antagonistic digital sphere, where activists must self-manage risk, and the same exposure that amplifies activism marks them as targets for disinformation, harassment, and offline intimidation.

5.3. RQ3: *Strategies and Meanings of Digital Resilience*

Alongside endurance, women also developed varied strategies to cope, resist, and redefine resilience as emotional honesty, collective solidarity, tactical withdrawal, and critical reflection.

P9 used solidarity networks: “If anyone faced abuse, we would mass report together. It’s like a shield.” These low-barrier circles sometimes removed content but caused burnout. P22 relied on constant blocking, pre-drafted posts, tighter privacy, and public exposure of harassers: “I have seen no result by reporting....I usually just block.”

Counter-speech and allyship also appeared. Across posts, we observed, a few young male political figures condemned slut-shaming “regardless of party or ideology” to interrupt normalization and legitimize women’s pushback. P8 rejected resilience as denial: “Feeling low...should be accepted so that we can give time and heal, and then we come back.” She credited counseling and family support. P22 used humor—screenshotting abuse and replying with sarcasm—to feel “mentally lighter.” P7 and P12 described small, protective circles with limits on exposure. P24 noted that solidarity is historically rooted in women’s collective action, even though parties tokenize or sideline them. Many participants emphasized that survival depends on peer support, especially when institutions fail to do so. But resources were unequal. Higher-profile women received more protection, and lower-visibility activists were left exposed. P2 highlighted this disparity. Continued participation often depended on strong family support—an uneven buffer many lacked.

P2 framed resilience as a cross-party struggle: “The attacks we women face are essentially the same.” She called for unified resistance by women. P12 combined caution with critique: She self-censored yet pressed international actors on platform neglect in the Global South and pointed to weak state mechanisms: “Police aren’t trained properly...Even *real people* attacking women don’t face consequences.” Without political will or legal reform, resilience places unfair burdens on victims.

P5 emphasized refusing erasure. For her, resilience is collective courage. She critiqued the “Hindi serial heroine syndrome” that celebrates self-sacrifice and recalled women rescuing male students: “Logic said no one would help, but we did....To be born as a Bangladeshi woman is already to be born into struggle.”

Visual disinformation played a key role; for example, memes on activists’ fabricated kissing scenes, edited images sexualizing or partially stripping women, altered clothing to imply indecency, AI-generated nude or explicit composites, obscene body language, distorted “uglified” facial edits, and pornified innuendo, like suggestive poses or manipulated screenshots, circulated, sometimes alongside pejorative labels like “*Shahbagi*” (used indiscriminately to identify “liberal/leftist” women). They worked to erase women’s credibility and political authority (Krook, 2020, Chapter 16).

Also, resilience cannot mean ignoring trolls. It requires counter-narratives, feminist digital practices, and structural reform. Participants insisted on returning on *their* terms. P10 defined resilience as “coming back” after healing; P16 demanded accountability; and P24 rejected tokenism, insisting on presence. All converge on one insight: Resilience is collective. Activists and allies used rapid tactics—evidence documentation, cross-partisan condemnations, humor/meta-commentary, and coordinated reporting. They built resilience through persistence, networks, and refusal of erasure, illustrating its fundamentally collective character (see Table 2).

Table 2. Overview of findings.

Cluster	Category	Focus	Examples
A. Disinformation Tactics	Sexualized & moralized violence	Sexualized insults, body shaming, and policing.	Pornified captions, incest-coded memes.
	Defamatory fabrications	Fake news, false context, edited/AI images, doctored videos, and cheapfakes.	Falsified audio, deepfake video.
	Politicized attacks	Partisan, nationalist, and religious shaming.	“BNP-agent” labels, hijab/secular attacks.
	Coordinated manipulation	Impersonation/sock-puppet accounts, suspected bots, and synchronized brigading.	Impersonation, bot armies.
B. Consequences	Family & social fallout	Abuse spilling into households and reputations.	Family pressure to withdraw.
	Offline spillover	Escalation into surveillance and intimidation.	Number doxed → harassment calls. Stalking.
	Platform/algorithmic dynamics	Outrage-driven virality, coordination/suspected bots.	Facebook brigading, viral memes.
	Visibility penalties	Recognition reframed as scandal/liability.	Award → rumors of sexual favors.
	Internalized/horizontal misogyny	Women echoing visibility policing.	Female peers branding others “too visible.”
C. Resilience Practices	Collective mobilization & tool-making	Coordinated defenses.	Mass-reporting, evidence, and blocking.
	Emotive solidarity	Support through emotion.	Humor, family support.
	Moral restoration quests	Calls for justice/accountability.	Condemning abuse, critiquing platform inaction.
	Counter-narratives & refusal	Rejecting erasure, reasserting presence.	Counter-posts, contesting elections.

6. Discussion

Our findings show how online attacks in Bangladesh intersect with overlapping crises of fragile governance, political instability, and platform dynamics. Disinformation, suspected “bots,” and digitally altered visuals operate as repressive tools in hyper-connected networks. Simultaneously, coping strategies—blocking, tactical withdrawal, solidarity networks, and public critique—show why resilience must be redefined as relational, gendered, and deeply contextual rather than only technical or individual. Power operates at interlocking levels: structural (patriarchal norms and party hierarchies), platform-based (algorithmic and weak moderation), and discursive (sexualized/moralized/nationalist framings). Participants’ narratives show these forces attempt to limit or silence women’s political agency.

6.1. Gendered Disinformation as Violence

Disinformation campaigns are not isolated. They draw legitimacy from patriarchal beliefs that make punishing women appear “common sense.” Gendered disinformation is a form of violence. Symbolic violence

(Bourdieu, 1991) shows how narratives cause lasting reputational harm, and semiotic violence explains how women's speech is reframed as indecent or disloyal (Krook, 2020, Chapter 16). Galtung's (1990) cultural violence situates these tactics within norms that normalize them. Echoing Jankowicz et al. (2021), we find sexualized rumors—most common—plus fabricated scandals and cheapfakes exploited to enact power over women activists in the uprising's aftermath.

Women are blamed for impersonation attacks that see abuse and disinformation toward them as *their* fault. Many participants mentioned that recognition often got twisted into scandal. Women's visibility gets recast as sexual quid pro quo. Networked misogyny clarifies these dynamics as cultural and patterned practices amplified by platforms. Disgust, shame, and outrage “stick” to women (Ahmed, 2004). Furthermore, uncritical media coverage lends legitimacy and extends harm. Timely fact-checking may interrupt the flow. But delays often make narratives permanent.

Attack tactics range from collective punishment threats to pornified depictions of women in authority. Across ideological divides, both religious and secular critics often converge on regulating women, making the hypermediated environment uniquely hostile for them. Guided by FCDA, we consider these attacks patterned discursive practices that reproduce—rather than merely express—patriarchal authority by converting women's political speech into “impropriety,” “betrayal,” or “deviance” that must be disciplined (Lazar, 2007).

Though long relegated to token roles, during this uprising, women could no longer be sidelined. Their unprecedented role helps explain why they are now persistently threatened in the digital sphere as partisan polarization resumes. The “gang-rape procession” call exemplifies how online speech mobilizes offline threats. P18 described it as “proof” that participation carried threats for women. Activists' images, speeches, and fabricated scandals are turned into viral content beyond their control. With the mechanism of coordinated retaliation (Trottier, 2017) and networked misogyny (Banet-Weiser & Miltner, 2016), findings show that in the polycrisis, these merge into gendered civic repression—a tool of authoritarian consolidation enacted both by the state and by its social actors.

Homophily can fuel polarization (Esteve-Del-Valle, 2022). Bangladeshi partisan networks strengthen misogynistic narratives and hinder cross-cutting debates. Partisan actors/rivals also deliberately orchestrate vigilantism. In both cases, women activists are cast as “outsiders” deserving extra-legal punishment. Manipulated content, like obscene visuals about activists, audience engagement, and victim-blaming, interacts so that harms extend *beyond* individuals (Gehrke & Amit-Danhi, 2025). Families and colleagues absorb fallout, bystanders self-censor, and intimidation is reinforced.

In Bangladesh's patriarchal-political climate, reputation is vital. Women activists have to manage both their political *and* “character” reputations. Claims about relationships or family life are used to undermine women's credibility disproportionately. Attacks often bypass policy opinion critique and target their character and physical features to delegitimize them. Social media-based visual disinformation situates these strategies within semiotic violence, rendering women invisible, illegitimate, or incompetent (Krook, 2020, Chapter 16).

While activists did not always use theoretical language, they were active knowledge-bearers of this terrain. Many stressed that collective resilience is essential: Across parties, women face coordinated attacks the moment they voice dissent, even ordinary criticism. As they put it, if you are a woman, you *will be targeted for speaking out*.

Together, we show how disinformation functions: Digital vigilantism supplies the mechanism of denunciation, weaponized visibility the exposure tactic, networked misogyny the cultural rationale, and affective economies the adhesive. Misogyny is both an ideological fuel and an attention economy incentive, generating clicks aligned with partisan aims. These dynamics meet established criteria for violence: deliberate, coordinated uses of symbolic and psychological force to suppress (political) participation.

6.2. Digital Resilience in a Polycrisis

Morin and Kern (1999, p. 74) argue that contemporary challenges cannot be reduced to a “number one” problem. We *cannot* see the digital attacks against Bangladeshi women as isolated incidents. Rather, the repressive political climate enables attackers by guaranteeing them impunity, amplified by platform algorithms that reward outrage, rooted in deep-seated patriarchal norms seeking to police women.

Tomkova’s (2020) triad appears here through encrypted chats, humor-laced counter-speech, and evidence documentation. Resilience is stratified. Higher-profile women often receive disproportionate protection, while lower-visibility activists endure greater isolation. Family and networks further influence whether women can persist. Whereas Koch, Russo Riva, and Steinert (2025, p. 16) find coping as individualized “preventive labor” that attributes unpaid, disproportionate burdens on women, our findings suggest that it is also usually relational, scaffolded by networks.

Even within biased technological systems, women generate counter-narratives and resist marginalization (Mukhongo, 2023). Plus, media can catalyze resilience for LGBTQIA+ youth by allowing coping, community, and validation (Craig et al., 2015). We also observe similar dynamics: Curated online spaces allow women to re-enter after attacks and reassert presence, solidarity, and confidence. Yet, findings show visibility’s central paradox: Media amplifies women’s voices, helps build coalitions, and confers legitimacy. It also, however, renders women more vulnerable as targets by intensifying political polarization and patriarchal norms, turning these into churning, inescapable features of women’s environment and creating a draining negotiation between presence and self-preservation that complicates linear narratives of digital empowerment.

Resilience also changes across time. In July–August 2024, broad coalitions united around shared goals. This tendency lowered overt division and opened space for women’s participation. But since then, as actors returned to partisan agendas, the same women who gained visibility are increasingly treated as *threats* by opposing camps. Despite now-expanded opportunity, the number of politically visible women declined as attacks intensified, and cross-party solidarity became unsustainable. Maintaining transformative solidarity is difficult (Ciccia & Roggeband, 2021). Burnout and fragmentation erode protective networks. We thus conceptualize activists’ abuse documentation through archiving as “counterdata” (D’Ignazio, 2024). It is heavy emotional labor rather than merely anecdotal, technical work. These solidarity networks sustain resilience through collective witnessing and a refusal of erasure.

Collectively, digital resilience is built through relationships, solidarity, and institutional accountability. From an FCDA perspective (Lazar, 2007), survival practices like humor, tactical silence, withdrawal, counter-speech, re-entry, and blocking are not mere coping tools but discursive interventions, insisting on women's continued presence in digital-political life. As Figure 4 illustrates, resilience, a feminist counter-power, operates across micro, meso, and macro levels. It is fragile yet political, emerging through cycles of withdrawal, return, and accountability demands.

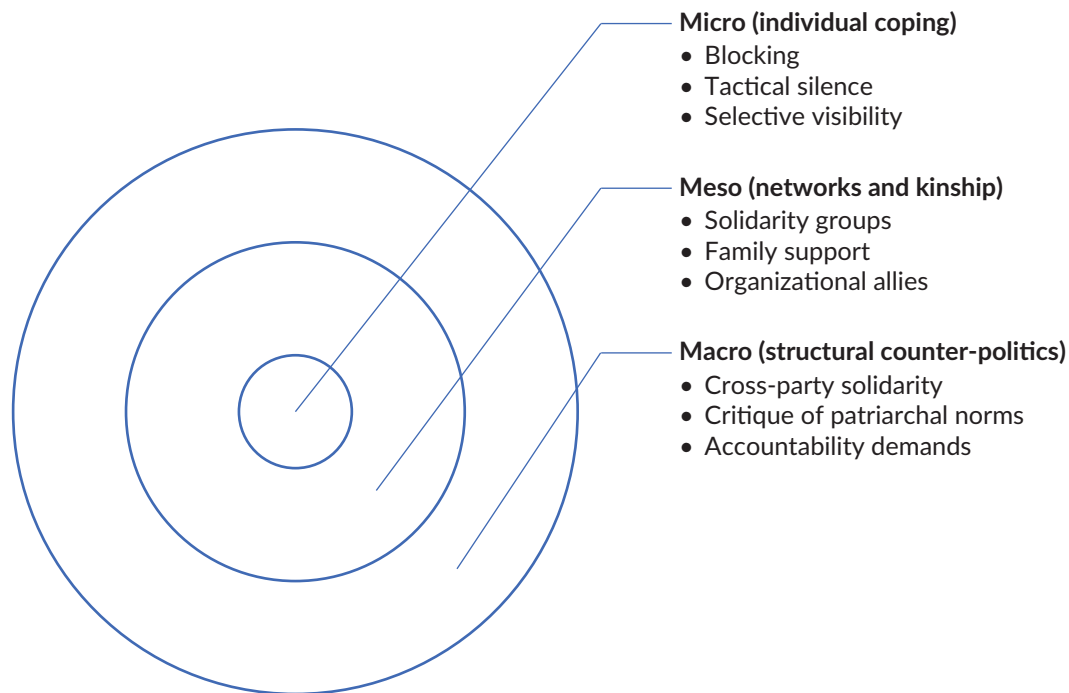


Figure 4. Layers of resilience in the Bangladeshi polycrisis.

This study extends several strands of scholarship. Misogynistic attacks reduce women's online political communication during election campaigns in Brazil (Koch, Ghawi, et al., 2025). Additionally, Koch, Russo Riva, and Steinert (2025) document the predominance of individualized coping (blocking, muting, and reporting). We similarly show silencing in civic life but expand upon the narrowness of coping. Resilience, in Bangladesh, is also family-anchored and network-based. Beyond content, network structures also matter (Esteve-Del-Valle, 2022). We extend the homophilic logic to gendered disinformation that intensifies within partisan enclaves and radiates outward.

Comparably, Chinese women intellectuals are denounced through betrayal and immorality discourses (Huang, 2023). In Bangladesh, these denunciations reinforce patriarchal control and partisan exclusion. Regionally, violence against women in politics is widespread in India, Nepal, and Pakistan; fear of violence deters over 60% of surveyed women from political participation (UN Women, 2014). Nearly 90% believe it breaks their resolve to join politics. Patriarchal power structures and weak enforcement of laws sustain this climate. Furthermore, India's Hindutva-aligned religio-political digital campaigns deploy misogynist memes, doxing, deepfake porn, and rape threats to frame women as immoral and politically illegitimate (Sen & Jha, 2025).

South Asia's paradox of iconic female leaders but limited systemic change across the region provides critical insight. They often rose via dynastic channels that upheld patriarchal party structures, leaving *even* them

vulnerable to sexist abuse and harsher scrutiny than men. Similarly, ordinary women activists are targeted with character assassination—the same patriarchal logic that limits leaders also limits grassroots actors, but without any dynastic protection.

Women hold only 20% of Bangladesh’s parliamentary seats, mostly through quotas (Inter-Parliamentary Union, 2024). Nearly all citizens report at least one bias against women (Liller, 2023). So, findings emphasize that these attacks are not merely a “by-product” but a deliberate tactic to discourage women’s activism and leadership. We must therefore understand political participation not only in numbers but also in other contextual factors.

Bangladesh-specific research confirms structural barriers. A persistent “gender wall” limiting political agency (Ara & Northcote, 2020), with documented coordinated campaigns in the 2024 election relying on sexualized slurs, religious shaming, and homophobic insults, attempts to surveil and erase women (Baksh et al., 2024). So, gendered attacks become a structural *mode of exclusion* (Gehrke, 2023). We extend these ongoing debates on misogyny, vigilantism, and violence in fragile democracies.

To counter gendered disinformation, we suggest structural reform at multiple levels (shown in Figure 5):

- **Civil Society:** Build collective resilience through feminist digital literacy that treats disinformation as violence and fosters counter-narratives.
- **Platforms:** End reliance on user-led defenses. Corporations must ensure culturally competent moderation that recognizes localized gendered attacks.
- **Governance:** Design survivor-centered reforms without expanding authoritarian control. Establish independent oversight to hold states and platforms accountable.

Overall, solutions must dismantle patriarchal ideologies and unequal infrastructures while empowering women’s narratives and collective resistance (Lazar, 2007).

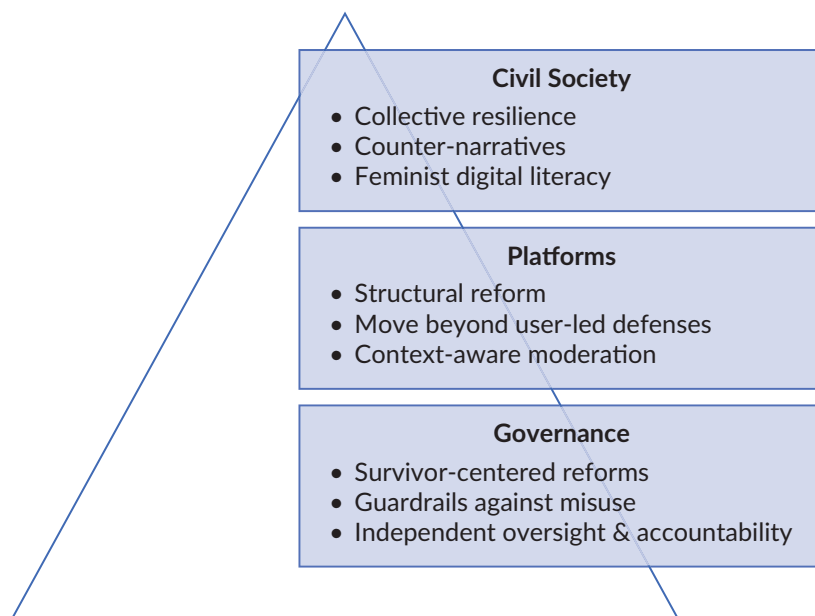


Figure 5. Levels to counter gendered disinformation.

7. Conclusion

We show that the online attacks against women activists since Bangladesh's uprising are not incidental, peripheral noise. Rather, these are part of coordinated violence. We conceptualize gendered disinformation as violence enacted through vigilantism and misogyny and demonstrate how women activists build collective, relational digital resilience in the ongoing climate. Sexualized slurs, fabricated scandals, and manipulated images blur the line between online and offline harm. They leave reputational scars, foster professional hostility, and trigger physical intimidation. We show how disinformation operates through discourse and the importance of centering women's voices in analyzing its impacts and responses (Lazar, 2007). It restructures both how women are perceived *and* the very conditions of their visibility. The coordination of digital vigilantism and the cultural framing of networked misogyny facilitate gendered disinformation. Together, they transform women's political speech into immoral or traitorous, while platform logics and algorithmic amplification intensify this process within a hypermediated polycrisis. Women activists respond to this situation by exercising resilience and creating protective networks. They demand accountability and present counter-narratives. Here, resilience is relational, contextual, and collective, rooted in care, persistence, and shared struggle rather than individual endurance alone.

Our qualitative design has several limitations. Prioritizing depth over breadth, the sample captures rich lived experiences but cannot claim representativeness. Our focus on Facebook and Telegram—central since the uprising—excludes other platforms (e.g., Instagram, TikTok, X) where affordances, visibility, and moderation differ. So, findings should be read as specific to these platforms rather than generalizable across *all* platforms. We center targets' experiences and analyze impacts without mapping perpetrators or audiences. Concentrating in the capital, Dhaka, and major urban centers enabled dense access and intensive interviewing; triangulating that with social media artifacts strengthened credibility. The limitations also indicate paths for future research. Large-scale computational studies could extend this work with generalizable findings and assess effects on participation. Cross-platform comparisons would help explain how attack strategies differ between platforms. Most importantly, studies should explore perpetrators and amplification networks, including the role of malicious bots, currently on the rise, and reception to measure how they influence public opinion.

Empirically, we provide systematic evidence from an underexamined context of how gendered disinformation functions as violence, extending the analytical agenda of Gehrke and Amit-Danhi (2025). Conceptually, we redefine digital resilience as a feminist counter-power of survival and resistance and emphasize the need for intersectional strategies that consider class, religion, age, and party affiliation. Finally, we illustrate that gendered attacks are central to the contestation of Bangladeshi women's political presence. Thus, we advance a Global South perspective that challenges one-size-fits-all accounts and recommend more context-specific interventions.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

Due to the highly sensitive nature of the data, research materials cannot be publicly disclosed.

LLMs Disclosure

ChatGPT (version 5) and Gemini (version 3) were used exclusively for language editing purposes.

Supplementary Material

Supplementary material for this article is available online in the format provided by the authors (unedited).

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Local Wisdom and Pre-Bunking Strategies: Building Digital Resilience Against Misinformation in Indonesia

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Abstract

In an era of hypermediated polycrisis, building digital resilience is essential to counter the spread of misinformation that threatens democratic processes. This study examines how Indonesia’s local cultural values and community-based movements contribute to strengthening digital resilience against misinformation. Drawing on empirical evidence from NGO-led pre-bunking initiatives, digital literacy programs, and the mobilisation of women’s organisations such as the Family Welfare Empowerment (PKK) program, the study demonstrates how local wisdom shapes information verification practices. While culturally contextualised pre-bunking strategies provide critical frameworks for identifying misinformation, the findings show that resilience is ultimately enacted through community-based verification practices. These informal networks transform individual digital literacy into collective resilience via trusted intermediaries, hierarchical credibility assessment, and community knowledge exchange. Using a mixed-methods design that combines interviews with key stakeholders in Indonesia’s digital literacy ecosystem and a quasi-experimental study with women’s community groups, this study situates Indonesia’s experience within the global discourse on digital resilience. It advances a community-centred model grounded in local empowerment, collective agency, and cultural continuity, offering an alternative to predominantly Western, individualistic approaches to combating misinformation.

Keywords

community-based digital literacy; cultural values; digital resilience; misinformation; pre-bunking strategies

1. Introduction

In an era of rampant misinformation, resilience has become central to safeguarding democratic and social systems. Resilience can be broadly understood as the capacity of groups or communities to cope with external stresses and disturbances by mobilising coping, adaptive, and transformative capacities to withstand crises and sustain societal well-being (Tomkova, 2020). Within the digital environment, Tomkova (2020) conceptualizes digital social resilience as the capacity of various social entities, from individuals to organizations, to leverage ICTs and online environments for sustaining social capital, cohesion, and collective efficacy. This conceptualisation highlights that resilience in digital environments encompasses social and cultural capacities that enable communities to withstand external shocks and hybrid threats.

Digital resilience entails understanding online risks, developing digital skills, and recovering from digital stressors with self-efficacy, while digital literacy encompasses the technical and cognitive skills that support these processes (Sun et al., 2022). Both are mutually reinforcing: Higher digital literacy predicts greater resilience, which in turn yields safer online behaviour, improved psychosocial functioning, and more effective coping with digital risks. In the misinformation context, resilience-oriented literacy interventions enhance the ability to distinguish true from false content and reduce susceptibility to manipulative messaging (Lee et al., 2025; Moore & Hancock, 2022).

Indonesia provides a salient case for examining digital resilience. Despite high social media penetration, resilience against misinformation remains limited. While 57% of Indonesians use social media as their primary news source (Newman et al., 2025), many lack strategies for evaluating information credibility (Suwana, 2021). This gap persists because digital resilience requires more than technical skills; it depends on collective verification practices embedded in the community (Kligler-Vilenchik, 2022) and cultural frameworks that prioritise group-based information evaluation (McDougall & Rega, 2022). Accordingly, this study examines how Indonesia's local cultural values and community-based movements strengthen resilience against misinformation.

Fact-checking, debunking, and pre-bunking all play important roles in countering misinformation; however, this study focuses on pre-bunking to explain how resilience can be built before misinformation circulates. Debunking research distinguishes preventive approaches from corrective ones and highlights the "continued influence effect," whereby misinformation often persists even after correction (Lewandowsky & van der Linden, 2021). Pre-bunking is particularly important in private messaging environments such as WhatsApp, where fact-checking faces structural constraints due to data privacy and reliance on third-party interventions (Reis et al., 2020). Drawing on inoculation theory, pre-bunking involves exposing individuals to weakened forms of misinformation in advance, thereby reducing susceptibility across contexts (Roosenbeek et al., 2020). Accordingly, this study examines how pre-bunking-oriented digital literacy can be implemented and embedded through community intermediaries rather than evaluating fact-checking effectiveness alone.

2. Literature Review

2.1. Digital Resilience

The concept of *digital resilience* has gained prominence as scholars attempt to capture how individuals, organisations, and societies adapt to and withstand disruptions in increasingly digitised environments. It has been approached from different disciplinary lenses. From the field of information systems and cybersecurity, Kohn (2023) frames digital resilience as humans' resilience in response to digital disruptions, framing resilience as a process capability, specified as "an employee's ability to continuously deliver the intended outcome despite adverse cyber events" in the organisational context (Kohn, 2023, p. 6437). Rather than treating resilience as simply "bouncing back" to a prior state, Kohn highlights that resilience involves creating new and improved trajectories of adaptation, where individuals and systems learn from disruptions, reorganise, and emerge stronger (Kohn, 2023).

Tomkova (2020) introduced the notion of *digital social resilience*, defined as "individuals', groups', or organizations' ability to maintain, change, recover, adapt to or recover their social capital mobilization, sustenance of social cohesion and collective efficacy, collective dignity—using ICT and the online space to do so" (Tomkova, 2020, p. 5). This conceptualisation is distinctive in emphasising bottom-up, community-driven processes of solidarity, collective mobilisation, and restorative ethics, rather than technical infrastructures of institutional legitimacy alone (Tomkova, 2020). Similarly, Esteve-Del-Valle, Costa, and Hagedoorn demonstrate how digital resilience can manifest through informal networks such as WhatsApp groups, which during the Covid-19 pandemic became crucial spaces for solidarity and mutual support (Esteve-Del-Valle et al., 2022). Both perspectives highlight resilience as an inherently social process grounded in interpersonal trust and collective efficacy.

Other communication scholars conceptualise digital resilience through the lens of misinformation, defining it as the capacity of societies to resist, cope with, and adapt to disinformation within digital media environments (Boulianne et al., 2022; Humprecht et al., 2020, 2023). Their comparative cross-national research demonstrates that resilience is unevenly distributed and contingent on institutional contexts, including media trust, media legitimacy, and regulatory safeguards. By situating resilience within broader media ecosystems, this scholarship underlines that resilience extends beyond individual cognition and is fundamentally shaped by political institutions, journalistic systems, and public culture.

Humprecht et al. (2020) advance a macro-level model of resilience that conceptualizes it as a nation's collective capacity to withstand disinformation, structured across three interrelated domains: politics (polarization and populism), media (trust in news, source diversity, and the strength of public service media), and economy/digital structures (reliance on social media for political information and digital market configurations). Resilience is operationalised through aggregate indicators, such as cross-national exposure to misinformation, underscoring the extent to which variations in resilience are shaped by country-level structural conditions (Humprecht, 2020; Humprecht et al., 2020). In contrast, Boulianne et al. (2022) adapt this framework to the individual level by examining citizens' awareness, exposure, and sharing of misinformation across four countries. Their findings indicate that macro-level assumptions do not translate straightforwardly to the micro level: While social media use consistently erodes individual resilience, trust in national news shows uneven and context-dependent effects (Boulianne et al., 2022; Humprecht et al., 2023).

Despite their significant contributions, both macro-structural and individual-level approaches leave an important analytical gap at the community level. The structural determinants emphasised by Humprecht et al. (2020, 2023) and the individual experiences examined by Boulianne et al. (2022) insufficiently account for how resilience is cultivated through collective practices, social networks, and cultural contexts. Addressing this limitation, this study foregrounds Tomkova's (2020) framework of *digital social resilience*. By situating resilience at the community level, this research highlights how local cultural values and community-based movements provide critical resources for resisting and adapting to misinformation. In doing so, it bridges macro-structural and individual approaches by demonstrating the role of community networks as a vital intermediary in transforming individual digital literacy into collective resilience.

2.2. Digital Literacy and Pre-Bunking Strategies

Contemporary pre-bunking and digital literacy strategies, as outlined by Bulger and Davison (2018), centre on five themes: youth participation, teacher training and curricular resources, parental support, policy initiatives, and the development of an evidence base. However, these foundations have attracted substantial critique, as they remain overly focused on individual-level interventions rather than the structural dynamics of platforms, lack national standards and consistent evaluation mechanisms, and are fragmented across demographic groups in ways that undermine systemic coherence (Bulger & Davison, 2018). This fragmentation is exacerbated by evidence that older adults are disproportionately susceptible to fake news and consume significantly more misinformation than younger populations, partly due to lower technological fluency and their non-digital-native status within contemporary information environments (Moore & Hancock, 2022; Walker et al., 2023).

Digital literacy and digital resilience have evolved as distinct research domains, yet their integration remains underexplored, particularly in explaining how individual competencies translate into collective defences against misinformation. Drawing on Sun et al. (2022), misinformation can be conceptualised as a form of digital adversity that exploits social and cognitive vulnerabilities, thereby weakening individuals' capacity to navigate online environments. This condition calls for resilience strategies that integrate information-evaluation capacities with social and culturally embedded filtering mechanisms—an analytical gap addressed by pre-bunking through anticipatory frameworks that reduce susceptibility before misinformation circulates through trusted networks.

Prior research frequently refers to “community-based” media or digital literacy initiatives, yet the organisational role of NGOs in designing, delivering, and sustaining these programs remains under-examined. Detlor et al. (2022) observe that there is “little, if any, scholarly work on the success of digital literacy initiatives run by local community organizations,” despite their central role in reaching underserved publics. In Indonesia, media literacy and fact-checking efforts are largely implemented through civil society organisations, yet these initiatives remain fragmented and face sustainability constraints that affect program continuity and reach (Hendytio et al., 2024). Policy analyses further emphasise that NGOs function as key intermediaries for delivering digital literacy training and fact-checking activities at the community level, particularly where state-led interventions have limited penetration (Hammonds, 2024).

Pre-bunking is defined as a proactive strategy that reduces susceptibility to misinformation by exposing individuals to weakened or refuted versions of misleading content before encountering the actual falsehood.

Conceptually grounded in psychological inoculation, pre-bunking relies on refutational pre-emption to build resistance to persuasive misinformation by alerting individuals to potential manipulation prior to exposure (Lewandowsky & van der Linden, 2021). Pre-bunking trains individuals to recognise and resist manipulative messages before exposure. It is implemented through anticipatory warnings, factual clarifications, and media literacy programs. By presenting weakened misinformation alongside pre-emptive counterarguments, pre-bunking equips individuals with cognitive tools to resist future persuasive attempts. Furthermore, evidence suggests that pre-bunking is generally more effective than debunking, which is reactive and only occurs once misinformation has already been spread (Lewandowsky & van der Linden, 2021; Roozenbeek et al., 2020; Tay et al., 2022).

Inoculation theory forms the foundation of pre-bunking strategies against misinformation. Originating in McGuire's 1960s work, it uses a vaccination metaphor: Exposure to weakened, misleading arguments with refutations builds psychological resistance (Lewandowsky & van der Linden, 2021). The process consists of two essential components: (a) *threat* or *forewarning*, which alerts individuals to the likelihood of encountering manipulative messages and activates a "mental immune response," and (b) *refutational pre-emption*, which supplies counterarguments to contest deceptive claims (Traberg et al., 2023). Once "inoculated," people are better prepared to detect and resist stronger misinformation. This resistance is strengthened by learning to identify rhetorical devices, manipulative techniques, and logical fallacies, enhancing their ability to anticipate and counter false content (Lewandowsky & van der Linden, 2021).

Digital literacy serves as the foundational layer for effective pre-bunking interventions. While pre-bunking provides the anticipatory frameworks for recognising misinformation, digital literacy supplies the technical skills and critical thinking capabilities necessary to apply these frameworks across different platforms and contexts. Sun et al. (2022) describe how this integration operates through a circular process where pre-bunking training enhances digital literacy, while improved literacy increases receptiveness to pre-bunking interventions. Drawing on inoculation theory and community-based digital literacy research, scholars conceptualise pre-bunking as an anticipatory approach that can be operationalised through sustained, community-tailored literacy programs. Such programs aim to build verification habits, including lateral reading and claim-evidence reasoning, before individuals are exposed to misinformation (Lee et al., 2025; Lewandowsky & van der Linden, 2021; Low et al., 2025; Moore & Hancock, 2022; Roozenbeek et al., 2020).

Evidence from community-based interventions shows that tailored digital/media-literacy workshops improve both comprehension and the ability to distinguish true from false content, particularly when delivered through trusted local organisations and adapted to audience characteristics (Lee et al., 2025). A critical and dynamic approach to digital media literacy further strengthens upstream resilience by training users to interrogate sources, contexts, and power (Low et al., 2025; McDougall, 2019). Design-oriented learning tools that scaffold systematic rather than heuristic information processing help users cope with information overload and high-uncertainty environments, thereby enhancing digital resilience as an anticipatory capacity rather than a reactive response (Jung et al., 2025; Moore & Hancock, 2022). Together, these findings support pre-bunking as recurring, locally embedded programs with hands-on practice environments, rather than one-off awareness campaigns (Lee et al., 2025; Smit et al., 2024).

Within the literature on pre-bunking, digital literacy is increasingly positioned as a core curricular component encompassing both civic-critical media literacy (source evaluation, evidence appraisal, lateral reading)

delivered as a habit-building practice, as well as social media literacy and algorithmic awareness of how ranking, recommendation, and datafication shape exposure and sharing (Cho et al., 2024; Low et al., 2025). Guided drills using learning tools prompt participants to systematically scrutinize headlines, links, and provenance, with immediate reflection on indicators of manipulation (Moore & Hancock, 2022). Other studies stress the importance of inclusive, context-specific pedagogy that leverages community intermediaries (e.g., small-group micro-teaching for older adults) to translate individual skills into collective verification practices (Astuti et al., 2024; Smit et al., 2024). While the literature varies in its emphasis and implementation, digital literacy is always positioned as an integral element of pre-bunking approaches, referring to a set of knowledge resources, habitual practices, and social infrastructures that are associated with community-level preparedness against misinformation (Cho et al., 2024; Lee et al., 2025).

2.3. The Social Basis of Information Processing and Community-Based Digital Literacy

Humans have a basic drive to belong to groups to obtain information (Shaw et al., 1999). Shaw et al. (1999) define groups as “collections of people based on some shared values, attitudes, or opinions” that range “from formal groups with specific requirements to those that are very loose” (p. 5). When individuals join groups, they integrate personal perspectives with group perspectives, creating collective frameworks for evaluating information (Shaw et al., 1999). McWhorter (2020) then demonstrates that participation in group-based activities positively associates with increased news literacy. McWhorter’s study indicates that literacy development occurs through social rather than purely individual means.

Metzger and Flanagin (2013) identify social endorsements as a key credibility heuristic, where individuals assess information credibility based on social validation signals. However, existing research on social influence (McWhorter, 2020) and social endorsements (Metzger & Flanagin, 2013) has focused on how these processes operate at the individual level. A critical gap exists in understanding how these individual-level processes scale to function as collective practices within community contexts, especially in offline settings.

Recent scholarship addresses this gap by examining collective verification in a group-level context. Kligler-Vilenchik (2022) introduces the concept of collective social correction, which is defined as ongoing practices of information verification and correction occurring within group contexts. Through analysis of information verification practices in WhatsApp groups, Kligler-Vilenchik demonstrates how group dynamics and norms shape collective verification processes with group members co-constructing standards for information sharing and accountability. However, Kligler-Vilenchik’s study focuses on online messaging groups where participants interact primarily through text-based messages.

Our focus extends this to community-based organisations. Following Gilchrist (2019), community networks are defined as groups characterised by informal interactions and routine relationships that enable members to exchange resources and share experiences through a shared sense of belonging. In community-based organisations, geographic proximity and sustained face-to-face interaction, alongside digital communication, create collective verification dynamics that differ from purely online settings. Collective verification thus operates through group consultation and community-level consensus rather than individual fact-checking alone, allowing digital literacy to function as a social practice in which members pool knowledge, exercise collective judgment, and develop shared standards for information sharing (Kligler-Vilenchik, 2022).

Allen et al. (2025) argue that researchers should study the impact of misinformation depending on whether it is consumed in social groups or individual settings, noting that community-based solutions show promise. However, they acknowledge that empirical research on how collective processes operate in offline community settings remains limited. This study addresses this gap. Research on community-led digital literacy training shows that effectiveness depends on how well interventions are customised for specific populations (Detlor et al., 2022). These findings underscore that effective digital literacy training cannot be separated from the cultural and community contexts in which it is delivered.

Research demonstrates that digital literacy is deeply situated in cultural, social, and educational contexts (McDougall & Rega, 2022). While Western digital literacy frameworks (e.g., European Digital Competence Framework) increasingly recognise collaborative competences, non-Western scholarship emphasises how cultural backgrounds shape digital literacy practices differently than individualistic Western approaches (Choudhary & Bansal, 2022). In collectivist contexts, digital literacy is frequently associated with community empowerment and collective action rather than purely skill acquisition (Choudhary & Bansal, 2022).

Indonesia represents a compelling non-Western case for analysing digital resilience. While 57% of Indonesians use social media as their primary news source, compared to 44% who use TV and 10% who use print, trust in news remains low at 36% (Newman et al., 2025). Social media's prominence makes it a growing site for misinformation and political propaganda, often amplified through paid influencers. This context necessitates community-based approaches alongside formal institutional efforts.

2.4. Research Questions and Objectives

Given the previous theoretical foundations and the identified gaps in understanding non-Western approaches to digital resilience, this research addresses the following questions:

1. How do formal pre-bunking strategies interact with community-based initiatives and NGO-led digital literacy programs to strengthen resilience against misinformation?
2. How do Indonesia's local cultural values and community-based movements shape and strengthen digital resilience against misinformation, particularly through collective verification practices?

3. Methodology

This study employs a mixed-methods approach combining institutional stakeholder interviews with a quasi-experimental study of women's community organisation to analyse how formal and informal networks contribute to digital resilience in Indonesia. The stakeholder interviews provide insights into institutional frameworks and policy intentions, while the quasi-experimental component examines how these frameworks are mediated and transformed through community-based digital literacy interventions.

3.1. Semi-Structured Interviews

Ten semi-structured interviews were conducted with key stakeholders from organisations involved in pre-bunking efforts (see Table 1) between September and November 2024. Interviews were conducted both through face-to-face meetings and via online platforms such as Zoom in Bahasa Indonesia, with an average

duration of approximately 1.5 hours each. An interview guide was developed, drawing upon key themes identified in the literature review section. The interviews employed open-ended questions, enabling respondents to articulate their perspectives on pre-bunking initiatives and the digital literacy programs they organised. Data were analysed using thematic analysis following Braun and Clarke (2022).

Table 1. Stakeholder informants.

Informant	Role/Affiliation
1	Kompas.com
2	Liputan6.com
3	Cekfakta.com and Alliance of Independent Journalists (AJI)
4	Ministry of Communication and Informatics, Indonesia
5	Indonesia Cyber Media Association (AMSI)
6	Indonesian Anti-Hoax Society (Mafindo) and Tular Nalar
7	Indonesian Advertising Companies Association
8	Suara.com
9	Press Council's Commission on Complaints and Ethics Enforcement
10	Press Council's Commission for Education, Training, and Professional Development

3.2. Quasi-Experimental Study

The quasi-experimental method addresses a gap in digital resilience research by examining how community-based digital literacy interventions shape information verification behaviours in community contexts. A quasi-experiment compares outcomes between treatment and control groups without random assignment (Baldassarri & Abascal, 2017). In this research, random assignment was not feasible because participants were organised in informal friendship groups of 2–3 individuals with strong social bonds and high cohesiveness, which are central to this study. Preserving these natural groupings offered methodological advantages and facilitated more open and candid interaction when they were surrounded by trusted friends, enabling observation of authentic collective verification practices. This design allows systematic comparison between groups while capturing how digital literacy interventions operate through existing community networks.

3.2.1. Participants

Participants were recruited from the Indonesian Family Welfare Empowerment Program (PKK), a social development movement established in 1957 and expanded nationally in 1972 (Daniswari, 2022). PKK operates through hierarchical structures from the national level down to neighbourhood units, organising regular meetings and community development activities. PKK members, predominantly housewives, are central to household and community, yet often overlooked in misinformation research, despite their potential influence on information dissemination and interpretation.

Forty-nine PKK members from Jakarta participated in the study between 11 and 15 November 2024. Participants were recruited through PKK organisational channels, with local coordinators announcing the research opportunity through WhatsApp groups. Inclusion criteria required active PKK membership and

regular social media use (defined as accessing platforms at least once daily). Participants joined the study as individual PKK members rather than as formal organisation representatives. Participants were assigned to two groups: a treatment group ($n = 20$) and a control group ($n = 29$). The unequal distribution resulted from some participants arriving late and being assigned to the control group to maintain group dynamics. Participants were mixed across education levels, age ranges, and income brackets to minimise group bias. Figure 1 illustrates the procedures for the treatment and control groups.

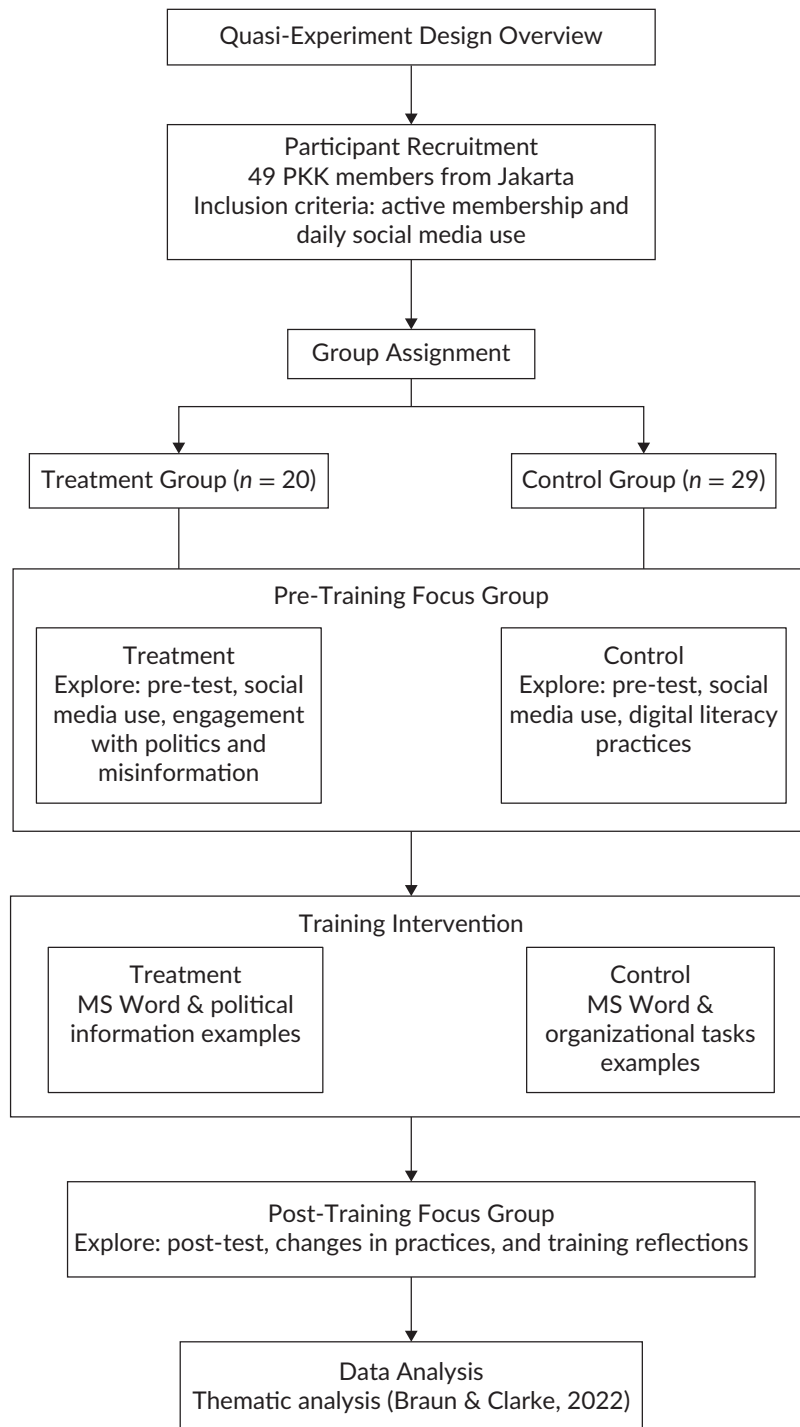


Figure 1. Flow diagram of quasi-experimental design.

3.2.2. Intervention Design

Both groups received four hours of Microsoft Word training, as requested by PKK members for organisational needs. The treatment group used examples related to political information during the pre-electoral period, while the control group used examples from routine organisational activities, such as preparing meeting minutes, organising membership data in tables, and formatting reports. Both groups, therefore, received equivalent technical instruction and practice time, differing only in exercise content. Training was delivered by facilitators with assistance from training assistants, using a participatory approach emphasising group discussion and collaborative learning. All sessions were observed by the research team. This observational approach enabled documentation of collective verification practices as they unfolded in real time.

The training for the treatment group incorporated the following main exercises:

- Exercise 1: Fact vs. Misinformation. Participants categorised 10 headlines in a two-column table: 5 from mainstream news sources covering the November 2024 regional election, and 5 debunked misinformation from the January 2024 presidential election (sourced from the Ministry of Communication and Information's fact-checking portal). Presidential misinformation was used because regional misinformation had not yet been debunked, whereas presidential misinformation had been documented throughout 2024. This exercise required participants to practice collaborative information assessment while developing table formatting skills.
- Exercise 2: Fact vs. Opinion. Participants practised distinguishing factual claims from opinion statements using locally relevant examples. Facts were drawn from the training day's local market commodity prices (e.g., "eggs cost IDR 12,000 per kilogram"), providing concrete information familiar to participants' daily activities. Opinions were collected from social media posts discussing contemporary social issues (e.g., "traditional values are disappearing"), representing the types of claims participants regularly encounter in their social media environments. This combination enabled participants to distinguish verifiable facts from subjective evaluative statements. Participants created tables organising these statements into fact and opinion categories.

3.2.3. Procedure

The quasi-experimental design consisted of three phases: (a) pre-training focus groups, (b) a digital literacy training intervention, and (c) post-training focus groups. Focus groups were selected over individual interviews for three reasons: They align with Indonesian cultural preferences for collective discussion, allow direct observation of how information verification practices emerge through social interaction, and reflect the study's emphasis on collective rather than individual verification processes.

Pre-training focus groups began with a standardised pre-test for both groups, followed by semi-structured focus group discussions. The treatment group discussed media use, engagement with political news, and experiences navigating potential misinformation, whereas the control group focused on general media use and everyday digital literacy practices. Each focus group session lasted 60–90 minutes and followed a semi-structured protocol to ensure consistency while also allowing themes to develop naturally.

The four-hour training intervention was delivered as described in Section 3.2.2. During training sessions, researchers conducted observations by recording field notes on group dynamics, interaction patterns, and spontaneous discussions related to information verification that emerged during collaborative exercises.

Post-training focus groups were conducted with the same participant groupings and semi-structured protocols as in the pre-training phase. These sessions included a post-test to assess skill retention, followed by reflective discussions on the training experience and perceived changes in information verification practices.

All interactions across pre-training, training, and post-training phases were audio-recorded using two digital recorders to capture all participant contributions. Recordings were transcribed verbatim in Bahasa Indonesia, translated into English, and analysed using thematic analysis following Braun and Clarke (2022), with particular attention to proxy indicators of digital resilience, including changes in verification behaviours, the emergence of collective information assessment, and the adaptation of cultural values to digital information processing.

4. Findings

4.1. *Pre-Bunking Strategies: Role of NGOs and Societal Actors*

This section reports the empirical findings on how key Indonesian actors implement pre-bunking strategies and digital literacy programs to counter misinformation. The results are organised into four themes: cross-organisational collaboration and innovation; pre-bunking content production and curricular work; capacity-building and institutional infrastructures for news credibility; and community-based pre-bunking.

4.1.1. Cross-Organisational Collaboration and Innovation

A central finding is that pre-bunking in Indonesia is enacted through cross-organisational collaboration, particularly among journalism organisations, fact-checkers, and civil society actors. AJI (Alliance of Independent Journalists) and Cekfakta.com (fact-checker organisation) collaborate closely with organisations such as Mafindo (Indonesian Anti-Hoax Society) and AMSI (Indonesia Cyber Media Association) alongside other media organisations under the Indonesian Fact-Checking Network to combat misinformation through pre-bunking and digital literacy initiatives. This collaboration spans multiple issue areas, including health and political disinformation. As Informant 3 mentioned, “There is pre-bunking effort through collaboration between Mafindo, AJI, and AMSI. Most of it relates to politics, but we have also started addressing health and other areas.” The same informant emphasised that these efforts aim to “create awareness before false information spreads,” framing pre-bunking as a preventive, “vaccine-like” approach.

Beyond collaboration, innovation is evident in the development and deployment of verification tools. Mafindo operates professional fact-checking infrastructures using internal tools (Yudistira, Bharata) and public-facing tools such as Hoax Cluster and the Kalimasada WhatsApp chatbot, which allow users to verify information directly. Mafindo has begun exploring the use of AI to predict and pre-bunk potential hoaxes based on recurring patterns, particularly in election contexts. Although still experimental, these initiatives represent early efforts to anticipate misinformation before it circulates widely.

4.1.2. Pre-Bunking Content and Curriculum

Pre-bunking content is produced by observing recurring misinformation themes and translating them into early warnings and educational materials. AJI and Cekfakta.com create pre-bunking content covering health, politics, and celebrity misinformation, often using multimedia formats such as infographics and videos. Interactive formats, including games and quizzes (e.g., *Recheck Before Getting Fooled*), are used to encourage critical engagement and teach people to evaluate critically the information they encounter online, rather than to passively consume it. The AMSI website features an e-learning platform that provides comprehensive educational resources on digital literacy and fact-checking. Additionally, the website offers downloadable modules focused on fact-checking and digital literacy training.

As Informant 3 explained, “Cekfakta.com started creating pre-bunking content, especially after seeing recurring disinformation topics in health and politics, to alert the public before the misinformation spreads widely.” Beyond content production, stakeholders emphasised curricular integration as a long-term pre-bunking strategy. In collaboration with Mafindo, AJI has developed educational curricula aimed at fostering critical thinking about misinformation, including initiatives targeting elementary and secondary education. Informant 3 highlighted this expansion: “We’re also pushing for digital literacy through the development of educational curricula, including for elementary and secondary education, and collaborating with various media organisations to integrate fact-checking into their content.” Cekfakta.com further complements these efforts by offering learning modules focused on fact-checking, media literacy, and critical assessment, alongside proactive educational campaigns using multimedia formats.

4.1.3. Capacity-Building and Credibility Infrastructure

AMSI plays a central role in strengthening journalists’ fact-checking capacities through regular and systematic training programs for journalists working in online media, designed to improve fact-checking capabilities. A key feature of this system is mentorship: AMSI mentors (journalists trained by AJI) train and guide representatives from 10 online media outlets each, with the training focusing on digital literacy and both pre-bunking and debunking techniques to support the production of fact-checked content. These programs rely on a cascading mentorship model, where journalists trained by AJI through Training of Trainers (ToT) subsequently mentor representatives from multiple online media outlets. AMSI also regularly organises news literacy training for the public, aimed at combating dis/misinformation. AJI’s online presence features digital literacy and pre-bunking programs, including collaboration with Google News Initiative to run ToT.

However, this capacity-building infrastructure also revealed constraints. According to Informant 5, many of these outlets struggle even with producing basic hard news, making the additional task of fact-checking even more challenging. Furthermore, Informant 5 pointed out that many journalists lack critical thinking skills, which are essential for fact-checking. The mentor noted that part of the challenge in the training was fostering critical awareness among journalists, as not all of them possess the necessary mindset for scrutinising information.

In parallel, the Press Council supports media credibility by providing structured education and training, competency tests, and mentorship to strengthen journalistic standards and legal-ethical awareness. Its programs cover competency requirements, newsroom workflows, digital literacy, distinguishing dis/misinformation, and verification, while preparing examiners and administering tiered Journalist

Competency Tests. The Council also enforces professionalism through sanctions for violations of the Journalistic Code of Ethics, including removal from membership, which results in losing Council recognition and essential legal protection. As Informant 9 stated:

Fabricating hoaxes and other such acts are major violations. The Press Council has imposed strict sanctions, and we do so without exception toward anyone who commits such acts. Recently, we have already ruled against two media outlets for fabricating fake news. We no longer consider them as press companies, and all their complaints to the Press Council have been dismissed.

4.1.4. Community-Based Pre-Bunking

Community-based pre-bunking is primarily implemented through Mafindo's Tular Nalar program, which focuses on public education and engagement. The program explicitly targets vulnerable groups, including first-time voters, the elderly, and underserved communities in remote areas, aiming to foster critical thinking, digital literacy, and responsible digital behaviour among these groups (Informant 6). The scale of Tular Nalar's outreach is extensive. Informant 6 stated:

For senior citizens and first-time voters, we are conducting digital literacy training. Currently, we are holding 500 classes to reach 1.6 million people. For first-time voters, the classes are called the "Sekolah Kebangsaan" [Indonesian civic school], and they are ongoing.

Tular Nalar's curriculum is systematically designed across three levels (basic, middle, advanced) and four thematic clusters (social media, digital safety, digital commerce, digital entertainment). The curriculum was developed through literature review, focus group discussions, and pilot testing. Learning is reinforced through pre- and post-assessments, reflective activities, mentoring, and supplementary tools (infographics, cards, video games), enabling participants to integrate safe digital practices into everyday life. In addition to in-person training, Tular Nalar disseminates pre-bunking and digital literacy content through social media and partnerships. Collaborations with organisations such as the Indonesian Community Radio Network allow outreach to underrepresented and remote communities, extending pre-bunking beyond formal training settings.

4.2. Local Indonesian Values and Collective Verification Practices

This quasi-experimental study with PKK women reveals how institutional frameworks are mediated through community networks, demonstrating both opportunities and limitations in translating formal pre-bunking strategies into community-level resilience.

4.2.1. Information Verification Behaviours

Prior to the intervention, both groups demonstrated similar baseline approaches to information sharing. Participants reported extensive participation in WhatsApp groups. Analysis of pre-training focus groups revealed existing information forwarding behaviours followed patterns based on content utility and source trust. They showed a high tendency to forward community announcements (e.g., work service announcements and PKK activity invitations); moderate tendency to forward political information (e.g., aid

announcements or campaign promises); and low tendency to forward suspicious content. When asked about suspicious content, participants stated responses such as “If a message is suspicious, I’m not brave enough to forward it immediately, just read it.”

Following the intervention, groups demonstrated different verification approaches. Treatment group participants described implementing multi-step verification processes. Thirteen participants mentioned comparing information across two or three platforms. Eighteen participants identified “forwarded multiple times” labels in WhatsApp as verification triggers. One participant explained: “I like to check other social media like Instagram or Facebook. If it is consistent, then the content can be trusted.” On the other hand, control group participants prioritised official organisational sources. They maintained more straightforward verification approaches. They described approaches such as “I will read first,” “sometimes search in Google too,” and “look for the source first.”

Both groups demonstrated trust hierarchies in information evaluation. Institutional sources received the highest trust ratings across both groups. Community leaders deemed to have high digital skills received moderate trust ratings. Anonymous social media content received the lowest credibility scores. Treatment group participants mentioned checking for verification markers before trusting suspicious information, including looking for checkmarks in account names. They used television news as reference points, comparing whether similar news had appeared on TV.

Treatment group participants demonstrated political awareness, as they acknowledged receiving campaign benefits (e.g., free groceries) while still realising they were able to maintain voting independence. One participant noted, “We have suspicion and resistance, possibly because many political candidates approached housewives, thinking [we are] an easy audience.”

4.2.2. Platform Usage and Knowledge Exchange

All 49 participants showed sophisticated social media engagement; they either managed or actively participated in three to seven WhatsApp groups simultaneously. Forty-seven participants showed advanced TikTok capabilities, including the ability to search for recipes, religious instruction, and community information. In contrast, 43 participants required assistance with computer-based Microsoft Word training. Only 7 participants demonstrated familiarity with basic keyboard shortcuts. Thirty-eight older participants relied on family members for computer operations.

During the intervention, both participant groups demonstrated intergenerational knowledge-sharing that enhances community resilience capacity. Younger participants (age 25–35) demonstrated greater technical skills, while older participants showed higher engagement with discussion topics. This created spontaneous peer learning opportunities, where younger participants actively assisted older peers with technical aspects while benefiting from older participants’ experiences with information evaluation during discussion sessions.

Both treatment and control participants demonstrated strong preferences for discussing suspicious information collectively before making sharing decisions. Social influence patterns included strong peer influence on platform choice, collective decision-making in information credibility assessment, and group-based verification dynamics within PKK networks.

5. Discussion

5.1. Individual Layer

At the individual level, the findings reinforce arguments in the literature that digital literacy alone does not automatically translate into digital resilience when confronting misinformation. Treating misinformation as a form of digital adversity, prior research emphasises that individual competencies become protective only when they are activated before exposure and supported by broader social contexts (Sun et al., 2022). Differences in participants' performance across platforms are consistent with work showing that digital literacy is not a uniform or fully transferable skill set but is shaped by platform- and algorithm-specific affordances that structure exposure and sharing practices (Cho et al., 2024). This supports the relevance of preventive, inoculation-based approaches, as pre-bunking aims to build resistance prior to exposure and has been shown to reduce susceptibility to misinformation (Lewandowsky & van der Linden, 2021; Roozenbeek et al., 2020).

The quasi-experimental findings reveal that individual digital literacy serves as a necessary but insufficient foundation for digital resilience in Indonesian communities. Both treatment and control groups demonstrated improvement in technical skills following Microsoft Word training, confirming that structured interventions can enhance individual competencies. However, the divergent outcomes between groups illuminate the critical distinction between skills acquisition and resilience development. The treatment group's exposure to political information examples during training facilitates what Sun et al. (2022) describe as the circular relationship between literacy and resilience. Participants who engaged with misinformation-related content strengthened their evaluative capabilities, with systematic verification processes emerging as evidence of this circular development. This finding demonstrates that digital literacy becomes most effective when contextually relevant to actual threats participants encounter in their information environments.

The findings reveal a platform-specific competency gap that challenges assumptions about the transferability of digital literacy. Participants required substantial assistance with computer-based tasks yet demonstrated sophisticated engagement with mobile platforms where misinformation predominantly circulates, underscoring that digital literacy operates in platform-contingent ways rather than as a universally transferable skill. This misalignment between formal, computer-based literacy training and participants' everyday information environments suggests that resilience-building interventions are most effective when they activate existing competencies on mobile platforms instead of presuming skill transfer across contexts.

At the same time, the limited performance in fact-opinion categorization tasks highlights the constraints of purely skills-based approaches. Treatment participants achieved only 58% accuracy overall and struggled markedly with culturally nuanced statements, reaching just 30% accuracy for context-specific examples. In line with the discussion's emphasis on digital resilience as socially embedded, these results indicate that individual cognitive capabilities, while necessary, require cultural and social supports to function as effective resilience mechanisms.

The persistence of collective decision-making preferences aligns with research showing credibility judgments as a socially embedded process (Kligler-Vilenchik, 2022; Metzger & Flanagin, 2013). Even participants who developed enhanced individual verification capabilities continued seeking collective

consultation before sharing information. This behaviour indicates that individual competencies serve as inputs to community-based resilience processes rather than standalone solutions (Detlor et al., 2022).

5.2. Community Layer

The women's institution findings provide compelling evidence for Tomkova's (2020) framework, emphasising community-driven processes of collective mobilisation. The research demonstrates that sustainable digital resilience emerges through collective verification practices that transform individual literacy into community-wide protective mechanisms.

The research reveals that women's organisations, such as PKK, are crucial nodes in community resilience networks. PKK women function as information intermediaries who filter and contextualise content before it reaches broader community audiences. The experimental findings show how these women develop collective strategies for managing information threats while maintaining their roles as community knowledge brokers. This finding extends Tomkova's (2020) emphasis on social capital mobilisation by demonstrating how gendered social roles can serve as resilience infrastructure. Our findings reveal three mechanisms through which community networks enable collective verification against misinformation.

First, Indonesian cultural values create structured pathways for information processing that function as resilience infrastructure. The research identified specific trust hierarchies that create predictable information flow patterns that can be leveraged for community protection against misinformation. Participants consistently prioritised institutional sources (government, established media) over anonymous content. Treatment group participants demonstrated sophisticated integration of these cultural hierarchies with systematic verification approaches. One participant's statement, "If a message is from our community leader, we still verify it, but also we respect their knowledge," illustrates how cultural values around authority respect can coexist with critical evaluation practices. Participants demonstrated collective verification through group consultation, reflecting Kligler-Vilenchik's (2022) concept of collective social correction and Metzger and Flanagin's (2013) concept of social endorsements by showing how communities establish collective hierarchies of source credibility.

Second, intergenerational knowledge exchange, which occurred during training, enables group-based fact-checking. Younger PKK members' digital fluency, combined with older members' contextual knowledge, created complementary verification resources. This collaborative competence reflects what Gilchrist (2019) identifies as central to well-connected communities. These findings challenge Western models that assume resilience develops through individual skill accumulation rather than social knowledge distribution. Instead, the Indonesian community approach demonstrates how different generations can contribute specialised knowledge to create a collective capacity that exceeds what any individual could achieve alone. This finding suggests that effective resilience interventions should build on existing social learning dynamics rather than implementing individualistic training approaches.

Third, accountability norms embedded in community expectations discourage sharing unverified information. The finding that participants avoided sharing suspicious content to maintain credibility within their networks demonstrates Kligler-Vilenchik's (2022) concept of collective social correction, where group norms shape individual behaviour.

Rather than universal scepticism toward all sources, the Indonesian approach shows how cultural values can enhance rather than inhibit critical evaluation by providing stable reference points, reflecting the culturally situated nature of digital literacy (Choudhary & Bansal, 2022; McDougall & Rega, 2022). These reference points reduce cognitive load while maintaining protective scepticism toward anonymous or unverified sources.

Figure 2 illustrates our proposed integrated model of digital resilience, which addresses a critical gap in existing interventions that focus on either individual skill-building or institutional frameworks while neglecting the community. This model offers a replicable approach for contexts seeking culturally grounded resilience.

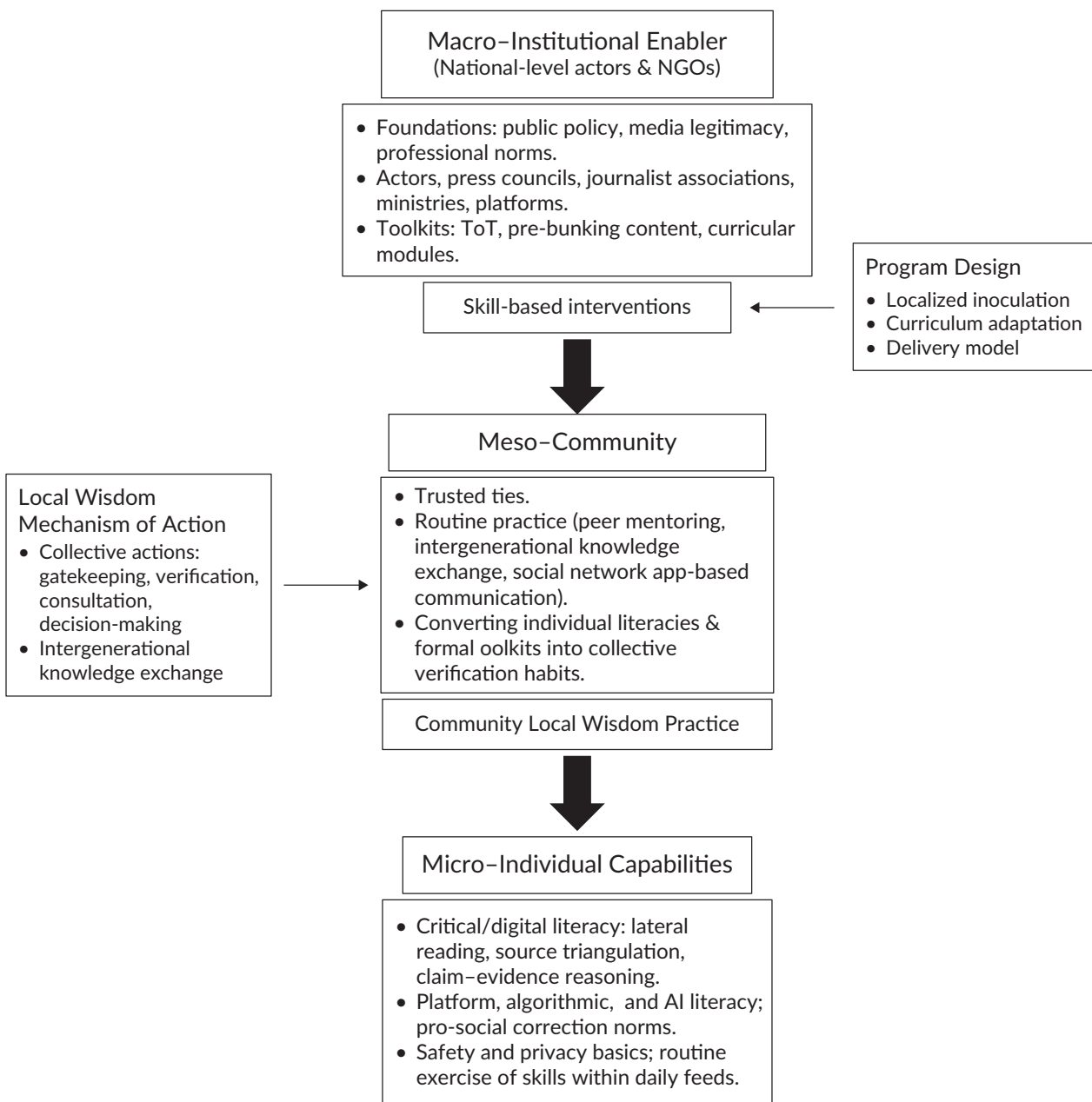


Figure 2. Community-focused digital resilience model.

Drawing together our findings and the literature, we argue that formal pre-bunking strategies in Indonesia gain effectiveness when they are integrated into NGO-led digital-literacy programs and existing community infrastructures, producing a multi-level resilience consistent with Humprecht's framework. National-level actors and professional networks translate macro determinants of resilience (media legitimacy, professional norms, regulatory safeguards) into anticipatory, skills-based interventions (ToT, pre-bunking content, curricular modules) that provide early warning and equip individuals with counterarguments before misinformation begins to spread. Community organisations such as PKK then socialise these frameworks through their networks and routine practice (peer mentoring, intergenerational knowledge exchange, WhatsApp-based deliberation), converting individual literacies into collective verification habits—precisely the meso-level mechanism that Humprecht's model leaves underspecified. In line with the literature review, programs that mix inoculation-style pre-bunking with “dynamic” digital literacy (critical source evaluation, lateral reading, and platform/algorithmic awareness) shift participants from heuristic forwarding to systematic scrutiny, while inclusive pedagogy (micro-teaching, locally relevant examples) lowers cognitive and cultural barriers to uptake. This produces a positive cycle (Figure 2): Formal institutions provide shared anticipatory frameworks, NGO-led training events develop transferable skills, and community networks weave those skills into everyday decisions—thereby strengthening resilience to misinformation across institutional, organisational, and community levels.

6. Conclusion

Formal pre-bunking strategies provide anticipatory knowledge frameworks through national actors and NGOs, including inoculation-based content, ToT, and curricular modules. Community organisations such as PKK translate these frameworks into everyday practice through peer mentoring, group consultation, and trust-based information filtering, thereby embedding collective verification routines in daily information use. Indonesian cultural values sustain collective information-processing practices (such as message gatekeeping, collective verification, and group-based decision-making) that persist beyond individual-focused digital literacy training. By integrating cultural values with information-checking behaviours, the Indonesian case suggests that effective digital resilience is most likely to emerge when interventions work within existing cultural frameworks, offering insights for contextually grounded resilience models addressing the global challenge of misinformation.

These findings provide practical implications for digital literacy practitioners and policymakers. Resilience interventions should be integrated into existing community organisations (e.g., women's groups, religious associations, and neighbourhood networks) that already function as trusted information intermediaries, rather than establishing parallel training structures. Program design should accommodate collective learning practices aligned with local cultural norms, while intermediary organisations play a critical role in translating national pre-bunking frameworks into locally resonant content. Effective implementation ultimately requires coordination across institutional, organisational, and community levels.

The study has several limitations that should be acknowledged. The quasi-experimental component involved a small sample of 49 women in Jakarta, limiting generalizability and statistical power, and observed group differences cannot be attributed exclusively to the intervention due to potential external influences. Focus group settings may have introduced social desirability bias, and the pre-bunking analysis relied primarily on stakeholder interviews at the national level, which may not capture informal or regional initiatives. Future

research should examine how this community-based approach scales across diverse demographic groups and regions in Indonesia and conduct systematic comparisons with Western initiatives to identify transferable principles and culture-specific mechanisms of digital resilience.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

Data supporting this study are openly available at <https://doi.org/10.17632/9y56fnhkxk.1>

LLMs Disclosure

Microsoft Copilot was used to assist with English translation, grammar refinement, and stylistic editing during manuscript preparation. All conceptual development, data interpretation, and final decisions regarding the content remain the sole responsibility of the authors.

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So Emotional? The Role of Emotions for Young Adults' Resilience to Disinformation

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Abstract

The chaotic information environment during (poly)crises, marked by urgency and heightened emotions, complicates truth assessments and provides fertile ground for the proliferation of disinformation. While the role of emotions in shaping disinformation beliefs and sharing is widely acknowledged, there is little empirical evidence on how and under what circumstances emotions impact responses to disinformation. To provide an in-depth understanding, we applied a qualitative study design, conducting 29 semi-structured interviews between November 2022 and April 2023 with young adults in Germany and the Netherlands. Our study outlines the context in which specific emotions arise when individuals encounter potential disinformation, connected behaviors, and the consequences for resilience to disinformation. We find that emotions of positive valence, such as feeling calm and confident, are linked to verification behaviors and can indicate and reinforce resilience to disinformation. Contrary to existing research, we find that emotions of negative valence, such as anger or discontent, can also be signifiers of resilience when accompanied by critical information evaluations. However, the intensity of emotions matters, as strong negative emotions are linked to resignation, distrust in democratic institutions, and disinformation beliefs. Illustrating the interaction between emotions and behaviors when navigating disinformation, our study offers more contextual and nuanced insights into how emotions influence, express, and may strengthen or weaken resilience to disinformation.

Keywords

disinformation; emotion; resilience; young adults

1. Introduction

The potency of disinformation lies in its ability to tap into the power of emotion, triggering affective responses that increase engagement with an issue. Disinformation agents leverage this perfectly, appealing to emotions to spread their often politically motivated messages. Emotional bonds may also explain why (dis-)information is believed along political and ideological lines (Anthony & Moulding, 2019; Lawson & Kakkar, 2022) or how political leaders stay in power despite having been (repeatedly) exposed for lying to their constituents (Marwick, 2018). This places emotions at the heart of not only issues related to disinformation but also polarization and populism. Despite the widely acknowledged role of emotions in shaping disinformation beliefs and sharing, there is a lack of empirical evidence on the underlying mechanisms. Existing research on the influence of emotions, such as anxiety and anger, presents conflicting findings (Oh & Lee, 2019; Weeks, 2015), underscoring the need for a more comprehensive understanding of how and under what circumstances emotions impact responses to disinformation. To address this gap, we apply the concept of resilience. Investigating the role of emotions for resilience enables us to broaden the analytical scope, examining not only the outcome—whether people believe disinformation—but also the process involved, including protective mechanisms.

Resilience processes in humans contain cognitive, behavioral, and emotional components (Shafi et al., 2020). In disinformation research, cognitive and behavioral elements have thus far received the most attention for explaining and preventing disinformation beliefs. Consequently, attempts at increasing resilience predominantly rely on conveying knowledge and skills to detect disinformation, for example, through media literacy or prebunking techniques (Roozenbeek et al., 2022; Smith et al., 2023). These approaches are based on a premise of rationality: Once people can differentiate “correct” from misleading information, they will endorse the former. However, research on the efficacy of and resistance to fact-checking (Bateman & Jackson, 2024; Hameleers, 2024), for example, reveals complexities that challenge this assumption. Even if the premise were accurate, emotions would still command attention, due to their influence on “rational” evaluations, belief-forming, and (re-)actions (Martel et al., 2020). Thus, to advance ongoing debates, it is imperative to understand what people feel when encountering potential disinformation and how this impacts their thoughts and actions. As emotions are highly context-dependent, prior quantitative studies have provided only limited answers.

To provide an in-depth understanding of how emotions shape resilience to disinformation, we employed a qualitative study design, conducting 29 semi-structured interviews with young adults (aged 18–32) in Germany and the Netherlands. Younger people are regarded as more susceptible to disinformation due to their high social media use and the assumption that the skills needed to discern disinformation may still be underdeveloped (Pérez-Escobar et al., 2023; Vissenberg, 2025). To counterbalance these expectations, our study focuses on the realities and daily practices of young adults. Based on day-in-the-life narrations and in situ social media walkthroughs, we investigate participants’ expressed emotions when navigating their daily information environments and map connected behaviors and consequences for their resilience to disinformation. Our study illustrates the relationship between emotions of positive and negative valence and resilience, outlines the underlying dynamics, and provides alternative explanations for well-documented phenomena, such as news avoidance.

2. Emotions and Disinformation

The scarce and inconclusive empirical evidence on the influence of emotions on resilience to disinformation could be due to methodological difficulties posed by emotions' fleeting and partly latent nature, being "hard to define, hard to operationalize, hard to measure" (Mercer, 1996, p. 1; see also Bleiker & Hutchison, 2018). Indeed, terminologies and definitions relating to emotions vary significantly, partly due to their conceptual openness and having been operationalized in vastly different contexts within the humanities, behavioral, medical, and computational sciences (Lünenborg & Maier, 2018; van Lange, 2023). Most referred to are affect, feeling, and emotions, which are often used synonymously. However, clarifying distinctions between these concepts is crucial for methodological rigor and the comparability of research results.

Communication and psychological studies predominantly regard affect as pre-cognitive or subconscious underlying moods and energies, which precede feelings and emotions and can direct attention, behavior, and thoughts (Papacharissi, 2014). Through identifying and labeling sensations, affect can transform into feeling. Emotions are a "display of feeling" and are attributed to a more conscious experience and expression, for example, through (body) language (Shouse, 2005). According to this distinction between the three concepts, research methodologies relying on verbalization and non-verbal cues, such as qualitative interviews, can capture emotions and, if articulated, feelings, but not affect (Lehaff, 2022). We, therefore, refer to emotions and feelings in this study.

Emotions and their regulation are recognized as an inextricable part of resilience (Rothstein et al., 2016). We define resilience to disinformation as a process of harnessing resources when encountering disinformation, which supports mitigating potential adverse effects, such as deception or impacts on (mental) health (Bastick, 2021; Kont et al., 2024). We conceptualize disinformation as a hypernym, encompassing a variety of formats, including clickbait, decontextualized or fabricated content, flawed reporting, conspiracy theories, and professionally executed disinformation campaigns, including bots (Kapantai et al., 2021; Marwick, 2018).

In essence, resilience encompasses protective mechanisms that help prevent or reduce harm when faced with adversity (Bracke, 2016; Masten, 2001). As the process of dealing with adversity commonly triggers emotions of negative valence, such as anxiety or anger, emotion regulation is central to resilience (Kay, 2016). Positive emotions, such as optimism, have been shown to promote resilience (Paquette et al., 2023) but have received little attention in the context of resilience to disinformation so far.

Any investigation into the role of emotions for resilience to disinformation ultimately raises questions regarding the relationship between emotions and behaviors. To document young adults' behavior, we apply the concept of tactics, defined as calculated actions in response to challenges (de Certeau, 2005). As resilience manifests and evolves in reactions to challenges, tactics are the most outwardly observable element of the process. Kont et al. (2025) distinguish seven tactics people use to navigate disinformation in their daily lives, as shown in Figure 1.

	Avoiding news
	Avoiding risky outlets
	Self-reflective thinking
	Distinguishing deceptive strategies
	Seeking nuanced representation
	Verifying
	Engaging in conversation

Figure 1. Taxonomy of tactics to navigate disinformation in order of perceived effort. Source: Kont et al. (2025).

Avoiding news, a well-documented phenomenon (Edgerly, 2022; Tandoc & Kim, 2023), is a comparably low-effort tactic to minimize exposure to disinformation. Avoiding risky outlets entails a certain alertness to the quality of news and is aimed at evading low-quality sources rather than all (hard) news (Wagner & Boczkowski, 2019). Self-reflective thinking refers to critically examining one’s limitations, biases, and potential judgment errors when evaluating information. It requires conscious effort and serves as an internal radar for potentially false beliefs. Another tactic is distinguishing deceptive strategies in encountered information, for example, by checking for manipulation in imagery, decontextualized, or omitted information (Swart, 2023). Seeking nuanced representation entails considering various viewpoints, either through conversations or comparing information from different outlets and countries (Cucinelli & Farhan, 2022). Verifying, which includes evaluating the trustworthiness of the information at hand through cross-referencing and checking sources, is more time-consuming (Dame Adjin-Tettey, 2022). Engaging in conversation requires the most effort and is applied only when directly confronted with people who share (suspected) disinformation. It is used to understand the logic or motivation behind the counterpart’s beliefs, exchange viewpoints, or counter-argue. By connecting tactics with emotions, we aim to understand how people’s feelings while navigating potential disinformation influence their actions, and vice versa. Examining these processual dimensions calls for qualitative methods capable of capturing how these dynamics unfold in context.

Existing studies are more outcome-oriented, primarily focusing on the influence of “negative” emotions, such as anxiety or anger, on disinformation beliefs. The topic is mainly explored quantitatively, relying on experiments to measure and manipulate emotions and beliefs in (false) news items or conspiracy theories. Drawing definitive conclusions is challenging as study findings differ significantly. For example, worry and anxiety have been argued to benefit resilience, as they may trigger more in-depth information processing and critical thinking (Kim et al., 2021; Weeks, 2015). However, higher social media use mediated by worry has also been associated with misinformed beliefs (Su, 2021). Anger has been found to increase belief in political misinformation that aligns with one’s political identity (Weeks, 2015). Other studies connect all heightened emotions, except for anger (Bago et al., 2022), to increased vulnerability to disinformation (Martel et al., 2020). The results of conspiracy theory belief are less ambiguous, linking it to feelings of threat or exclusion (Jolley et al., 2018). Reducing these feelings of exclusion, for example, through self-affirmation,

has been shown to weaken conspiracy theory endorsement (Poon et al., 2020). This highlights the potential of emotional regulation techniques for interventions, while simultaneously raising questions about the role of “positive” versus “negative” emotions in resilience to disinformation.

Differences in the study context, definitions, and operationalization of concepts may account for some of the conflicting findings observed in the literature. This is symptomatic of a research field in its infancy, lacking theoretical underpinnings and conceptual development. From an epistemological standpoint, the field exhibits dualistic tendencies, positioning emotion in opposition to rational thought. In this rationale, the latter is presumed to be more beneficial for resilience to disinformation. This valorization of rationality is common in the social sciences. While it might explain the lack of research into emotions, it comes with limitations. Firstly, rather than one appearing at the expense of the other, emotion and reason most likely complement each other in evaluations, such as truth assessments (Calhoun, 2001; Mercer, 2010). Secondly, emotion “is not innately irrational but in fact plays an important role in rational behavior and rational thought” (Lehaff, 2022, p. 44). By closely examining people’s emotional experiences with (dis-)information and connecting them to specific behaviors and the contexts in which they arise, our study contributes to a more nuanced perspective on emotions and disinformation. To address the research gaps on the role of emotions for resilience to disinformation, this study investigates the following questions:

RQ1: Which emotions do young adults express when discussing disinformation? RQ2: How do emotions relate to different tactics that users adopt to navigate disinformation?

RQ3: How does the interplay between emotions and tactics shape young adults’ resilience to disinformation?

3. Method

Accuracy in depicting emotions requires methods that reflect complexity and context (Paasonen, 2021). To capture the richness of emotional experiences, we employed a qualitative study design, involving 29 semi-structured interviews. This provided insight into emerging emotions and participants’ lived experiences. To compare processes across contexts and identify potential transnational mechanisms, interviews were conducted with young adults (18–32) in Germany ($n = 15$) and the Netherlands ($n = 14$). The two neighboring countries share similar political systems and media landscapes, but differ in their levels of digitalization, citizens’ digital skills, and trust in institutions (Edelman, 2025; European Commission, 2025). Particularly the latter two may condition how people respond to disinformation.

Participant recruitment began with snowball sampling at vocational schools and universities and was subsequently complemented by quota sampling to ensure a balanced distribution across age, gender, and educational background (Table 1). Our sample includes young adults from various regions within Germany

Table 1. Sample demographics.

	Age group		Gender		Education		Total
	18–24	25–32	Female	Male	Vocational	Higher	
German	4	11	9	6	10	5	15
Dutch	7	7	7	7	5	9	14

and the Netherlands, and participants' occupations range from students to part-time or full-time employees, freelancers, entrepreneurs, and primary caregivers.

The data were collected by two researchers, one native speaker of German and one native speaker of Dutch, between November 2022 and April 2023. All interviews lasted an average of 60 minutes and were conducted face-to-face, either in person ($n = 8$) or via participants' preferred video conferencing software ($n = 21$). To ensure reliability, we compared the length, content, and depth of online and in-person interviews and found no significant differences. The setting was designed to make participants feel safe sharing experiences, opinions, and emotions openly. Therefore, we used a conversational, informal interview style, emphasizing that participants weren't judged or tested. This proved crucial and, at times, was explicitly addressed by participants: "Um, as you said, you're not judging, so [...]," followed by information that might otherwise have been omitted.

All interviews began with a "day-in-the-life" narration, in which participants shared how they used social and news media on a typical day. Easy to recap, this helped ease participants into the conversation, offering insight into their daily lives, information routines, and (informational) environments. The following section involved an in-situ exploration of media practices, relying on think-aloud and walkthrough methods (Charters, 2003; Ritter, 2022). Participants were prompted to open their social media and news feeds and move through them naturally, describing the encountered content, related thoughts, and actions. This invited participants to describe and reflect on how they access information and their main (trusted) sources in the next step. The last part of the interview focused on participants' interpretations of the term disinformation, their experiences, and their opinions.

We deliberately decided against discussing emotions in a separate section of the interview. Research indicates that normative expectations around news and social media use can distort (young) adults' reflections on their emotions, making them more dismissive or reluctant to discuss those feelings (Lehaff, 2022). Therefore, we opted for a design that also allowed emotions to surface naturally, for example, during the in-situ think-aloud and walkthrough section, when discussing encountered content, (dis-)trusted outlets, and navigating disinformation. Emphasizing, at times repeatedly, the validity of and explicit interest in participants' subjective experiences facilitated sharing how certain situations or encounters made them feel. When responses were ambiguous or required further elaboration, we used follow-up prompts such as "How do/did you feel about...?" or "Does/did that make you feel...?" As studying emotions requires capturing subtleties (Ayata et al., 2019; Gupta, 2023), all interviews were audio-recorded, and, in the case of online interviews, video-recorded with participants' consent. Each interview was transcribed verbatim, noting pauses, laughter, irony, or sarcasm, and accompanied by detailed field notes documenting participant behavior and atmosphere during the interview.

We analyzed the data based on grounded theory with multiple rounds of inductive coding in ATLAS.ti, analyzing the transcripts alongside interview recordings to ensure validity in emotion coding (Saldaña, 2021). Initial coding began with clustering positive, negative, and neutral emotions, which were progressively developed into more detailed codes, such as "angry," "disappointed," or "amused." The codes were refined in an iterative process, moving from exploratory to axial coding. Then, the emergent codes were compared with the categories in the Geneva Affect Label Coder, which is widely used in emotion research (Scherer, 2005). This comparison did not replace our inductive categories, but rather strengthened the analytic rigor

and theoretical sensitivity of our findings by sharpening distinctions between emotions and identifying gaps between theory and data. Inductive codes that do not fit Geneva Affect Label Coder categories, such as feeling “depressed” or “overwhelmed,” reveal how participants conceptualize their emotions in ways that challenge or extend existing taxonomies.

As emotions are subjective experiences, complete emotional detachment during data collection and analysis is not only impossible, but potentially counterproductive. Providing space for participants to express their experiences and feelings openly and correctly labeling them requires a certain degree of empathy (Saldaña, 2021; Sauerborn, 2019). To ensure a systematic and reliable approach in our methods and reasoning, we relied on analytical reflexivity and calibration among the research team. Reflective memos on decisions, difficulties, and learnings throughout the research cycle were used to minimize bias and critically examine the interpretative process. To safeguard the participants’ anonymity, we use pseudonyms for quotes.

4. Results

The cross-national comparison did not reveal substantial differences regarding expressed emotions, connected behaviors, and consequences for resilience to disinformation between German and Dutch participants. Positive emotions are most often expressed during the social media walkthrough of the interviews, contrary to research tying social media use to negative emotions (Borah et al., 2022; Wu & Pei, 2022). Swiping through their feeds, the young adults find valuable content to learn from, feel inspired and enthusiastic about, making statements such as “really fun to see,” “really motivating,” and “really valuable.” Their reactions suggest that their social media feeds and algorithms are aligned with their preferences and interests, providing a positive experience. When speaking of disinformation and news, negative emotions prevail, as reflected in the following sections, where we differentiate between emotions of neutral or positive and negative valence. Some emotions appeared in clusters, with frequently co-occurring codes, and are consequently presented together.

4.1. *Emotions of Positive Valence and Resilience to Disinformation*

4.1.1. *Calm, Amused, Confident*

Whether participants feel a sense of control is decisive for how they (emotionally) experience and deal with encountered (dis-)information. Positive emotions are expressed mainly when describing domains over which they have perceived control. For some, dealing with disinformation belongs to one of those domains. As a result, while being regarded as an issue by all participants, the topic does not necessarily spark negative or intense emotions for everyone. We also find expressions of calm, amusement, and confidence. Accounts of encounters with (potential) disinformation delivered casually or confidently are almost always accompanied by mentions of tactics such as verifying, distinguishing deceptive strategies, and seeking nuanced representation. Especially those with a broad range of tactics and knowledge of evaluating (dis-)information and news do not feel particularly challenged or concerned about themselves.

Emma (27, Netherlands), for example, believes that she encounters disinformation “almost every day, but I just don’t let myself be influenced by it.” Her steady, confident tone remains as she adds, “Even my dad sometimes sends me a news article or something. And I’m like: How did you even get this? This is a totally

unreliable source.” Lisa (20, Netherlands) casually comments on her encounter with disinformation on TikTok with “Yeah, well, I’d rather just look it up myself,” followed by an outline of the steps she takes to verify information. Being asked how she decides what to believe, a question many participants struggle to answer, Anna (22, Netherlands) responds calmly, without hesitation, that she is “quite a fact checker,” wanting “to know background a lot,” “what it [a claim] is based on,” and “look at both sides of things.”

Knowing what to do allows these three participants to remain unfazed in the face of what causes emotional turmoil in others. While our data do not allow for causal inferences, the pattern of positive emotions and verification behaviors (and knowledge) does suggest that they are related, supporting quantitative research that links efficacy to verification behaviors (Zhu et al., 2025). Having or applying the necessary knowledge and skills to navigate disinformation gives young adults a sense of control, allowing them to approach the issue calmly and confidently.

Where overwhelm and uncertainty drive others towards avoidance tactics, as outlined in the next section, participants who are confident in their ability to discern disinformation often feel amused instead of threatened. They cannot help but laugh recounting narratives as “Corona doesn’t exist [laughs]” (Elias, 19, Germany) or the corona vaccine being used to “monitor us...yes, it’s crazy [laughs]” (Luise, 21, Germany). In line with existing research (van Prooijen et al., 2022), we find that conspiracy theories specifically have an entertainment value. To such an extent that some participants consume incidentally encountered online disinformation “just shortly,” because “well, [it is] a bit funny” (Daniel, 26, Netherlands):

And a lot of people thought it was Jeff Bezos ending the world [chuckles]....That Covid was a Bill Gates project [laughs]....I don’t care if it’s true; sometimes, news is funnier when it’s false. (Jim, 26, Netherlands)

The young adults’ confidence in their truth assessments is, in most cases, well-founded. This self-efficacy, the belief in one’s ability to tackle specific challenges, has been shown to promote resilience (Bandura, 1997; Zhu et al., 2025). Thus, positive emotions can indicate and reinforce resilience to disinformation. We do not find any evidence of positive emotions constraining resilience.

4.2. Emotions of Negative Valence and Resilience to Disinformation

4.2.1. Powerless, Overwhelmed, Depressed

Also in relation to negative emotions, perceived control emerges as important. Consistent with existing literature, a lack of control elicits negative emotions, such as feeling overwhelmed or depressed (Atiq & Loui, 2022). The underlying mechanism appears to be the same as the one described in the previous section, albeit operating in reverse. Participants name the negativity and sheer amount of information they have to evaluate and process daily as the leading causes. Swiping through her newsfeed, Lotta (27, Germany) labels it as “toxic,” as “it’s all about bad news...it’s just not good for me.” These participants find it difficult to actively follow the news: “All I get is a stomach ache” (Hannes, 30, Germany), it “makes me sad” (Lisa, 20, Netherlands), “the negativity...I don’t want to deal with it” (Danielle, 20, Netherlands). The tactic they rely on to prevent unpleasant emotions is avoiding news.

Amelia (25, Germany) illustrates the consequences of (not) having a sense of control over subsequent emotions and actions. Regarding Covid-19 news, she says: “It didn’t bother me so much because...it was still somehow something that was in my own hands.” A different image emerges when discussing the news coverage of the war in Ukraine. Having Russian roots, Amelia felt not only personally affected but was confronted with conflicting news reports in German versus Russian, leaving her confused and overwhelmed:

I couldn’t sleep at all, called my mum, and cried for ages because it was all such a psychological burden. Um, then I said to myself: I’m not going to inform myself anymore, I don’t want to know anything more about it....I’ve got enough shit to do all day. (Amelia, 25, Germany)

Feeling powerless, overwhelmed, and depressed often appear together and are connected to avoidance tactics.

Our analysis reveals two types of news avoidance, which have different consequences for young adults’ resilience to disinformation. One group of participants avoids consuming news throughout their day and instead opts to actively inform themselves, firstly, in fewer selected moments when they have the energy to process information, and secondly, from trusted outlets. Frieda (25, Germany) exemplifies this approach. During the social media walkthrough, she mentions having unfollowed news channels, despite wanting to stay informed. Now, if she wants “to know more” about a topic, she actively seeks out legacy media outlets she trusts and “take[s] a look at it” in selected moments, “rather than seeing it after I’ve been sleeping or before I go to sleep.”

In doing so, the young adults aim to elude unreliable information and minimize the impact of negative headlines, which “can really disturb your well-being” (Frieda, 25, Germany). In terms of resilience, this can be interpreted as having developed protective mechanisms to regulate negative emotions and reduce potential harm when facing a stressor.

The second type of news avoidance, which participants explicitly link to negative emotions, involves avoiding news altogether and remaining passively informed by peers, families, and algorithmically curated social media feeds. Danielle (20, Netherlands) explains it as follows:

If there is something big, then I just will see it eventually...maybe it [not following the news] is also because if there’s something bad going on that I’m sort of stressing about it in a way...with the Coronavirus, like, you see it everywhere....But I didn’t really know how it came here and stuff like that.

Why do the same negative emotions result in total news avoidance for some and not others? What appears to differentiate participants like Danielle is difficulty evaluating information. Asked how she decides what information to trust, her response is characterized by frequent longer pauses, self-interruptions, and incomplete utterances. She then admits that “those are really hard questions,” that “if you search something on the internet, there are so many pages” with at times contradicting information, making it “very difficult” to know “okay, this is the truth.” These difficulties are often accompanied by resignation: “There’s no point, so I might as well leave it be” (Sophia, 26, Germany). Confronted with a lack of other coping mechanisms or resources, avoiding news becomes the primary tactic. Whether these participants end up disinformed or not depends heavily on their social and online environments. Socio-cultural resources have been shown to influence the outcomes of tactics such as news avoidance for resilience to disinformation (Kont et al., 2025).

4.2.2. Angry, Discontent, Disappointed

When participants demonstrate anger, discontent, and disappointment in relation to disinformation, it is often directed at mainstream media, which is perceived as biased, one-sided, or profit-driven, and at politics, for not serving the public good. This confirms existing research regarding “wider discontent with the information landscape” (Nielsen & Graves, 2017, p. 1) and youth’s dissatisfaction with political institutions (Abdelzadeh et al., 2015). Interestingly, these emotions appear both with critical information evaluation and news avoidance.

It is tempting to adopt a unidirectional view in which people experience a certain emotion and consequently apply tactics to cope with it. Our analysis shows how the process may also work in reverse. Participants’ expressions of discontent with the media often appear with arguments based on tactics such as distinguishing deceptive strategies or seeking nuanced representation. Their discontent and anger stem from detecting bias, framing, and profit-driven sensationalism in the news. Referring to a Dutch news outlet, Lisa (20, Netherlands) says that she doesn’t “like how they share news,” because “it’s really clickbait.” Reading their articles leaves her wondering, “What was all this fuss about?” pointing towards a disappointing experience. Hannes (30, Germany) finds that “news coverage could be more neutral. It always feels like: This must be your opinion.” Scoffing angrily, he adds, “This just makes me want to vomit.”

These participants have the knowledge and skills to evaluate media reporting, concluding that it is dissatisfactory. Consequently, their trust in the information or source at hand decreases. This skepticism, in turn, sparks two distinct reactions among the young adults. For most, this serves as motivation to rely more on tactics such as avoiding risky outlets and seeking nuanced representation, which is a constructive mechanism. As being able to identify misleading elements in encountered content helps in discerning disinformation, we interpret these reactions as signifiers of resilience.

The opposite is the case for participants with the strongest expressions of anger and discontent. They all share a comparatively high distrust in politics and media, and either avoid mainstream news altogether or divert to alternative media such as YouTube and closed social media channels. Asked whether she trusts her country’s government and media, Klara (30, Germany) replies “not at all,” naming Covid-19 news reporting as an example:

During Covid, where were the other things? Where were the starving children? [raises voice, speaks more rapidly] Where were the tsunamis? Where were the shootings? Where was all that? Was that gone during that time? No, don’t bullshit me, it was there. Did anyone inform us about anything? No, they didn’t!

To her, the Covid-19-centric political and news agenda during the pandemic shows that neither can be trusted to give a complete picture of reality. Therefore, she would “go to people who are conspiracy theorists” and “ask: Where do you get your information?” or turn to YouTube for people who “really talk about it, give real figures” (Klara, 30, Germany).

Another example that illustrates the origins of heightened negative emotions and the resulting behavior is Finn (29, Germany). Like Klara, he is discontent and angry about news reporting:

When a foreigner does something, it gets blown out of proportion to such an extent that people form their opinions about such people based on what they see on television....But that shouldn't be the case! And then [speaking more agitated] they're surprised when... (Finn, 29, Germany)

He then concludes: "That's why I'm not interested in it," meaning mainstream media. Sophie (32, Netherlands) notes that the government "should be there to help the people out"; instead, "this is the government [puts her hand up], and lower are the people...mhm [shakes her head] I don't trust it anymore." Therefore, she turns to her friends and "the sites," meaning closed Facebook groups with titles such as "questions about the vaccines." Of the three participants who express the most anger, all believe theories that are conventionally labeled conspiracies. Our data do not indicate a lack of critical thinking skills that impede their ability to discern information, challenging conventional explanations of conspiracy theory beliefs. Instead, we observe a cycle wherein negative emotions, distrust, and disengagement reinforce one another. Existing strong feelings of discontent, anger, and disappointment with the government and media lead to a severe erosion of trust, which in turn results in disengagement and/or a shift to alternative media, thereby further amplifying existing negative emotions and mistrust.

4.2.3. Worried, Confused, Uncertain

Uncertainty is typically defined as an appraisal rather than an emotion. However, in our participants' narratives, it emerged as an important theme and is experienced as emotionally charged. To avoid reducing lived expressions of emotion, we report it alongside accompanying emotions, such as worry and confusion.

In line with existing research (Borah et al., 2022), many young adults in our sample experience uncertainty when determining what information or outlets are trustworthy. Navigating conflicting information, a multitude of sources, and disinformation-prone topics such as Covid-19 and the war in Ukraine leaves them feeling worried and confused. Bram (24, Netherlands) and Mia (26, Germany) verbalize their emotions, saying: "The scary thing is I'm not even sure what I'm disinformed about" and "this uncertainty—how do I know what's right." Others express their confusion and uncertainty more implicitly, for instance, through utterances such as "What is the truth even?" (Emma, 27, Netherlands), or "What can I actually believe?" (Noah, 29, Germany).

Our analysis reveals that these emotions often accompany tactics such as verifying and self-reflective thinking. Here, uncertainty, worry, and doubt arise due to nuanced thinking and awareness of their vulnerability, such as potentially lacking information, being biased, and not wanting to spread disinformation themselves. Just like anger, discontent, and disappointment, this cluster of emotions can spark (the need for) deeper inquiry. At a minimum, it causes participants to postpone their evaluation until they receive more information on the subject. Therefore, worry, confusion, and uncertainty can indicate and benefit resilience to disinformation.

Only intense experiences of worry and uncertainty, often accompanied by feelings of overwhelm or powerlessness, are associated with resignation and disengagement in our sample. Luise (21, Germany), for example, feels "helpless" when navigating disinformation and does not "really know how to deal with it," or how to "even recognize it, because it's quite difficult." She concludes: "I don't feel that I can even develop the expertise for that." These struggles are a recurring theme in her interview, and her case exemplifies how intense feelings of overwhelm and uncertainty lead to resignation. Luise has given up even trying to develop

her skills and knowledge. Sophia (26, Germany) also finds it “really difficult to assess anything at all,” in this case regarding news reporting on Ukraine. Her uncertainty and confusion originate from the realization that for some of the legacy outlets she previously trusted, “it has now become apparent over the last few years that what they tell you isn’t always true” (Sophia, 26, Germany). Having to constantly ask herself “Is it true, is it not true?” makes her wonder whether she should “even listen to it [legacy outlets] anymore” (Sophia, 26, Germany). Thus, she disengages and directs her attention to other things than staying informed.

Resignation and disengagement can be read as expressions of resilience, a way of protecting one’s well-being and enduring the unchangeable when active resistance is futile. In this case, however, the strong negative emotions appear to result from difficulties in assessing the credibility of the (dis-)information. Additionally, although these emotions do not necessarily lead young adults to believe disinformation, they seem to impact their mental well-being. As our definition of resilience encompasses the potential adverse effects of disinformation on mental health, we conclude that strong feelings of uncertainty and overwhelm can indicate lower resilience to disinformation.

5. Discussion and Conclusion

This study explores the role of emotions in young adults’ resilience to disinformation. Our inductive, in-depth analysis carefully examines the contexts in which specific emotions arise and delineates the subtle differences not only across but also within clusters of emotions and behaviors. This enables us to identify the circumstances under which certain emotions reinforce and indicate (a lack of) resilience to disinformation. By foregrounding process, our study advances discussions beyond established emotion–reason dualisms, broadens the emotional range under consideration, and complements outcome-focused perspectives in the field.

Addressing RQ1, we find that young adults express a range of emotions when discussing disinformation, which can be divided into four clusters: calm, amused, confident; powerless, overwhelmed, depressed; angry, discontent, disappointed; worried, confused, uncertain. These clusters of emotions are associated with specific behaviors. Responding to RQ2, our findings indicate that positive emotions are accompanied by mentions of tactics such as verifying and distinguishing deceptive strategies. Feeling powerless, overwhelmed, and depressed appears with news avoidance, confirming prior research results (Tandoc & Kim, 2023; Toff & Palmer, 2019). Anger, discontent, and disappointment emerge with tactics such as distinguishing deceptive strategies and seeking nuanced representation or avoiding news and turning towards alternative media. Similarly, expressions of worry, confusion, and uncertainty are linked to self-reflective thinking and verifying, as well as disengagement.

What do these patterns reveal about the role of emotions for young adults’ resilience to disinformation (RQ3)? Firstly, they show how emotions can not only impact but also indicate resilience. For example, participants who can rely on a broad range of tactics to navigate disinformation, such as verifying and distinguishing deceptive strategies, feel calm, confident, or even amused when facing (potential) disinformation. This affirms the importance of literacy initiatives and provides an alternative explanation for the entertainment value of, for example, conspiracy theories (van Prooijen et al., 2022). As these positive emotions are rooted in having the skills and knowledge to detect disinformation, we interpret them as signifiers of resilience. In scholarly discourse, emotions are often implicitly approached as factors

contributing to disinformation beliefs, best minimized not to impede rational assessments of information (Bago et al., 2022; Martel et al., 2020). Our findings offer an alternative perspective, viewing them as an integral part of resilience processes.

Secondly, our data suggest a reciprocal process between emotions, cognition, and behavior, showing how these can reinforce one another. For example, uncertainty among participants arises through self-reflective thinking and the ability to verify information, which alerts them to limitations in encountered content and their own abilities. Confirming existing research, we find that this uncertainty can then spark a deeper inquiry and critical thinking, leading to the employment of more tactics, such as seeking nuanced or reliable information (Tulin et al., 2025; Weeks, 2015). Thus, in the process of developing and expressing resilience to disinformation, emotional responses shape and are shaped by behavior and knowledge. Identifying a reciprocal process advances the theorization of resilience to disinformation and has implications for existing and future empirical research, as it highlights the limitations of practical but reductionist linear approaches.

Thirdly, our findings on the role of negative emotions also warrant a more nuanced interpretation. Considering the potential of positive emotions for resilience, it may be tempting to assume the opposite holds for negative emotions. However, in our sample, expressions of anger and discontent indicate participants' critical thinking and ability to identify flaws in news reporting. Similarly, uncertainty does not necessarily indicate a lack of knowledge, but rather the opposite: Participants are knowledgeable and reflective enough to realize how much they do not know. The moderate negative emotions they experience spark proactive approaches, such as seeking more nuanced information and carefully considering what to believe, ultimately benefiting their resilience to disinformation. Building on existing research (Su, 2021), we assume that these proactive approaches, which lead to exposure to diverse opinions, further help regulate negative emotions such as worry. The findings may also offer an alternative explanation for the growing discontent among young people with the media and politics (Abdelzadeh et al., 2015; Nielsen & Graves, 2017). Our participants are mostly well aware, for example, of the monetary-driven incentives in the media and their impact on the over- and underrepresentation of specific topics. In fact, our evidence suggests that some tactics aimed at attracting readers' attention not only harm the media's reputation but also prompt discontent and disengagement among young adults.

Lastly, we find that the intensity of experienced negative emotions matters. The same feelings that can spark constructive tactics to navigate a polluted information environment can lead to disengagement when felt at an extreme. It appears that the more intense the feelings of uncertainty, discontent, or anger, the more likely participants are to disengage or turn towards alternative sources of information. This might explain why anxiety, worry, or anger have been linked to critical thinking and in-depth processing in some studies, and partisan processing and disinformed beliefs in others (Bago et al., 2022; Weeks, 2015). We find that intense negative emotions can indicate a lack of tactics and knowledge to navigate a polluted information environment, and thus lower resilience to disinformation. These results may help explain existing quantitative studies, which link heightened emotions and alternative media use to increased vulnerability to disinformation (Humprecht et al., 2023; Martel et al., 2020). They are also symptomatic of an erosion of trust in governmental and media institutions, as observed in many countries (Edelman, 2025). Overall, the resilience processes of German and Dutch participants appear consistent across contexts, suggesting similar underlying mechanisms.

Studying emotions, the “least tangible part of our activities” (Williams, 1961, p. 64), entails certain empirical challenges. Subconscious processes aside, it is safe to assume that not all the emotions at play were expressed or verbalized during the interviews. Given the subjective nature of emotions, we cannot entirely rule out a certain degree of subjectivity in interpreting and coding emotions, despite taking countermeasures. It should also be noted that the structured clusters we presented may be more fluid and diffuse in practice.

Our findings offer multiple pathways for future research. Studies in different national contexts would help determine whether the patterns and mechanisms identified here are indeed transnational, as our cross-national comparison suggests. Experiments testing the effectiveness of interventions, such as fact-checking, could benefit from incorporating emotional dimensions. These studies typically examine the impact of format, source, or text on the acceptance of corrections. However, how (strongly) participants feel about a topic might explain variations in results.

With this study, we hope to also contribute to improving educational and literacy initiatives. Considering emotional aspects, such as the potential of positive emotions for resilience, alongside the traditional focus on conveying knowledge and skills, may enhance their impact by boosting perceived control and self-efficacy. These factors have been shown to improve resilience to disinformation in previous research (Paquette et al., 2023; Zhu et al., 2025). As today’s information environment causes overwhelm, confusion, and powerlessness in many young adults, explicitly addressing how to approach and regulate these emotions may go a long way in increasing their resilience.

A state of (poly)crisis affects, demands, and fosters resilience. Efforts to enhance resilience depend on a nuanced understanding of the concept itself. Our research advances the theoretical understanding of the concept within the context of disinformation, highlighting the importance of emotions. By revealing the underlying dynamics at play, we show how resilience to disinformation is enacted in people’s daily lives.

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Digital Resilience in Social Media Feminist Activism: Reactance Theory Applied to Weibo and Zhihu

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Abstract

Past studies have shown the value of social media for feminist activism in China. Yet, activists encounter strict censorship, negatively impacting their mobilization efforts. Existing studies have documented the strategies activists use to circumvent censorship by analyzing digital trace data but have not yet examined their censorship experiences. To fill this gap, the present study draws on reactance theory to investigate the experiences of social media feminist activists in China through 19 in-depth interviews. Following calls to examine digital resilience in the era of polycrisis, this study also contributes to rethinking digital resilience as not only resistance to censorship, but as an adaptive capacity to maintain agency and continuity in activism. We conducted a cross-platform comparison contrasting activists' censorship experiences across Weibo and Zhihu. We found a hierarchy of concerns underlying censorship mechanisms. We identified five types of cognitive reactance: ambiguity, disagreement, unfairness, believing in a lack of control, and critical questioning of the positive energy motto. Affective reactance manifested through feelings of anger and irritation toward haphazard censorship enforcement. Digital resilience was visible in both cognitive and affective reactance, which motivated participants to restore their freedom. Participants used two types of direct means to regain their lost freedom: seeking and disseminating censored information. A few participants engaged in indirect restoration by reinterpreting the state's motto of positive energy. The findings suggest activists developed different forms of digital resilience on Zhihu and Weibo that reflect unique platform affordances and regulations. We outline implications for reactance theory and future research.

Keywords

affect; censorship; China; digital resilience; feminist activism; reactance theory; social media; Weibo; Zhihu

1. Introduction

In China, social media has become an important space for feminist activism (Luqiu & Liao, 2021), paralleling its uptake for feminist causes in other regions of the world (Quan-Haase et al., 2021). Yet, China represents a unique case because of the state's widespread and strict censorship practices (Fu et al., 2013). These practices are adaptive and dynamic as platforms are constantly implementing novel techniques (T. Sun & Zhao, 2022), approaches (King et al., 2013), and criteria (Chen & Xu, 2017). They have led to a polycrisis (Lawrence et al., 2024; Morin & Kern, 1999) wherein activists encounter not a single threat, but a complex system of antagonism from other users, uncontrollable algorithmic processes, unpredictable regulations from platforms, and general oppression from the government. With social media censorship becoming increasingly sophisticated and ubiquitous, Fu et al. (2013) found that it reduced how often activists read and post information. Yet censorship has not had a uniform effect on feminist activists' online engagement. Roberts (2020) found that it could backfire, with some feminist activists showing digital resilience by increasing their engagement after encountering censorship. This shows the relevance of understanding digital resilience to censorship as an adaptive capacity that sustains digital feminist activism over time. Digital resilience is an understudied topic (Craig et al., 2015; Esteve-Del-Valle et al., 2022) and has not been applied to examine how feminist activists appraise censorship threats and adapt to them over time.

Past studies have focused on how feminist online activists react to censorship by analyzing data harvested from social media (Liao, 2019; Zeng, 2019). This body of work is important, as it shows that social media feminist activists are not passive but rather actively resist censorship mechanisms (Liao, 2019). It also shows that there is an ongoing negotiation and adaptation process occurring between feminist activists' engagement and censorship mechanisms (Y. Sun & Yin, 2022). Yet, so far, studies have mostly relied on digital trace data or investigated a single platform, limiting our understanding of how feminist digital activists perceive censorship and how they develop digital resilience over time to stay motivated to implement countermeasures. We define digital resilience, following Tomkova (2020), as how groups adapt to threats and crises by using digital technologies for mobilization efforts, collective efficacy, and collective identity.

A few studies have interviewed feminist activists to learn about their perceptions and responses to censorship. For example, Shao and He (2024) focused on a single type of censorship (i.e., account bombing) and found that activists used various strategies to cope with state interference. L. Han and Lee (2019) also used interviews, but examined a single campaign known as the "nude photos" anti-domestic violence campaign. They found that activists' creative use of images allowed certain posts to evade censorship. These two studies, which draw on interviews with feminist activists, expand our current understanding of censorship by describing activists' experiences and opinions. Yet, in both cases, the focus was limited by looking at only one type of censorship or examining a single campaign. They also disregarded how digital resilience develops over time as an adaptive capacity.

The present study expands past studies by investigating activists' perceptions of not only one type of censorship, such as account bombing (Shao & He, 2024), but also examining censorship more holistically. Drawing on reactance theory (Brehm & Brehm, 1981), our study investigates how feminist activists perceive censorship, their reactance to it, their development over time of digital resilience, and the countermeasures they employ. We examine two social media platforms: Weibo and Zhihu. Rather than assuming that all social media operate uniformly, the comparative lens helps to understand activists' nuanced experiences of

copyright across platforms (Matassi & Boczkowski, 2023; Quan-Haase & Young, 2010). Supporting the need for a comparative lens, scholars have found differences in terms of censorship criteria, techniques, sanctions, and users' perception of and response to censorship (MacKinnon, 2009; Tai & Fu, 2020). We chose Weibo (microblogging) and Zhihu (question-and-answer platform) because feminist activists have utilized both for their cause (Mao, 2020; Xiong & Ristivojević, 2021) and the affordances and regulations of these platforms have shown to influence feminist activism (Bao, 2024). We selected Weibo because of its centrality to how feminist campaigns emerge, circulate, and spread, and also the high prevalence of censorship (Tai & Fu, 2020). Zhihu was selected because it is a platform where feminist debate occurs, and past studies have documented widespread censorship, including user banning which restricts, suspends, or bans users who have violated the platform's rules (X. Zhang et al., 2022). While our analysis is limited to two platforms, the findings reflect broader activist practices observed across other Chinese social media sites. We investigate three research questions:

RQ1: What are the perceptions of feminist activists toward social media censorship?

RQ2: What is the cognitive and affective reactance of feminist activists to censorship on social media, and what factors lead to cognitive and affective reactance?

RQ3: How does digital resilience develop over time as an adaptive capacity and what countermeasures do feminist activists use to regain their lost freedom?

2. Literature Review

2.1. Digital Feminist Activism

Prior research has documented how feminist activists have embraced the opportunities and affordances of social media to voice personal narratives of sexual violence and create awareness of systemic injustices (Linabary et al., 2020), form feminist communities, foster solidarity and collective identity (Gudhlanga & Spiegel, 2021), and mobilize connective and collective action (Suk et al., 2023). Scholars have critiqued the narrow approaches taken in these studies as they lack diverse voices and mostly represent the perspectives of White, middle-class, cisgender women (Trott, 2021) despite digital activism being a global phenomenon. Responding to this critique, a body of literature is emerging that investigates digital feminist activism across varied geographical, socio-cultural, and political landscapes with the goal of uncovering nuanced and context-specific activist practices (Hou, 2020), a range of participant experiences (B. Wang & Driscoll, 2019), and a multitude of socio-political implications (Y. Sun & Yin, 2022). The present study contributes to this growing body of work by examining digital feminist activism in China, where state censorship exercised through social media platforms and their algorithms limits and frustrates the engagement of activists.

2.2. Digital Feminist Activism and Social Media Censorship

Social media censorship describes the practice of controlling, regulating, and/or restricting content (Hintz, 2015; Tai & Fu, 2020). While it is effective in filtering out harmful posts such as hate speech, threatening language, and misinformation (Bronstein & Vinogradov, 2021), it limits how individuals and groups can express opinions freely (Dal & Nisbet, 2022). Feminist activists have experienced a range of censorship mechanisms

and state censorship has been a real barrier for feminist activists, limiting their mobilization efforts (Yin & Sun, 2021).

In China, social media censorship has targeted feminist content, making it difficult for activists to disseminate activism-related information and limiting solidarity building among activists (G. Yang, 2018). Studies have described a range of censorship mechanisms, ranging from content deletion to account suspension (Yin & Sun, 2021; Zeng, 2020). Studies have also found that censorship aimed at digital feminist activists is ambiguous, with no clear set of criteria (Yin & Sun, 2021). This inconsistency in censorship practices creates a significant obstacle for those involved in digital feminist activism.

Feminist activists are not passive recipients of censorship measures (Liao, 2019); rather they have demonstrated great digital resilience to these threats. We define digital resilience following Tomkova (2020) as “individuals’, groups’, or organizations’ ability to maintain, change, adapt to, or recover their social capital mobilization, sustenance of social cohesion, and collective efficacy, collective identity—using ICT and the online space to do so” (p. 414). Digital resilience is not static; it is a dynamic and transformative process and continuously adapts to the changing nature of existing threats (Esteve-Del-Valle et al., 2022). Digital resilience consists of not only assessing current threats but also developing effective and adaptive measures to mitigate them.

Most of the existing research on social media censorship and feminist digital activism has relied on digital trace data (L. Han & Lee, 2019; L. Han & Liu, 2023; X. Han, 2018; Zeng, 2020). Digital trace data offers valuable insights; however, it lacks rich details about the social context in which the trace data is generated. This limitation underscores the need for approaches that offer in-depth understandings into the experiences and perspectives of feminist activists. Taken together, the literature shows how censorship is a part of the experience of feminist activists mobilizing in China. The literature also demonstrates the need to investigate feminist activists’ experiences and countermeasures through directly engaging them rather than relying solely on digital trace data.

2.3. Theoretical Framework

To examine activists’ nuanced responses to censorship in the context of feminist activism, we draw on reactance theory and digital resilience. According to Brehm and Brehm (1981), a threat to, or loss of, freedom can elicit reactance. Reactance is conceptualized as a motivational status that cannot be directly measured, but can only be inferred from the response to the threat. This leads to ambiguities in applying reactance theory in research, as it relegates reactance to “a proverbial black box” (Reynolds-Tylus, 2019, p. 3). To address this shortcoming, Dillard and Shen (2005) proposed an intertwined model that conceptualizes reactance as “an amalgam of anger and negative cognitions” (p. 164), providing a workable representation of reactance and operational means to study it (Quick et al., 2013). In this model, the affective component of reactance involves varying degrees of anger while the cognitive component consists of negative cognitions resulting from the perceived threat to a person’s freedom. We draw on Dillard and Shen’s (2005) intertwined model because it has found support in studies across multiple fields (Rains, 2013; Richards & Banas, 2015; Shen, 2015) and it allows us to assess reactance directly from self-report data rather than inferring it from a person’s restorative response to a threat to freedom. Reactance theory is described as a motivation theory because its key premise is that a threat to a person’s freedom will motivate

them to restore that freedom. As a motivational state, reactance has “energizing and behavior-directing properties” (Brehm & Brehm, 1981, p. 98). While reactance itself is not actionable, reactance can lead to action. For example, Miller’s (2022) study of Turkey’s March 2014 ban on Twitter (now X) showed that banning social media triggered existing users’ reactance, motivating them to circumvent the Twitter ban and intensify criticism of the authorities in Turkey.

Reactance theory is applicable to the present study because it provides a framework to examine censorship on social media. Social media censorship undermines the formation of connective and/or collective action that relies on spreading and exchanging information broadly (Youmans & York, 2012) and with close, trusted allies (Bennett & Segerberg, 2011). Social media censorship aligns with Brehm and Brehm’s (1981) understanding that “any event that makes it more difficult for a person to exercise a freedom constitutes a threat to that freedom” (p. 392). Scholars (e.g., Miller, 2022; Zhu & Fu, 2021) have applied reactance theory to the study of backfire effects on social media, where censorship invokes reactance in users, motivating countermeasures. Studies have also examined censorship targeting digital feminist activism and identified various mechanisms utilized to hinder activists’ freedom of expression and participation (Shao & He, 2024; Zeng, 2020). Also relevant is that reactance theory provides an approach for scholars to conceptualize feminist activists’ reactance as both cognition and affect (see Figure 1). Finally, the framework links reactance to action—to a range of countermeasures aimed at restoring freedom and coping with negative cognition and affect. While past research has drawn on reactance theory to investigate countermeasures (Dal & Nisbet, 2022; Miller, 2022), to our knowledge, this is the first study to apply it to the investigation of censorship in feminist activism in the Chinese context. A key strength is that it can contribute to our understanding of how activists perceive censorship and what countermeasures they develop.

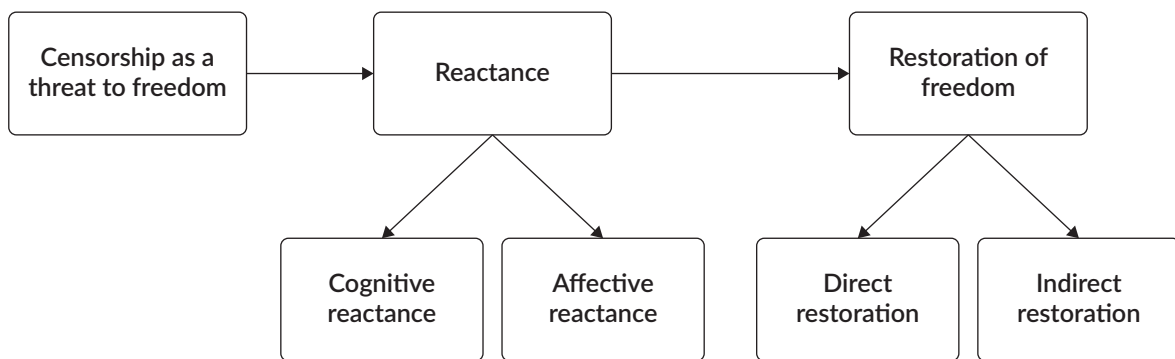


Figure 1. Reactance theory: censorship, reactance, and restoration of freedom. Note: Adapted from Brehm and Brehm (1981) and Dillard and Shen (2005).

Existing studies have drawn on the concept of reactance in exploring individuals’ responses to censorship. However, this research missed the opportunity to directly measure the reactance manifested in the negative cognitions and affect of individual users (L. Zhang et al., 2022; Zhu & Fu, 2021). Instead, they infer the existence of reactance from the potential behavioral outcomes motivated by reactance, such as users going against censorship to speak up. For example, Zhu and Fu (2021) investigated how different layers of social media censorship exposure influence users’ opinion expressions, including the intention of staying silent or rebelling against it. However, the study does not directly assess the reactance as the bridge between perceiving censorship as a threat and making an effort to regain the freedom threatened, relegating reactance to “a proverbial black box” (Reynolds-Tylus, 2019, p. 3). What constitutes the reactance as the

motivational status that leads to the effort to regain freedom of speech threatened by censorship is still not known.

Reactance theory proposes two modes as central to the restoration of freedom (see Figure 1; Brehm & Brehm, 1981). Direct restoration of freedom refers to direct efforts such as engaging in an admonished behavior or resisting a behavior one is coerced into (Reynolds-Tylus, 2019). Indirect restoration can be achieved “by exercising another freedom that would imply that they continue to have the one that was threatened” (Brehm & Brehm, 1981, p. 116). We investigate not only direct restoration efforts, but also indirect efforts when direct restoration efforts bear a higher risk or are not an option. The theory of digital resilience can expand reactance theory. For example, Roberts (2020) found that censorship could backfire with some feminist activists showing digital resilience by increasing their engagement after encountering censorship. This shows the relevance of understanding digital resilience to censorship as an adaptive capacity that sustains digital feminist activism over time.

3. Methods

After obtaining the Research Ethics Board’s approval (Western University, #12108), participant recruitment on Weibo and Zhihu took place between July 1, 2022, and September 3, 2022. Data collection followed purposeful sampling, which is used in social media research to select information-rich cases with desirable characteristics (Hollingshead et al., 2022). Our operational definition of feminist “activists” followed work by Bobel (2007) that questions the idea that the activist identity is linked to a “perfect standard” that “few even self-described activists could satisfy” (p. 156). Following this work, we used the term activist more loosely and recruited individuals who self-identified as activists. Our inclusion criteria were: (a) users actively involved in feminist activism on Weibo or Zhihu; (b) Mandarin- or English-speaking users; and (c) adults (18+). All participants recruited from Weibo were engaged through a feminist non-governmental organization that assisted in disseminating the recruitment material to their follower base. Participants from Zhihu were recruited via direct messaging on the platform. The final sample comprised 19 participants: 17 women and two men. Ten participants were recruited from Weibo and nine from Zhihu. To determine the sample size, we followed the approach proposed by Guest et al. (2020), which is considered a refinement of other approaches to data saturation. Saturation is reached when there is a low proportion of new information being added as evidence during data collection, ranging from >5% new information to no (0%) new information (Guest et al., 2020).

Semi-structured interviews were used for data collection because of their flexibility and unstructured nature. Interviews are well-suited for engaging with participants about their diverse perceptions and opinions of censorship (Cridland et al., 2015). Open-ended interview questions encourage participants to provide rich narratives about sensitive topics such as anti-sexual violence activism and experiences of censorship (Barriball & While, 1994). We also included a question on the concept of positive energy to learn more about how online feminist activists perceive its role in censorship. Interviews lasting from 40 to 90 minutes were conducted through Microsoft Teams. The interviews were recorded to check the accuracy of the automatic transcriptions. Each participant was assigned a unique ID and a pseudonym that they chose. Thirteen participants were compensated ¥25 (~ CA\$5.00) for their time and six declined the compensation.

We conducted a qualitative content analysis of the 19 interview transcripts which were coded using the qualitative analysis software NVivo (QSR International, Version 12). A qualitative content analysis is “a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns” (Hsieh & Shannon, 2005, p. 1278). Following Elo and Kyngäs (2008), our analysis consisted of three main phases: preparing, organizing, and reporting with the goal of conducting a systematic classification process of coding and identifying themes. In the preparation phase, the first author conducted a close reading of the interview transcripts to get familiar with the data. The organizing phase consisted of deductive coding based on reactance theory and digital resilience (Table 1). While our study draws upon reactance theory and digital resilience, by integrating inductive and deductive coding, we can capture the complexity of the participants’ experiences without constraining them within predetermined categories. Intracoder reliability helped assess the consistency of the coding and yielded a rate of 0.71, which falls within an acceptable level (above 0.67; Krippendorff, 2004). The final phase comprised the reporting of the findings.

Table 1. Final coding frame.

Main categories	Sub-categories
Perceptions of censorship	Type of censorship
	Visibility of censorship
Reactance to censorship	Cognitive reactance <ul style="list-style-type: none"> • Ambiguity • Disagreement with censorship • Unfairness • Believing in a lack of control • Critical questioning of the concept of positive energy
	Affective reactance <ul style="list-style-type: none"> • Anger • Irritation • Fear • Worry • Powerlessness
Restoration of freedom	Direct restoration <ul style="list-style-type: none"> • Seeking information that censorship targets • Disseminating information that censorship targets
	Indirect restoration <ul style="list-style-type: none"> • Reinterpreting positive energy
	Digital resilience

4. Findings

4.1. Perceptions of Censorship

To address RQ1, we examined participants' perceptions toward censorship. We identified two subcategories: type and visibility of censorship. The former is defined as the types of censorship mechanisms enacted by the platform that activists either experienced or observed. The types reported by both Weibo and Zhihu participants included: post removal ($n = 7$, 6 Weibo and 1 Zhihu), keyword filtering ($n = 5$, 2 Weibo and 3 Zhihu), and limiting the visibility of content through algorithms ($n = 3$, 2 Weibo and 1 Zhihu). Three types were only reported by Weibo users: blocking hashtags by disabling the indexical function of the hashtag ($n = 3$), account suspension ($n = 3$), and image breaking—the replacing of user uploaded images with a placeholder ($n = 2$). One Weibo participant reported that his account was suspended, and two other Weibo participants described observing the large-scale suspension of other users' accounts during the Xianzi trial in December of 2020 when Zhu Jun was accused of sexual harassment. The trial represents the landmark Chinese #MeToo case and can be considered the equivalent of the Harvey Weinstein case in the US. By contrast, Zhihu users did not report having experienced or observed the suspension of accounts. Post removal and keyword filtering were the most frequent types that participants described across both platforms, yet they reported being most concerned about the possibility of their accounts being suspended. This suggests that there is a hierarchy of concern related to censorship, with participants reporting being the most concerned about their accounts potentially being suspended either temporarily or permanently.

The second category identified was visibility. All 10 participants from Weibo and seven from Zhihu reported having been exposed to targeted censorship, either as something they had experienced directly or had observed. Seven participants ($n = 7$, 3 Weibo and 4 Zhihu) reported they had received a message through the platform, notifying them that a specific post had violated the platform's policy and, therefore, had been deleted. Two participants from Zhihu, Emma (Zhihu10, W, 33) and Paul (Zhihu05, M, 18), reported that their posts had not been deleted, but rather had been algorithmically demoted to reduce the post's exposure. Emma said that it was incredibly frustrating because the platform did not notify her when the algorithm had manipulated the circulation of her post. This has led her to speculate about the reasons behind the algorithmic intervention and to worry about the consequences, such as the impact on her Zhihu Yanzhi, which is the platform's credit score. Zhihu Yanzhi is a credit system based on a user's reputation, content creation, friendly interaction, compliance with laws and policies, and effort in community building (Zhihu, n.d.). A reduced Zhihu Yanzhi can have consequences for losing access to certain actions, such as editing content or receiving priority when reporting issues. It also affects how a user is perceived by others as well as the circulation of messages a user posts.

Participants ($n = 10$, 7 Weibo and 3 Zhihu) reported that censorship was most visible when it was deployed on a large scale, targeting content that their social media connections had posted. Emma described observing what she referred to as an "acute situation," where the platform suddenly erased numerous posts from feminist influencers, targeting feminist activists broadly including posts unrelated to anti-sexual violence or feminist causes. In those cases, the censored content was not simply demoted, but it was permanently removed. These tactics served as a means to frustrate feminist activists and to signal that they could be censored at any time. Participants reported that they became aware of the removal of content because of the after-effects, which included numerous user grievances reflecting discontent with the repressive approach. Activists often

expressed their discontent on social media with the unfair and wide-reaching censorship mechanisms and did not remain silent despite the potential consequences for their accounts.

4.2. Reactance to Censorship

To address RQ2, we examined reactance to censorship, focusing on cognitive and affective reactance. Thirteen participants ($n = 13$, 7 Weibo, 6 Zhihu) described cognitive reactance, which we define as encompassing both evaluative and behavioral-intent components. Cognitive reactance did not only arise due to the censoring of anti-sexual violence content but also from how platforms deployed censorship. We found evidence of five types of cognitive reactance: ambiguity, disagreement, unfairness, believing in a lack of control, and critical questioning of the concept of positive energy.

Participants ($n = 12$, 7 Weibo, 5 Zhihu) described the ambiguity surrounding the platforms' censorship criteria. We found no differences between Weibo and Zhihu users in terms of how they described their negative cognitions concerning the ambiguous censorship criteria. For example, Xiao Juan (Weibo01, W, 25), who had actively engaged in anti-sexual violence activism since #MeToo launched in China in 2017, expressed confusion and disagreement with the double standards often observed with how platforms applied censorship criteria. Xiao Juan explained how the platform consistently censored words like rape, but allowed content that directly targeted feminist activists: "Some verbally abusive remarks targeting women and victims can survive censorship. However, if you share an experience of sexual violence with explicit words like "rape" in the text, it may not be able to pass it."

Participants also discussed how they learned from past experiences that the censorship criteria were unclear and illogical, which could help them adapt to avoid being censored. Xiao Juan evaluated the criteria as ridiculous and absurd:

It is ridiculous and absurd because while the term "qiang jian" [rape] is forbidden, yet its acronym is allowed, even though the alternative is not unknown, and everybody knows what it refers to....It's more like a reminder of the existence of censorship to users who want to post content related to sexual violence.

Moreover, participants questioned censorship due to the perceived unfairness of ambiguous criteria. Yummy (Zhihu07, W, 22) had published a post on Zhihu during the #MeToo movement inviting users who had experienced sexual violence to join a WeChat social support group. Following the post, she faced "unreasonable" and "unfair" censorship that consistently targeted her posts related to sexual harassment: "Inappropriate posts made by male users or content promoting patriarchy, such as slut-shaming comments, are not always censored, yet posts that challenged or refuted those comments would be censored because of them 'inciting gender antagonism.'"

Past research has already described how the state has hijacked the positive energy motto as a control mechanism (P. Yang & Tang, 2018). Ten participants in our study (7 Weibo, 3 Zhihu) reported negative cognitions around the state's use of positive energy as a soft tool to justify their deployment of censorship. Participants believed that the positive energy concept was misappropriated as an ideological tool to control contentious discourses in public spaces. Instead of uncritically endorsing the concept, participants

questioned its use as a tool for censorship that threatens their engagement in digital activism. As Yilan (Weibo06, M, 29) stated: “I was disenchanted by this term years ago. Why are those misconducts not counted as negative, but speaking out against them is seen negatively? It does not make sense.”

Participants also articulated believing that they lacked control when using social media, which was often as a result of the unpredictability of censorship measures. Participants emphasized that both information flows and account security were beyond their control. For example, Yingying (Weibo09, W, 23) noted that the platform could remove trending topics “at any time.” Yifan (Weibo05, W, 35) similarly emphasized the unpredictability surrounding potential account deletion or suspension, noting that bloggers’ accounts could be abruptly terminated (“炸号”) without warning. Overall, we identified five dimensions of cognitive reactance which ranged from disagreement with the censorship mechanisms to perceptions of their unfairness.

When looking at affective reactance, we found that anger was the most reported affective reactance: two participants (Weibo) expressed anger toward censorship. One participant, Zhaozhao (Weibo04, W, 25), reported having used Weibo for 10 years, starting when she was 12 years old. She became involved in activism against sexual violence after the emergence of the global #MeToo movement. Despite being familiar with Weibo’s policies, Zhaozhao was still enraged by the pervasiveness of censorship and the ambiguity surrounding its implementation:

I once posted something in the form of a poem, and the content was not explicit, yet it was still removed. This made me furious, and it was then that I realized that even mentioning anti-sexual violence was considered taboo, even if it was in the form of a subtle poem.

Zhaozhao described how anger “fueled” her intention to remain engaged with the movement. She stated: “Censorship does not discourage me from following and participating in relevant discussions. If anything, it fuels my desire to express myself even more fiercely due to the anger towards this restricted space.”

Although anger was identified as the primary affective reactance to censorship, participants showed a broader emotional range. In addition to anger, they described irritation, fear, worry, and a deep sense of powerlessness when encountering censorship. Ceci (Weibo07, W, 23) recounted instances of censorship targeting images with anti-sexual violence content and these images being substituted by the platform for alternate images. She became aware of this practice because of scattered discussions regarding the censored images within her network. Ceci expressed her irritation, stating: “It can be quite exasperating, as you are aware that something is happening, but you are denied access to the details and reasons. This made me determined to uncover what was concealed.”

These more nuanced responses reflect a complex affective component shaped by censorship and platform governance. For instance, Yingying (Weibo09, W, 23) reported feeling powerless when watching feminist-activism hashtags being removed from the trending list. We found evidence that anger was linked to activists’ resolution to counter censorship and restore freedom, whereas emotions such as fear or powerlessness attenuated rather than intensified reactance motivation, resulting in more cautious and restrained expressions among participants. Thus, not all affective reactance has the same effect on long-term activism.

4.3. Direct and Indirect Restoration of Freedom

To address RQ3, we examined the direct and indirect restoration of freedom that participants engaged in and how they developed digital resilience. Two types of direct restoration of freedom were identified: seeking and disseminating censored information. Common strategies used to seek censored information were using VPNs and conducting keyword searches on different platforms. Participants reported using VPNs—which they described as “climbing over the wall”—as particularly helpful and effective in accessing blocked sites like X and Facebook. This strategy did not directly circumvent censorship on Weibo or Zhihu but rather allowed participants to go elsewhere—an adaptive means to meet their information needs.

We found that participants used creative strategies as a direct restoration of freedom with the aim of disseminating anti-sexual violence-related information. For example, participants reported “hijacking” trending hashtags, desensitizing posts by replacing terms like “rape” with its acronym “qj,” and using other genres and forms of expression, like a poem, to convey euphemistically or sarcastically their message and evade being detected by automatic keyword filters. In addition, participants reported that under-the-radar communication was also an effective strategy for the direct restoration of freedom; they often disseminated anti-sexual violence information via their social media connections despite the limited reach of this approach. For example, Yilan (Weibo06, M, 29), a man in his late twenties, often archived news articles from blocked websites and then forwarded screenshots to his close personal circle via Weibo or WeChat messaging as well as other private channels. We found that participants’ dissemination of anti-sexual violence-related information was contingent upon the features of the specific platform. Participants reported that hijacking “safe” hashtags was easy on Weibo but was not possible on Zhihu because hashtags are not a built-in feature.

We also identified one type of indirect restoration of freedom. Four participants (2 Weibo and 2 Zhihu) reported indirectly restoring their freedom by reinterpreting the concept of positive energy on their own terms. One example is how Paul (Zhihu05, M, 18) reinterpreted the positive energy concept and used it to amplify narratives of sexual violence rather than silencing and censoring them. On Zhihu, Paul was able to connect with survivors of sexual violence and serve as a witness to their experiences. After obtaining their consent, Paul, together with a group of friends, utilized the shared narratives from the survivors and organized an offline exhibition to raise public awareness regarding the pervasiveness of sexual violence in China. Paul developed his own way, a survivor-centered perspective, to interpret and exercise positive energy:

When reaching out to survivors, I often check every word I use, and I am mindful of the tone, avoiding a biased perspective as someone who has not experienced sexual violence....To me as a young man, being mindful about the vulnerability of this group and showing a caring attitude is what I think means to embody positive energy.

We also observed digital resilience in the way participants transformed the official discourse of “positive energy” into a tool that supports them to continue their activist practices. Similar to how Paul reinterpreted the “positive energy” slogan—originally intended to constrain mobilization—into a survivor-centered perspective within his activism, Ceci shared that she reinterpreted the positive energy term to align with her activism goals:

According to the propaganda, whatever you do must align with mainstream expectations and government policies, supposedly as a way to promote “positive energy” [弘扬正能量] But I don’t think this has anything to do with “positive energy” at all. If we really have to label things in terms of so-called positive and negative energy in this world...engaging in a discussion of emerging sexual violence cases will increase the visibility of the issue and this is positive. Movements like #MeToo are positive. Although it may only bring change on an individual level, this cumulative process can bring change to society in the future.

Ceci’s perspective showed that rather than adhering to the perspective of positive energy the authorities have widely promoted, the participants reinterpreted the concept to fit their own goals. By transforming the “positive energy” slogan from a top-down censorship mechanism into a motivator for activism, the activists adapted to this type of censorship. In this way, “positive energy” was reinvented as a strategy to continue and legitimize their anti-sexual violence activism. Thus, it became a driver for mobilization and a means of indirect restoration of freedom.

5. Discussion

The present study is the first to investigate, through 19 in-depth interviews, the censorship experiences of activists engaged in digital activism against sexual violence and their cognitive and affective reactance. The understanding of how affective and cognitive reactance motivate activists to restore their freedom and develop digital resilience is important for sustaining long-term activism in tightly censored digital environments. A key contribution of the present study consists of applying Dillard and Shen’s (2005) reactance theory to the unique context of feminist activism in censored environments. Our findings suggest that reactance operates as a key psychological mechanism underlying participants’ behavioral responses to censorship. Cognitive and affective reactance, manifested through negative cognitions and emotional anger, motivated individuals to restore their perceived freedom by continuing engagement and developing creative strategies to circumvent censorship. This process demonstrates how reactance translates into agency and resilience within constrained online environments. These findings resonate with the strategies employed across different activist communities in China, such as queer, environmental, and labour groups. Feminist activism navigates the same tightly controlled digital environment as other activist groups, but also contends with gender-specific pressures that shape how feminist actors respond. By placing feminist digital resilience within this wider activist landscape, we can better see both the structural constraints shared across movements and the distinct strategies feminists develop in response.

When addressing RQ1, a new finding is the hierarchy of concern underlying censorship mechanisms. Participants were most worried about the platform suspending their account for an unknown timeframe or indefinitely, as this would disconnect them from their online activist networks. The concern of potentially being suspended functions as an effective censorship mechanism because it leads to activists constantly monitoring and adjusting their engagement to be below an imagined threshold that could trigger sanctions. This process suggests that, rather than simply conforming to censorship, activists appear to have learned from past experiences, a key aspect of the adaptive capacities that define digital resilience (Tomkova, 2020). This leads them to explore alternative ways to share and access information related to anti-sexual violence activism.

In relation to RQ2, we found that participants' cognitive reactance primarily resulted from how the platforms enforced censorship. Activists experienced a range of cognitive reactance: ambiguity, disagreement, unfairness, believing in a lack of control, and critical questioning of the concept of positive energy. They often reported disagreeing with censorship criteria that lacked clarity, were unfair, and illogical. We found that participants expressed disagreement with the ambiguity of the criteria that guide the enforcement of censorship. Moreover, participants reported cognitive reactance in the form of their unwillingness to comply with the authorities' misappropriation of the concept of positive energy. This suggests that the pursuit of positivity, achieved by endorsing optimism and discouraging critical discourse whilst censoring and stifling dissenting voices that expose gender injustice, has paradoxically resulted in a backfire effect among feminist activists.

Our study makes a valuable contribution to the literature on the politics of anger in feminist studies. We found that participants reported that their anger motivated them to counter censorship and continue their activism. This finding complicates the view of anger as morally problematic and politically counterproductive (Nussbaum, 2016). As Lorde (1997) noted, when "focused with precision," anger can be "a powerful source of energy serving progress and change" (p. 280). Although anger in the form of affective reactance to censorship may not be as conspicuous as the collective and mediated anger expressed in feminist movements like #MeToo, it nonetheless has the potential to inspire political action aimed at countering censorship that targets activists' work. Moreover, the fact that affective reactance manifested in the feelings of anger and irritation unveils an additional facet of the emotional toll associated with censorship, which often remains hidden but persistently weighs on activists in the Chinese context.

In examining RQ3, we learned that activists engaged in two types of direct means of freedom restoration: They sought and disseminated censored information. We found that keyword searches and the use of VPNs were effective strategies for participants to seek censored information. This is important, as it suggests that feminist activism in China is attuned to the global feminist movement. There exist real risks in employing VPNs, as Chinese authorities have sanctioned users in the past (China Digital Space, n.d.). Nonetheless, activists continue using VPNs to restore their freedom, as they see value in the information they gain from the global feminist movement. This contributes to our understanding of the importance of global interconnectedness within feminist mobilization networks.

This study also highlights digital feminists' digital resilience developed within a censored digital space. Feminist activists transformed the state-promoted discourse of "positive energy" into a tool that reinforced their activist commitments. Rather than allowing this narrative to constrain feminist mobilization, they strategically redefined it to align with their own values and goals, transforming a restrictive ideological framework into a source of empowerment and resilience for their continued digital activism. These insights can inform the analysis of other types of activism—queer, environmental, and civic—as they navigate similar constraints under the broader "positive energy" framework that shapes online regulation.

Our study also makes an important contribution to understanding indirect restoration of freedom as an adaptive capacity developed over time in the context of feminist activism in China. The concept of positive energy as presented by the state stifles activists' engagement with anti-sexual violence activism that exposes deeply rooted gender injustice within society. Instead of passively endorsing the concept, participants provided alternative meanings to the concept to support their participation in anti-sexual

violence activism. While prior studies discussed indirect ways that activists engage in activism under surveillance and censorship, such as mitigating the radicalness of feminist discourses and actions (Y. Sun & Yin, 2022), our study calls attention to activists' indirect efforts at a cognitive level. This involves deconstructing the mainstream ideology that promotes societal harmony at the cost of suppressing public discourse on gender injustice. The study findings underscore the adaptive strategies used by the activists and their resilience within a heavily censored environment where direct countermeasures may entail significant risk. This echoes scholars' calls for greater recognition of emerging feminist practices that move beyond traditional forms of resistance within digital spaces that are often subjected to ambiguous and evolving censorship (Shao & He, 2024). By examining the adaptive strategies feminist activists developed over time, this study also contributes to understanding the digital resilience feminist activists developed over time—a broader capacity to maintain their agency, sustain engagement, and ensure the continuity of feminist activism within a highly restricted and surveilled digital environment.

Also, our investigation on the indirect restoration of freedom through interviews expands existing literature on counter-censorship practices relying mostly on digital trace data. More importantly, the restoration achieved by reinterpreting positive energy raises a significant question for future research: how can feminist activists drive social change without explicitly opposing the “default operating principle” (J. Wang, 2019, p. 18) of harmony that guides internet policy in China?

Our study makes an important contribution to cross-platform comparative research (Matassi & Boczkowski, 2023; Quan-Haase & Young, 2010). First, we found that the high level of ambiguity participants described was not unique to a specific social media platform. This suggests that despite variations across platforms in what criteria are used and how, the high level of ambiguity is part of the authorities' strategy across the entire platform ecosystem in China. Our findings suggest that the authorities use ambiguous censorship criteria as a strategic tool that offers flexibility in how the platforms implement censorship dynamically. Second, we found that participants developed different countermeasures on each platform that are a result of unique platform features. For example, activists on Weibo often hijacked safe or uncensored hashtags to disseminate anti-sexual violence-related information as a countermeasure, which is not possible on Zhihu. The comparative lens shows the need to look at the range of countermeasures employed and how they link to platform features.

6. Limitations and Future Research

While we identified various censorship mechanisms, we did not systematically examine how different censorship mechanisms are associated with different types of reactance and variations in countermeasures. Future research could examine, via survey research, the nuances of activists' reactance to specific censorship mechanisms and also link reactance types to various restorations of freedom. Second, the process of identifying types of cognitive and affective reactance in the data relied on the subjective judgment of the coder. Because this process is based on the interpretation of the activist responses, it is unclear if participants intended a specific reactance. To address this, future research could incorporate participant coding as an additional layer in the data analysis process to discern their actual intention (Reynolds-Tylus et al., 2021). Third, we focused on feminist activists, but did not measure their degree of commitment. Future research could further examine how degrees of commitment shape digital resilience in terms of types of reactance, strategies of coping, and adaptation. Finally, we limited our study to two social media platforms. Considering China's polymedia environment, future studies could expand our approach to include other

platforms such as Douyin, Xiaohongshu, and WeChat, which are also central to everyday feminist activism, each with distinct demographics, social affordances, and governance mechanisms.

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Conflict of Interests

In this article, editorial decisions were undertaken by Marc Esteve Del Valle (University of Groningen) and Ansgard Heinrich (University of Groningen).

Data Availability

Please contact the corresponding author for anonymized data access.

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Same Platform, Different Stories: TikTok and the Battle Over Immigration Narratives

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Abstract

In an era defined by overlapping global crises, immigration has become a key fault line in what scholars term a “polycrisis.” Within this context, social media platforms serve as digital battlegrounds for competing narratives about immigration, with TikTok occupying a distinct and understudied niche. This article examines how immigration-related content in Canada is framed on TikTok and how the platform’s logic of mimesis and interactivity, grounded in its affordances, shape immigration discourse. From a dataset of 5,305 public TikTok videos containing immigration-related terms and hashtags, we selected a sample of 344 English-language videos posted in 2025, each with over 100,000 plays and likely shown to Canadian users. Through a mixed-methods content analysis, we found that, contrary to expectations, the content leaned toward positive portrayals of immigration, accounting for 41% of the sample. Furthermore, despite expressing differing perspectives on immigration, users used TikTok’s affordances in comparable ways. That is, the same affordances that can support immigrants’ information seeking and sense of belonging through practical guidance and relatable storytelling, respectively, can be weaponized to amplify xenophobia by way of manipulated statistics and racist humour performed in skits and AI-generated videos. This highlights how TikTok’s affordances can simultaneously support digital inclusion and community building while also enabling exclusion and hostility. The findings, although rooted in Canada, hold broader relevance for understanding how short-video platforms mediate contentious issues across digitally connected societies.

Keywords

affordances; digital social resilience; framing; immigration; Polycrisis; TikTok

1. Introduction

Immigration has been identified as one of the defining issues of the 21st century (Betts, 2015). As of 2020, 281 million people reside outside their birth country—triple the number in 1970 (McAuliffe & Oucho, 2024). Concurrent and intertwined crises, like pandemics, environmental disasters, and war, have intensified immigration, inspiring fiercely contentious debate in the Global North (Leblang & Peters, 2022).

These debates increasingly unfold on social media platforms where platforms' democratizing features allow ordinary people to broadcast their perspectives and selectively "frame" the narrative (Gruzd et al., 2024). However, platforms are not mere hosts; they are interlocutors that shape users' capacity to share ideas. These potentials are shaped by platforms' "affordances," which manifest in users' grasp of platforms' material designs that delimit the range of actions possible (Ronzhyn et al., 2023). Platforms thus moderate how we collectively respond to social problems—our "digital social resilience" (Tomkova, 2020). For example, while platforms' affordances can be used to mobilize support for immigrants' rights and express solidarity, they can also be used to call for restrictive policies and disseminate xenophobic rhetoric (Ojala, 2021). However, research on social media users' framing of immigration has largely been limited to X (formerly Twitter; de Rosa et al., 2021; Siapera et al., 2018; Walsh, 2023; Yantseva, 2020) and Facebook (Kelling & Monroe, 2023). This leaves a gap in our understanding of how users' framing unfolds on platforms like TikTok, which have fundamentally different architectures.

TikTok is the fastest-growing platform in history, surpassing 1 billion monthly active users in its first five years (Dellatto, 2021). Its growth is attributed to its addictive recommendation algorithm, the For You page, which curates content based on users' consumption patterns (Bhandari & Bimo, 2022). TikTok is also noted for its playful cultures which promote social interactivity through memetic trends, including Sounds, and participatory Challenges (Kaye et al., 2022). These dynamics have also animated new styles of engaging with political topics (Hautea et al., 2021; Matamoros-Fernández et al., 2022; Quick & Maddox, 2024; Zhao & Abidin, 2023). This includes immigration, where recent work has, for instance, explored immigrants' and refugees' tactics for asserting visibility and belongingness (Cabalquinto, 2024; Jaramillo-Dent et al., 2022; Marino, 2024).

In this study, we examine an underexplored area: the immigration-focused videos that TikTok users create and their use of the platform's affordances. We first tease out how immigration is popularly framed on the platform. By immigration, we mean users' perceptions of immigrants and the governmental processes that shape immigration. Next, we assess the extent to which users' content is shaped by TikTok's affordances. Our research is guided by the following questions:

RQ1: How do popular TikTok videos frame immigration?

RQ2: What is the relationship between a TikTok video's immigration stance and its use of audio, visual, and sharing affordances that derive from, or promote, mimesis and interactivity?

We centred our research questions in Canada as Canadians' shifting perceptions of immigration provide a useful context for exploring the often contentious framing of immigration. For instance, polling in 2024 revealed that a majority of the country (58%) agreed that there was "too much" immigration to the country,

a level not seen since the early 2000s (Environics Institute for Survey Research, 2024). While immigration has animated political polarization in other Western liberal democracies (Bloemraad, 2012), Canada has historically been defined by a national consensus—both in public sentiment and electoral politics—that immigration is a key part of its national identity (Trebilcock, 2019). Canadians' anxieties over housing shortages and a rising cost-of-living appear to be responsible for this attitudinal shift (Banerjee et al., 2025). These issues are exacerbated by a post-pandemic record-breaking population growth, fueled by the federal government's lofty immigration targets (Statistics Canada, 2023), which have since been decreased amidst mounting public pressure (Immigration, Refugees and Citizenship Canada, 2024). As the fastest-growing platform by user adoption in the country since 2020 (Gruzd & Mai, 2025), TikTok is playing an important role in Canadians' engagement with the issue. For instance, TikTok has received criticism as a progenitor of inflammatory xenophobic content (Liddar & Pallapothu, 2024).

Our study contributes to the literature in two ways. First, we shed preliminary insight into TikTok's role in shaping the public's understanding of immigration. Second, we advance digital methods for TikTok research by devising a sampling strategy that captures popular videos served to geographically-bounded populations, offering a replicable approach for studying the platform's recommendation dynamics. Overall, we found that TikTok users' content largely skewed toward positive framings of immigration. We further found that, across these framing categories, users' videos engaged TikTok's affordances in a largely symmetrical way. We argue that this illustrates how TikTok's affordances can function as a double-edged resource for both bolstering and eroding digital social resilience. We conclude by arguing that stakeholders must contend with how TikTok's novel environment is shaping the public's engagement with, and understanding of, immigration.

2. Literature Review

2.1. Framing Immigration in the 21st Century: The Role of Social Media

To understand how TikTok shapes immigration narratives, we draw on two bodies of literature: research on immigration framing and work on platforms' affordances, with an emphasis on TikTok. Framing is understood here as the selection of particular dimensions of a "perceived reality" to make them "more salient in communicating a text" (Entman, 1993, p. 52). Most scholarship has examined elite actors' framing of immigration, such as newspapers' coverage of the 2015 Syrian refugee crisis (Greussing & Boomgaarden, 2017) and politicians' framing of immigrants in governmental assemblies (Card et al., 2022). This focus on elite actors' frames reflects their historical narrative authority in a one-to-many media environment.

Analyses of elite actors' framing strategies have further produced typologies specifying common frames used. For instance, Helbling (2014) identified several immigration frame categories in Western European politicians' discourse. Those supporting inclusive, integrative policies draw on frames that: situate multiculturalism and cultural openness as net positives; accentuate immigrants' inviolable rights, thereby humanizing them as deserving subjects; and valorize immigrants' economic contributions. Pro-immigrant voices also deploy defensive strategies, like counter-speech, as a means to disarm xenophobia through combative and confrontational rhetorical styles (Ziegele et al., 2018). In contrast, those favouring restrictive, exclusionary measures engage frames that configure immigrants as an unassimilable threat, dichotomizing between a native-born "us" versus a foreign-born "them," while intensifying fears of a cultural takeover, economic competition, administrative drain, and social dysfunction by way of crime spikes and terrorism.

With the rise of many-to-many communication technologies in the 21st century, such as social media, attention has shifted to understanding how non-elite actors frame immigration on these platforms. Several existing studies show that social media users' framing of immigration is highly contested (de Rosa et al., 2021; Kelling & Monroe, 2023; Siapera et al., 2018), and in some cases, skew toward hostile representations (Walsh, 2023; Yantseva, 2020). For instance, in a study of tweets surrounding the 2019 Canadian federal election, Walsh (2023) found countervailing discourses of nativism, Islamophobia, and economic anxieties against sympathetic, humanizing messages centring immigrants' marginality. Similarly, using a corpus of English- and Italian-language tweets between 2017–2019, de Rosa et al. (2021) note that immigrants were framed through their perceived propensity toward deviance in contrast to frames emphasizing states' role in responding to humanitarian emergencies. On Facebook, Kelling and Monroe (2023) found users' comments on American media outlets' refugee-related stories mostly revolved around identity-based frames, centring the need to take care of "our own," where others used their Christian faith as an impetus to take care of refugees.

While these studies illuminate social media users' immigration framing dynamics, their focus on X and Facebook risks overlooking how different platforms' userbases, technical structures, and interactional logics shape public discourse. For example, TikTok's primarily Gen-Z userbase, short-video format, algorithm-driven interface, and "memetic" and "interactive" logics create communicative dynamics that differ substantially from earlier platforms (Vizcaíno-Verdú & Jaramillo-Dent, 2023). Understanding users' interaction with immigration-themed content on TikTok, therefore, requires attending to the platform's specificities rather than assuming generalized insights from other platforms. We adopt the affordance framework to explain how TikTok's socio-technological architecture shapes the dynamics of political discourse on the platform.

2.2. Social Media Affordances in the Era of TikTok

Affordances are defined as the "perceived actual or imagined properties of social media" that are contextually situated in a user's own social location, and which come to "enable and constrain specific uses of the platforms" (Ronzhyn et al., 2023, p. 3178). In this way, affordances are a valuable theoretical framework for understanding the nexus of platforms' materiality and social constructedness, both of which delimit different possibilities for action. Building on this framework, affordances are a useful concept for identifying TikTok's departure from X and Facebook. Where the latter two emphasize users' relationships to one another, TikTok centres users' relationships to content (Zulli & Zulli, 2022). On TikTok, one does not need to follow or friend anyone; you are automatically fed a stream of content on the platform's landing page, the For You feed, that is then iteratively curated to match your interests, inferred by a proprietary algorithm (Bhandari & Bimo, 2022). This means that users' content often gains visibility not from their existing networks but rather from their ability to capitalize on TikTok's richly memetic and interactive culture.

One popular means of mimesis on TikTok is the Sound feature: an audio-based affordance where an audio snippet serves as the locus for imitation (Abidin, 2020). Sounds give way to popular templates (e.g., dances, skits) that people draw inspiration from to craft their own content. Mimesis is also bound to TikTok's visual affordances, including its library of effects that distort the user's face or modify the video's background and come to popularly stylize users' visuals (Zulli & Zulli, 2022). Interactivity, on the other hand, can be identified in the platform's affordances that facilitate engagement and collaboration, like the Duet, Stitch, or Reply to

Comment with Video features. Additionally, hashtags are a formative feature of interactivity on TikTok, similar to X. Hashtags can be markers of Challenges or prompts calling for imitation, ranging from the “Ice Bucket” challenge promoting ALS philanthropy to the “Devious Licks” challenge involving vandalism and theft of public property (Abraham et al., 2022). Hashtags can also be community signifiers on TikTok: They are used to “cluster” content into identity, or interest-based communities known as “Toks” (Kaye et al., 2022). One example of this is #BookTok, which has been used to cultivate an algorithm-driven “side” of TikTok centred around the consumption of literature (Maddox & Gill, 2023).

Scholarship has further begun to trace how TikTok’s affordances are driving users’ political expression. For instance, several works have identified how Sounds can be used to perpetuate (Matamoros-Fernández et al., 2022) or critique racial stereotypes (Zhao & Abidin, 2023), and facilitate non-technical audiences’ affect-laden engagement with climate change politics (Hautea et al., 2021). Elsewhere, other work has explored how Duets and Stitches, while fostering cross-cutting political discussion, often degrade into sectarian politics (Quick & Maddox, 2024). Extending these works, scholars have also examined immigrants and refugees’ use of TikTok’s affordances for politicized self-expression. This work has found that TikTok’s playful and otherwise mundane templates are often wielded to amplify immigrants and refugees’ voices to assert agency, contest hegemonic depictions, and build community (Cabalquinto, 2024; Jaramillo-Dent et al., 2022; Marino, 2024).

This literature indicates that TikTok’s affordances are reconfiguring how political discourse is performed and circulated online. It also indicates that TikTok’s affordances are facilitating powerful new means of political self-expression for marginalized groups. What remains underexplored is how these affordances shape the specific framing of immigration among TikTok’s wider user population. Prior scholarship has broadly examined the discursive content of immigration frames in social media settings and TikTok’s affordances in terms of their technical and cultural logics but has paid little attention to their intersection. This leaves a gap in understanding how TikTok’s affordances shape not only how different frames are sonically and visually stylized but also condition how this content gains traction and circulates among TikTok’s userbase. Bringing these two strands into conversation, our study examines how TikTok users’ immigration frames are constituted, disseminated, and amplified through the platform’s affordances. Using this as a point of departure, we now outline the research design that guides our inquiry.

3. Research Methods

3.1. Study Sample and Data Collection

Our sampling strategy was designed to capture popular immigration-focused content that likely surfaced to Canadian TikTok users. We did this by querying TikTok’s search interface using relevant keywords and hashtags (see Supplementary File, Appendix A). Keywords and hashtags were both included as each shapes content recommendation pathways (Anderson, 2020). In selecting candidates, we narrowed our collection to English keywords and hashtags only. We additionally opted to include only those keywords and hashtags that were general in focus and value-neutral. For instance, we avoided terminology likely to be used only in specialist circles by immigration consultants (e.g., “Immigration, Refugees and Citizenship Canada,” #spousalsponsorshipcanada), and phrases carrying politically-loaded language (e.g., “illegals”). We did this to ensure that our sample was generated by keywords and hashtags that were not only popular but also

conducive to contestable discursive spaces rather than sites of ideological homogeneity. In doing so, we were able to assess how otherwise politically neutral keywords (e.g., “Canada immigration”) or hashtags (e.g., #canadaimmigration) are leveraged across the political spectrum.

A key methodological consideration for TikTok research is how the platform’s algorithmic curation impacts keyword- and hashtag-based sampling (Kanthawala et al., 2022). For instance, search results can vary based on the user’s IP address, past viewing history, and the time of search, all of which limit the representativeness of the sample. Therefore, we devised a sampling strategy to maximize coverage while mitigating the effects of algorithmic personalization. First, we sampled our keyword and hashtag corpus twice per day at different times for seven days (July 8–15 2025). Second, we captured only publicly accessible videos without signing in to TikTok and deleted any stored cookies between sessions. Our sample was collected using Zeeschuimer, a semi-automated, web-scraping extension for Mozilla Firefox that is designed to collect and store a social media post’s metadata as you observe it on a desktop browser (Peeters, 2024). This approach was necessary as TikTok’s official Research Tools API is not accessible to those working at Canadian institutions, and even when accessible, it excludes Canadian content (TikTok for Developers, n.d.).

Following each session, Zeeschuimer’s log files were saved and converted to Excel format with duplicates removed based on the videos’ unique identifiers. We then calculated Jaccard similarities between each file’s ID list to assess between-day collection overlap (see Supplementary File, Appendix B). We found moderate overlap across devices and collection times, indicating that our time-varied strategy increased coverage. The datasets were later merged into a master file, removing all rows with duplicate IDs, leading to a preliminary dataset of 5,305 TikTok videos. Given the time-intensive nature of manually reviewing content that is richly multimodal, we narrowed our dataset through purposive sampling. We devised a sample that reflects the logic of TikTok’s recommendation system, exploring content likely to be viewed by a broad audience interested in immigration content. To identify cases for inclusion, we explored the preliminary dataset for each video’s creation date and the number of plays or the number of times a video began on a user’s device, irrespective of time watched.

Most videos were created in 2025 ($n = 3,672$, 69%) and were very frequently viewed ($M = 441,874$, $Mdn = 27,500$). Therefore, we opted to include cases that were shared in 2025 and contained more than 100,000 plays. To further refine the scope of the dataset, we included only videos with English or unknown language metadata codes. Although French is an official language of Canada, and the dominant language of Québec, the country’s second-most populous province (Office of the Commissioner of Official Languages, 2024), we analyzed English-language videos only to reflect our research team’s language proficiencies. We also excluded videos with non-Canadian location metadata while retaining videos without explicit location data. If a user had more than one video that met the above criteria, we kept only their most-played video. This is because we were interested in identifying a range of immigration-focused frames, rather than a sample skewed toward the perspectives of a few prolific and popular content creators. This led to a sample of 432 videos. However, after manual review, nine were no longer available (i.e., removed by the user or the platform, or hidden by the user’s profile privacy settings), and 67 were not in English. After filtering out these cases, we were left with a sample of 356 videos.

3.2. Data Analysis

To address RQ1, we manually coded each video into three possible stances—pro-immigration, anti-immigration, and neutral—and a fourth category for unrelated content. To classify videos as pro- or anti-immigration, we investigated the expressions of immigration-specific frames. We generated from the literature a typology of 13 immigration-focused frames that instructed our analysis (Gruzd et al., 2024; Helbling, 2014; Kelling & Monroe, 2023). Similar to past work (Helbling, 2014; Kelling & Monroe, 2023), the frames guiding our analysis were generalist rather than issue specific since our work does not correspond to a particular event. The pro-immigration category was composed of six frames: multiculturalism, humanitarianism, cultural integration, countering, economic benefits, and other. In comparison, the anti-immigration stance consisted of seven frames: nationalism, cultural threats, integration difficulties, economic costs, administrative costs, security threats, and other. The neutral category was operationalized as videos containing an equal proportion of pro- and anti-immigration frames as well as those that did not express an identifiable stance. Finally, videos were coded as unrelated if they did not focus on immigration, such as content on internal migration or non-human migration (see Supplementary File, Appendix C).

Immigration stance, and the corresponding immigration-specific frames, were coded by two of the authors. Coding took place over multiple stages, involving several meetings among coders to review, resolve disagreements, and refine the codebook accordingly. We then calculated Krippendorff's alpha statistics, which is a measure for assessing intercoder reliability that is commonly used in content analyses (Krippendorff, 2019). For all manually coded variables, we achieved alpha levels greater than 0.8 (see Supplementary File, Appendix D), a threshold considered to be the standard for drawing reliable conclusions. We included in our analysis only cases in which agreement was achieved, resulting in an analytical sample of 344 videos.

To answer RQ2, we adapted the *Memetic Interactivity Codebook* (MIC; Vizcaíno-Verdú & Jaramillo-Dent, 2023), a framework for analyzing TikTok content through its audio, visual, and sharing affordances. The MIC operates on two levels of analysis. The first focuses on mimesis (the reuse of sounds, formats, or styles) and interactivity (the ways videos use interactive features such as shares, duets, stitches, or comments). The second level situates mimesis and interactivity within antecedent conditions and effects. Antecedent conditions capture the contexts that shape how mimesis and interactivity appear in a given video, asking whether a video imitates existing content (mimesis) or draws on interaction through audio, visual, or sharing features (interactivity). Effects examine how these same features unfold once the video circulates, assessing whether they encourage further imitation (mimesis) or promote new interactions (interactivity) that shape audience engagement and platform trends.

We used the metadata fields of videos parsed by Zeeschuimer to categorize audio, visual, and sharing affordances, respectively, into subcategories of mimesis and interactivity, as well as antecedent conditions and effects. Audio affordances included the sound applied to the video. Visual affordances pertained to the use of effects that applied visual transformations. Sharing affordances related to the use of the Duet, Stitch, and Reply to Video with Comment features for video creation, as well as the user-generated video description and sticker to invite others to engage in trends, and promote interactivity through calls to like, comment, share, Duet, or Stitch. The video description was also analyzed for users' engagement with hashtags that signalled participation in Challenges, and identification with different communities through

references to specific Toks. For more information on how we operationalized each affordance with respect to the MIC, see Appendix E in the Supplementary File.

Lastly, we conducted chi-square tests of independence to assess the association between a video's assigned immigration stance and its use of affordances. We used Fisher-Freeman-Halton exact tests with Monte Carlo simulations (10,000 sampled tables, seed = 2,000,000) when expected cell frequencies were below five since small expected counts can make Chi-square approximations unreliable (Agesti, 2018). Affordances showing a statistically significant association with a video's assigned immigration stance were further examined using post-hoc pairwise comparisons. In addition to adjusted p -values, we report odds ratios (ORs) to quantify the magnitude and direction of these associations, with accompanying Bonferroni-adjusted 95% confidence intervals (CIs) to account for multiple comparisons.

4. Findings

4.1. RQ1: Immigration Framing on TikTok

We begin by detailing descriptive statistics for our content analysis of videos' stance toward immigration-related topics. Pro-immigration was the most observed category in our dataset, representing 41% of all TikTok videos (Figure 1). In comparison, anti-immigration coded videos were observed much less frequently, at just 13% of our dataset. Those coded as neutral toward immigration were also seldom found at only 8%. While these findings highlight a notable imbalance, the relatively small proportion of anti-immigration content may stem from several factors including algorithmic downranking, the platform's lower prevalence of such narratives, or reduced audience engagement with this type of content. Future research should investigate TikTok's recommender system more directly to clarify the mechanisms driving these patterns.

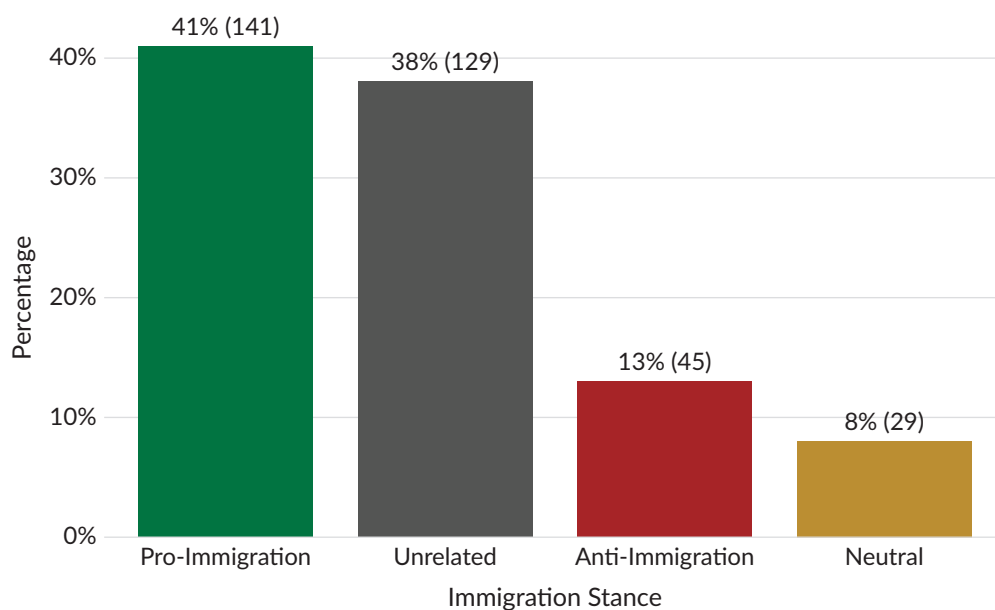


Figure 1. Distribution of assigned immigration stance. Note: The number in parentheses is the raw count of each stance category.

We also found that TikTok’s search engine recommended a large proportion of unrelated content, accounting for approximately 38% of our total dataset. This was likely triggered by reference to Canada in all our queries and resulted in a significant presence of content relating to Canadians’ condemnation of US President Trump’s 51st State rhetoric, Canadian consumer boycotts of US products in response to Trump’s tariff policies, and, broadly speaking, patriotism, solidarity, and community-building amongst Canadian TikTok users.

Within the pro- and anti-immigration stance categories, we found an uneven distribution of frames that narrativized immigration-related issues (Figure 2). We observed the pro-immigration other category to be the most common frame, appearing in 62% of all pro-immigration videos. This other category primarily consisted of professional advice by regulated Canadian immigration consultants and peer-to-peer support from recent immigrants, as well as celebrations of individual, spousal, or familial attainment of Canadian permanent residency or full citizenship. This content crucially framed immigration as a lawful, orderly, and bureaucratic process, presenting immigrants as law-abiding and patriotic figures. This stands in stark contrast to Canadians’ belief that the country’s immigration system is increasingly broken, and that Canada is admitting people who do not embrace its values (Environics Institute for Survey Research, 2024).

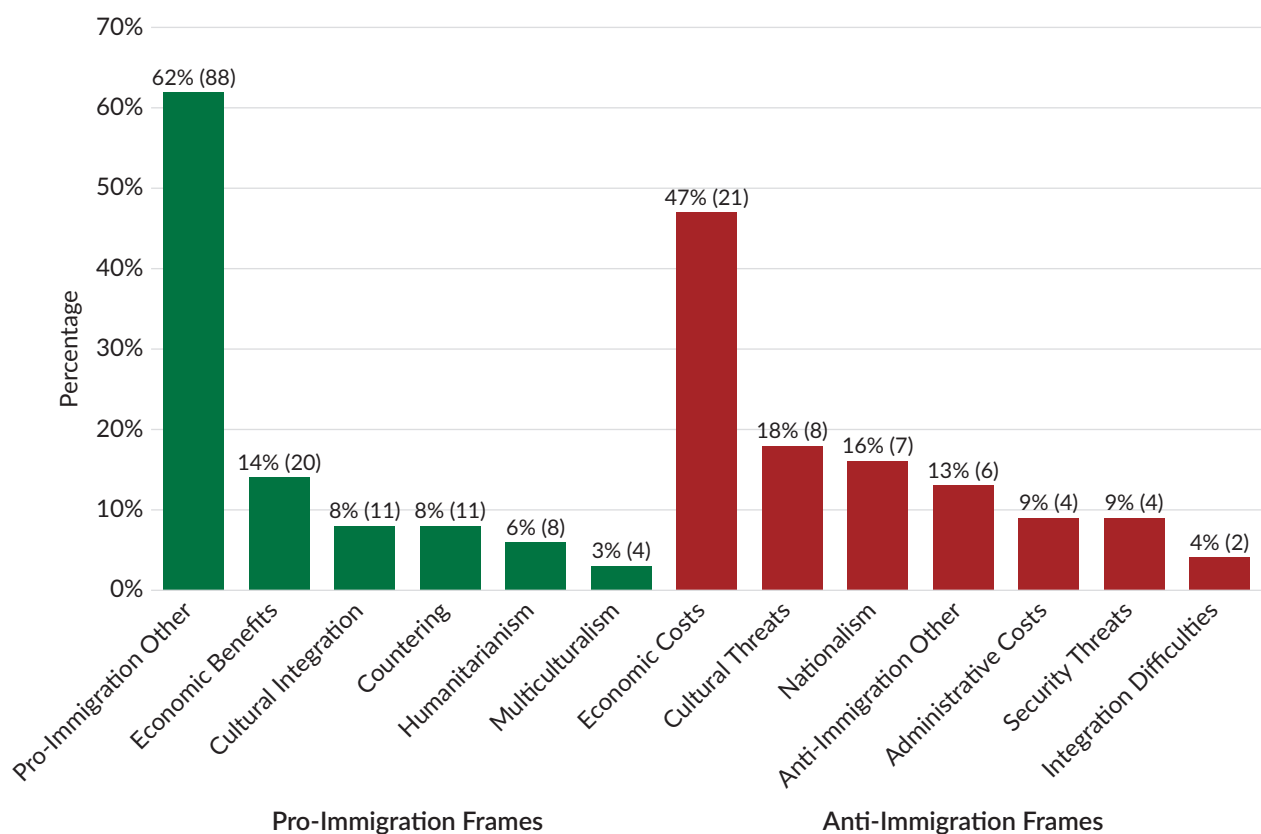


Figure 2. Distribution of pro-immigration ($n = 141$) and anti-immigration ($n = 45$) frames. Notes: The number in parentheses is the raw count of each frame; within each stance, totals may exceed 100% since videos can be assigned multiple frames.

The only other frame category to appear in more than 10% of pro-immigration videos was economic benefits. These videos often showcased sponsored positions to fill labour shortages across Canada, including manufacturing and care work. We also noted a minority of videos that included positive depictions

of undocumented immigrants' economic contributions (e.g., local tax revenues, over-representation in unskilled labour), particularly in response to President Trump's program of mass deportation against "illegal aliens." While not Canada-focused, these cases retain relevance for Canadians' sentiments as the consumption of foreign news can shape individuals' views on domestic issues, shaping how an issue is understood locally (Peterson & Allamong, 2022). This is particularly important in the context of Canada and the US as Canadians regularly consume news from American media outlets online (Newman et al., 2025).

We further observed equal proportions of videos using the countering and cultural integration frame (8% each). Videos deploying the countering frame were centred around calling out generalized trends (e.g., hate toward South Asian immigrants) and specific instances of xenophobia (e.g., a woman decrying the lack of English-speaking customers at a Canadian restaurant), which itself has become a popular genre of activism on the platform (Zhao & Abidin, 2023). Cultural integration, on the other hand, was primarily used by immigrants themselves to humorously document their transition to Canadian culture and its particular idioms, including harsh winters and interpersonal dynamics in the classroom and workplace.

Humanitarianism (6%) and multiculturalism (3%) were the least observed framing strategies for pro-immigration content. This is somewhat counterintuitive as multiculturalism is enshrined in the Canadian Multiculturalism Act, while the country's immigration system is often lauded for its protection of pluralism and humanitarian compassion (Banerjee et al., 2025).

Compared with pro-immigration content, the most prominent frame in anti-immigration videos was economic costs, observed in 47% of videos within this category. Videos using this frame undercut immigrants' economic contributions by blaming them for increasing the cost of goods through inflation, placing a downward pressure on native-born Canadians' wages, and exacerbating housing supply issues. The prominence of both economic costs and benefits across pro- and anti-immigration videos, respectively, suggests that users' framing is centred on immigrants' role in Canada's economy. This heightened attention may reflect Canadians' anxieties about the country's post-pandemic affordability crisis and trade tensions with the US (Previl, 2024). This led to disputed representations with anti-immigrant framings blaming immigrants for raising the country's cost of living and pro-immigrant voices challenging this assertion by accentuating immigrants' contributions to the country's economic output.

Beyond economic costs, identity-focused frames, like cultural threats (18%), nationalism (16%), and integration difficulties (4%) were cumulatively observed in about a third of all anti-immigration videos. They expressed claims about federal expenditures for asylum seekers' living expenses, demanding that the federal government's spending should instead prioritize financial support for "real" Canadians. TikTok users also used racist humour to spread anti-Indian narratives, expressing their belief that Indian immigrants were negatively transforming Canada's cultural landscape. Integration difficulties further captured this sentiment, framing South Asian immigrants as responsible for deteriorating cleanliness and order. Additionally, generative AI was used, albeit limitedly, to facilitate some of these anti-Indian narratives by fabricating "speculative" futures (Lc & Tang, 2023). While we cannot know the specifics of users' prompts, the AI-generated video used racist imagery to bleakly depict an Indian "takeover" of Canada, should current immigration levels persist. These videos are a part of a wider wave of hate directed at Canada's South Asian community where TikTok has been a key incubator (Liddar & Pallapothu, 2024).

Anti-immigration other was the only remaining frame to account for greater than 10% of frames observed in anti-immigration videos. A common theme in these discussions was criticism of the government's perceived mismanagement of Canada's immigration system, leading to unsustainable immigration rates. This included claims that the federal government had lost track of its immigrant population, leading to 500,000 undocumented persons and false claims that the federal government was on track to admit more immigrants in 2025 than in 2024. While ostensibly non-ideologically motivated (Helbling, 2014), this sort of rhetoric promoted exclusionary immigration policies under the guise of pragmatism.

Lastly, we observed administrative costs and security threats frames in 9% of all anti-immigration videos each. Administrative costs positioned immigrants as a burden on taxpayers, amplifying misinformation regarding the federal government's provision of funds to temporarily host asylum seekers. Security threats emphasized immigrants' criminality, calling for the deportation of immigrants with criminal convictions and enhancing vetting mechanisms to prevent those with criminal convictions from entering Canada. In each case, the onus was regularly placed on the system itself with blame directed toward the ruling Liberal Party's recent leadership, including former Prime Minister Justin Trudeau and current Prime Minister Mark Carney.

4.2. RQ2: TikTok's Affordances and the Shaping of Immigration Frames

Next, we examined the relationship between videos' immigration stance and the use of TikTok's affordances to test for potential differences in how immigration-related content is derived from and promotes mimesis and interactivity. Table 1 presents the raw counts and the proportions of each affordance used across assigned immigration stances.

Table 1. Descriptive statistics for TikTok affordance use by immigration stance ($n = 344$).

Condition: Category	Affordance Variable	Immigration Stance Count (% Within Stance)			
		Pro-Immigration	Anti-Immigration	Neutral	Unrelated
Antecedent: Memetic	Audio: Has non-original audio	62 (44%)	7 (16%)	10 (34%)	73 (57%)
	Visual: Has effect	14 (10%)	2 (4%)	4 (14%)	9 (7%)
	Sharing: Has challenge	33 (23%)	11 (24%)	9 (31%)	42 (33%)
Antecedent: Interactive	Sharing: Has community Tok	25 (18%)	11 (24%)	7 (24%)	30 (23%)
	Sharing: Is Duet	0 (0%)	0 (0%)	0 (0%)	0 (0%)
	Sharing: Is Stitch	0 (0%)	0 (0%)	0 (0%)	0 (0%)
	Sharing: Is Reply to Video with Comment	3 (2%)	1 (2%)	0 (0%)	0 (0%)
Effect: Memetic	Visual: Has sticker promoting audio re-use	0 (0%)	0 (0%)	0 (0%)	0 (0%)
	Sharing: Has video description promoting audio re-use	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Table 1. (Cont.) Descriptive statistics for TikTok affordance use by immigration stance ($n = 344$).

Condition: Category	Affordance Variable	Immigration Stance Count (% Within Stance)			
		Pro-Immigration	Anti-Immigration	Neutral	Unrelated
Effect: Interactive	Sharing: Has share enabled	141 (100%)	45 (100%)	29 (100%)	129 (100%)
	Sharing: Has comments enabled	140 (99%)	45 (100%)	29 (100%)	128 (99%)
	Sharing: Has Stitch enabled	139 (99%)	45 (100%)	29 (100%)	128 (99%)
	Sharing: Has Duet enabled	139 (99%)	45 (100%)	29 (100%)	128 (99%)
	Sharing: Has video description promoting user engagement	9 (6%)	2 (4%)	2 (7%)	4 (3%)
	Visual: Has sticker promoting user engagement	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Note: All variables are binary (TRUE or FALSE).

Where TikTok videos' content was derived from mimesis, we observed largely similar use of the platform's affordances across assigned immigration stance categories. The only notable exception was the use of non-original audio in videos. Here, anti-immigration content (16%) drew from TikTok's sound library less frequently than other assigned categories. Non-original audio was a particularly popular affordance used in pro-immigration (44%) and unrelated-assigned TikTok content (57%). Moreover, within these categories, similar audio was repetitiously used between videos. This included pro-immigration TikTok videos' use of the audio, "What Dreams Are Made OF WEDDING by Brent Morgan" ($n = 13$), a cover of the Hilary Duff song. This was used by TikTok users as a celebratory backing track when sharing that they or their family members had received permanent residency or Canadian citizenship. In comparison, unrelated-assigned content most frequently featured the hip-hop audio, "This is Canada" ($n = 5$). This audio was often deployed to promote pride in Canadian national identity, often as a counter to President Trump's annexation threats.

Affordances that allowed for videos to be derived from interaction also showed relative homogeneity across immigration stance categories. Notably, none of the observed videos used the Stitch or Duet features, and very few engaged the Reply to Video with Comment feature. The one exception was community Toks, which was used fairly similarly across all categories, specifically in 21% of all examined videos. Popular Toks used reflected Canadian users' patriotic connection to a larger national community (e.g., #canadatiktok, #canadantiktok, #tiktokcanada) in the wake of geopolitical tensions between Canada and the US.

We observed no use of affordances that would promote mimesis in TikTok users' immigration-focused videos. Across stance categories, we saw zero use of TikTok's Sticker feature to overlay users' videos with text, calling upon others to reuse their audio to contribute to a trend's growth. The same was true for users' written video descriptions where we saw no attempt to call for participation in a sound-driven trend.

In contrast, virtually all TikTok content analyzed promoted audience interaction by enabling several system settings, including the ability to share a video, comment on it, and Duet or Stitch it. We did, however, see very little effort to promote interactivity through text-based affordances, such as stickers and video descriptions.

For instance, we saw zero use of TikTok’s Sticker feature to prompt viewers to engage in sharing, commenting, duetting, or stitching during calls for viewer engagement, across videos assigned to the immigration stance. In comparison, we saw only marginal use of the video description to promote these forms of interactivity.

Next, we tested the relationship between a video’s assigned immigration stance and affordance use (Table 2). Only the use of non-original audio had a statistically significant relationship with immigration stance, $\chi^2(3, n = 344) = 24.11, p < 0.001$. Post-hoc pairwise comparisons (Figure 3) showed that anti-immigration videos were significantly less likely to use non-original audio than both unrelated (OR = 0.14, $p < 0.001$, 95% CI [0.06–0.34]) and pro-immigration videos (OR = 0.23, $p < 0.01$, 95% CI [0.10–0.56]). These results suggest that anti-immigration videos were less likely to draw on memetic templates built around popular or trending sounds. Instead, they tended to rely on original audio, often in the form of PoV-style footage, selfie-filmed diatribes, or repurposed clips from broadcast media.

Table 2. Chi-square and Fisher-Freeman-Halton test results.

Affordance Variable	Statistical Test	Test Statistic	DF	p-Value
Audio: Has non-original audio	Chi-square	24.11	3	< 0.001*
Visual: Has effect	Fisher-Freeman-Halton	2.75		0.43
Sharing: Has challenge	Chi-square	3.22	3	> 0.05
Sharing: Has community Tok	Chi-square	1.77	3	> 0.05
Sharing: Is Reply to Video with Comment	Fisher-Freeman-Halton	3.40		0.32
Sharing: Has comments enabled	Fisher-Freeman-Halton	1.16		1.00
Sharing: Has Stitch enabled	Fisher-Freeman-Halton	0.93		1.00
Sharing: Has Duet enabled	Fisher-Freeman-Halton	0.93		1.00
Sharing: Has video description promoting engagement	Fisher-Freeman-Halton	2.10		0.54

Notes: Variables with no variation in values (i.e., 100% TRUE or 100% FALSE) are excluded, as statistical tests could not be conducted; results are based on SPSS version 29.0.1.0 (171); * $p < 0.05$.

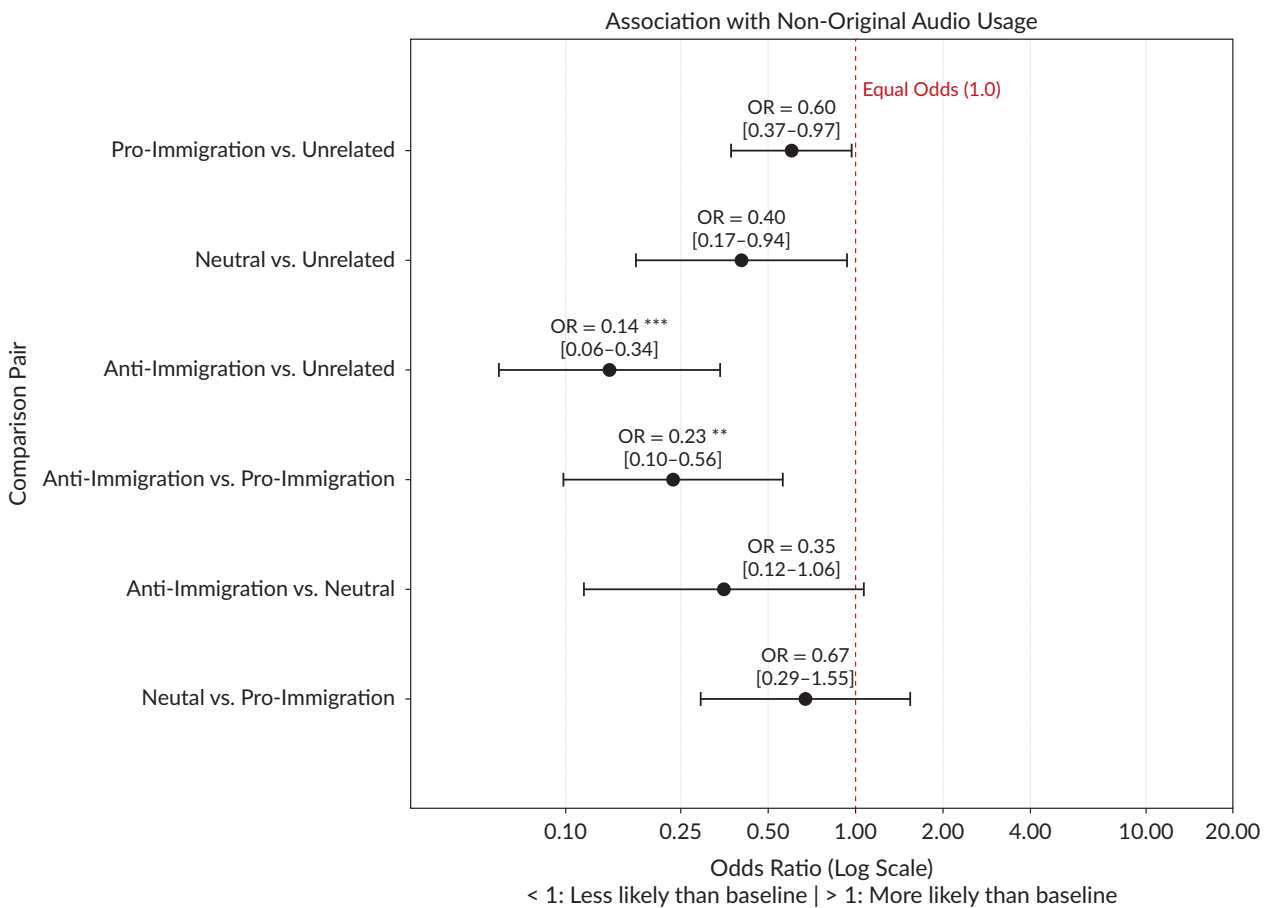


Figure 3. Post-hoc pairwise comparisons of non-original audio use by assigned immigration stance. Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

5. Discussion

Our work sought to advance the understanding of social media users' contentious framings of immigration by exploring the burgeoning short-video platform, TikTok.

Addressing RQ1, our results diverged from existing studies on X (Walsh, 2023; Yantseva, 2020): The prevalence of anti-immigration content was minimal compared to pro-immigration content. A large proportion of the content centres on formal and informal support for immigrants, ranging from recent immigrants' stories that celebrate the often arduous immigration journey to registered immigration consultants offering guidance on navigating bureaucratic systems. Our results echo past work that found immigrants and refugees' TikTok videos often combine narratives of struggle and resilience to humanize their journeys (Cabalquinto, 2024; Jaramillo-Dent et al., 2022; Marino, 2024). Social media has also been demonstrated as a key avenue through which immigration consultants' services are advertised (Bastide & Yeoh, 2024). Others have found that social media is often used to document immigrants' experiences navigating foreign bureaucratic systems (Dekker & Engbersen, 2014). Past work has argued that these online supports strengthen immigrants' resilience by increasing their access to valuable information in real-time during times of need (Dekker & Engbersen, 2014). Accessing this sort of information can also strengthen immigrants' aspirations to move by demonstrating that a future in the destination country is possible

(Grubanov-Boskovic et al., 2022). Showcasing immigrants' resilience may also have beneficial impacts for the broader public. For instance, past work has shown that these types of stories can reduce individuals' measured xenophobia and foster empathy through narrative relatability (Igartua & Cachón-Ramón, 2023).

Although users' frames featured comparatively less anti-immigration sentiments, their presence advanced a radically different understanding of Canadian immigration. In contrast to Kelling and Monroe (2023), anti-immigrant videos regularly discussed immigrants' impact on Canada's economy as opposed to identity-related concerns. This is not surprising given that the cost-of-living and affordability issues were voted Canadians' top story of 2024 (Previl, 2024). In saying that, nearly a third of the anti-immigration TikTok videos did reference identity-related concerns, including not-so-subtle white nationalist dog whistles that framed immigrants' "mass" arrival as an existential threat to Canadian culture. Often, these videos featured false or misleading claims, citing "official" statistics or figures that had been misrepresented.

Generative AI also played a role in capitalizing on Canadians' increasingly unfavourable views toward immigrants. We observed that TikTok users' content prompted generative AI to envision a future after mass immigration. This practice has been explored in other arenas with users' prompts speculatively creating visuals of a world ravaged by climate change (Lc & Tang, 2023). While this sort of speculative exercise can inspire action in response to an existential threat, such as climate change, it also has significant implications for digital misinformation. It illustrates generative AI's potential for racist worldbuilding, agitating cultural anxieties over mass immigration. TikTok may also serve as an amplifier of this content. Its easy-to-consume format could make it an attractive site for nefarious actors to disseminate dehumanizing content that could, in turn, translate to offline violence against immigrant communities.

For RQ2, we examined how these videos' competing frames were presented using TikTok's affordances. Ultimately, we observed only one statistically significant difference: the derivative use of non-original audio, or Sound. With pro-immigration videos regularly invoking stories celebrating immigrants' mobilities, non-original audio provided a "templatable" device to weave personal histories into viral "audio memes" (Abidin, 2020). Conversely, the largely impersonal tone used in anti-immigration videos—vis-à-vis political commentaries and reused media was far less compatible with this affordance. This speaks to how a particular affordance can be inflected with "registers of meaning" (Gibbs et al., 2015, p. 258). In other words, affordances are not just objective properties of a platform; they are subjectively shaped by users' engagements, leading to normative uses. This means that some affordances may be suitable for telling some stories, but wholly incongruent with others.

The absence of veritable differences elsewhere between pro-, anti-, and neutral-immigration videos, as well as those labelled as unrelated, is indicative of a "shared language" on TikTok that transcends competing perspectives (Literat et al., 2023, p. 378). For instance, our data showed comedic content was a popular format across stances where pro-immigration content sought to make light of newcomers' transition to their host countries while anti-immigration TikTok videos engaged in racist tropes to diffuse their disdain for South Asian immigrants. The challenge is that humour is a key facet powering memetic trends on TikTok. As a result, it can be an equally effective tool for prosocial outcomes like building solidarity, staking political claims, and mounting challenges to oppressive systems, while also entrenching antisocial systems by reifying harmful stereotypes and trivializing discrimination (Matamoros-Fernández, 2023). In the case of the latter, it also raises additional questions regarding platforms' capacity to moderate humour, walking the delicate line

between harm reduction and free expression. This is particularly important for TikTok, where the threat of radicalization looms large for the platform's young, politically malleable userbase, and where humour is a critical discursive strategy to mainstreaming the far right (Schmid et al., 2025).

6. Conclusion

In today's polycrisis—marked by overlapping challenges such as pandemics, climate emergencies, armed conflict, and social inequalities—the cultivation of digital social resilience is a critical mechanism for preserving social cohesion. Our study sheds light on how the turn to short video, ushered in by TikTok, is altering how we produce, consume, and engage with pressing societal issue such as immigration. Where TikTok has become an increasingly important space for young people to acquire new information and engage politically, it is paramount that policymakers, civil society organizations, and academics continue to partner to build strategies that both counter harmful content and harness the platform's connective potential by developing programs that strengthen citizens' resilience against anti-immigration disinformation. These literacies ought to correctively tackle the threats to public safety fostered by xenophobic misinformation, along with user- and AI-generated racist humour that proliferates on TikTok, all of which threaten immigrants' safety and well-being. However, stakeholders' engagement with immigrant communities should also recognize that TikTok may have positive value. For instance, immigrant-advocacy groups might incorporate TikTok as an additional pathway to disseminate information that empowers immigrants' decision-making in an entertaining format.

Our study also provides ample opportunities for future research. Specifically, as our dataset was generated from a non-random sample of videos utilizing limited keywords, we cannot claim generalizability to searches using additional or alternative keywords (Hollingshead et al., 2022). For example, the relative lack of anti-immigration videos in our dataset likely underrepresents the extent to which this content appears on the platform, particularly as users posting such content may adopt “algospeak,” a type of language used to subvert algorithmic censorship (Steen et al., 2023). Researchers looking to extend this study should consider using non-generic search terms to assess how users' politicized terminologies regarding immigration (e.g., “newcomers” versus “illegal aliens”) shape the framing strategies adopted on TikTok.

Although the study focuses on Canadian content, its methodology can be applied to explore how short-video platforms mediate various other types of contentious issues in other countries or contexts. It introduces a sampling strategy for identifying popular TikTok content and operationalizes the MIC codebook using rule-based, automated analysis of metadata. Furthermore, because TikTok's Research Tools API is only available in a limited number of jurisdictions (e.g., the EU, UK, and US), our approach enables researchers elsewhere to investigate similar questions about immigration or other social issues.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

Data is available upon request to the corresponding author.

LLMs Disclosure

When preparing this article, the authors used Grammarly and ChatGPT to proofread and improve readability. They then reviewed and edited the content as needed and take full responsibility for the manuscript.

Supplementary Material

Supplementary material for this article is available online in the format provided by the authors (unedited).

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To Scenes Through Screens? A Study of The Offline Club Digital Detox Community

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Abstract

As daily life, social relations, and labour increasingly unfold through digital media, users seek to regulate their digital engagement by adopting dumbphones, uninstalling applications, or participating in “digital detox.” In high-connectivity contexts such as the Netherlands, digital disengagement has gained traction among middle-class citizens and expatriate professionals. This article examines how digital disconnection is commodified, socially valorised, and collectively experienced through a case study of The Offline Club (TOC), a Netherlands-based initiative offering curated digital detox events. Drawing on a netnographic approach, we analysed 35 posts on TOC’s Instagram page, conducted participant observation at two events, and carried out nine semi-structured interviews with attendees. We argue that TOC constructs digital disconnection as a curated, temporary practice that unfolds within urban contexts where the role of digital technologies becomes increasingly ambiguous. While TOC markets disconnection as resistance to digital saturation, its own reliance on social media and platform infrastructure for outreach and legitimacy reveals a paradox of disconnection-through-connection. Our findings demonstrate how such initiatives both respond to and reproduce platform logics, simultaneously cultivating community while inadvertently reinforcing cycles of commodified digital non-use. From a digital humanist perspective, we critique the limitations of initiatives like TOC that offer symptomatic relief without addressing the structural conditions of digital dependency. While participants may temporarily reclaim attention and presence, the broader socio-technical systems that underpin digital overload remain unchallenged, raising critical questions about the efficacy and politics of commercialised digital detox movements.

Keywords

digital dependency; digital detox; digital disconnection; the Netherlands; The Offline Club

1. Introduction

In the Netherlands, the everyday use of digital devices has become an integral aspect of both public and private life. With an internet penetration rate of 99%, one of the highest in the world alongside Norway and Denmark (Statista, 2025), digital engagement is deeply embedded in societal routines. This widespread adoption is both a driver and a consequence of government-led digitalization initiatives such as the *Values-Driven Digitalisation Work Agenda* (Digital Government, 2024), which is part of the broader Dutch digitalization strategy. However, in response to the pervasive nature of digital technologies and social media, some individuals actively seek temporary disconnection through “digital detox” (Syvertsen, 2022).

What is also referred to as voluntary digital disengagement takes place as a temporary withdrawal on an individual level (Syvertsen, 2022). However, recent forms of digital disengagement reflect initiatives in the form of corporate action on a collective level, hinting at an emerging trend in the market of self-growth, self-optimization, and well-being (Syvertsen, 2022; Syvertsen & Enli, 2019). The Netherlands-based initiative, The Offline Club (TOC), is a prime example of such practices. While TOC mirrors an already existing trend in the tourism industry where digital disconnection is an actively sought experience (Stäheli & Stoltenberg, 2022), it is the initiative’s persisting high-profile social media presence with over 400 thousand Instagram followers (data from November 2024) that creates tensions around the role and meaning of technology.

Multiple studies in digital disconnection research highlight “authenticity” as a desirable benefit, one increasingly packaged and sold as a commodity through digital detox retreats, camps, textual guides, and self-growth literature (Syvertsen & Enli, 2019). Whereas initiatives like TOC also seem to transform the individual aims for digital disconnection in hyperconnected digitalized societies into a collective experience, little has been studied on the content of these initiatives’ activities as well as their seemingly paradoxical commodified role on digital platforms, which they in principle oppose (Syvertsen, 2022).

The present study explores contemporary collective practices of digital disconnection through a case study of a growing high-profile digital disconnection initiative by asking: How does TOC frame digital disconnection in its discourse and practices of “digital detox”? “Discourse” here is understood as a social practice consisting of semiotic and linguistic figures pertaining to social processes and problems (Fairclough & Wodak, 1997, as cited in Gölbaşı, 2017, pp. 7–8).

A significant transformative point in digital disconnection research stems from resisting the outdated habit of perceiving digital non-use as fully constitutive of one’s identity as either a user or a non-user, but rather acknowledging that non-use is a constantly negotiated and fluid process that individuals engage in, which involves both (Baumer et al., 2015). This means that research on digital non-use requires a new approach studying other phenomena or practices that substitute the absent interaction with technology instead of focusing solely on the motivations and strategies of technology non-use (Baumer et al., 2015). With the approach proposed here, we not only examine why people practice digital disconnection but also explore the content of their TOC experiences, focusing on how they engage in and experience “digital detox” practices.

This study contributes to debates on the commodification and paradoxes of digital disconnection by examining TOC, a “digital detox” initiative that operates at the intersection of online visibility and offline

experience. Unlike previous research that centres on commercial digital detox tourism or individual disconnection practices, this empirical study highlights how disconnection is collectively produced within an urban, platform-dependent environment. TOC's reliance on social media for marketing and coordination exposes a central paradox in practice: Participants seek distance from technology through infrastructures that simultaneously sustain and commercialise their desire to disconnect. By tracing how users and organisers navigate this tension, the study shows that digital disconnection is not merely a temporary withdrawal but a mediated practice shaped by platform logics, commodified authenticity, and collective negotiations of meaning.

2. Literature Review and Theoretical Framework

2.1. Digital Disconnection Research and Critiques

Within academic debates on non-participation in digital media and practices of digital disconnection, scholars have explored users' motivations and strategies for disengaging from technology, often framed through the notion of "digital detox" (Nguyen et al., 2022; Schoenebeck, 2014). Foundational ethnographies, such as Fish's (2017) critical analysis of commercial digital-detox camps, reveal how withdrawal from connectivity has been commodified, transforming disconnection into a purchasable experience of authenticity, mindfulness, and moral renewal. Related work in tourism and leisure studies has conceptualised "digital detoxing" as a form of wellness or slow tourism, where temporary disconnection is marketed as emotional repair within capitalist logics of productivity and self-optimization (Quaye, 2025).

A recurring argument across this scholarship is that digital dualism, understood as the assumption of clear boundaries between online and offline realities, is no longer viable as users inhabit hybrid technological assemblages where complete withdrawal or genuine disconnection is neither practical nor desirable (Kuntsman & Miyake, 2019; Schoenebeck, 2014; Syvertsen, 2022). Building on this, Kuntsman and Miyake (2019) articulate the paradox of dis/connection, arguing that disengagement exists on a continuum shaped by privilege, mobility, and infrastructural access.

Yet, most analyses still treat disconnection primarily as an act of individual withdrawal, a luxury commodity for the privileged or a population governance tool (Beattie & Cassidy, 2020), rather than a potentially activist or transformative practice embedded in the everyday urban public spaces. This article advances the debate by situating disconnection within the framework of digital humanism, understood not as a moral prescription but as an analytical lens through which to examine how "humane technology" discourses repackage digital well-being within neoliberal ideologies of self-management and personal responsibility. In doing so, it contributes to critical scholarship that reframes disconnection as a site of social negotiation and political expression rather than a mere escape from technological life.

2.2. Digital Humanism

As an interdisciplinary framework, digital humanism focuses on the intersections between technology, power dynamics, and human values. This approach advocates for recognizing the constraints of technological power structures while emphasizing the critical importance of human-centered principles in guiding societal development (Coeckelbergh, 2024; Prem, 2024). Digital humanism, thus, underscores the

need to integrate ethical considerations into digital innovation, emphasizing the preservation of human dignity, agency, and equity as central to technological advancement. However, depending on the communication tools that digital humanist projects utilise to take part in the initiative, one may still have to engage with larger digital platforms passively, advancing “a political, economical, or organisational agenda set by someone other than the participant” (Casemajor et al., 2015, p. 856). In a case of such online engagement labour, efficient data are produced for sustaining platform economics and technology monopolies (Casemajor et al., 2015; Prem, 2024). Here, Casemajor et al.’s (2015) framework of mediated political action allows for understanding political action in digital humanist initiatives more concretely. It extends traditional forms of participation by illuminating the potential risks of surveillance capitalism and the disempowering forms of interaction enacted through digital disconnection. The framework does so by acknowledging the impact of digital media’s sociotechnical ecology by perceiving political action in passive and active engagements, revealing an under-theorised area in media studies and the empowering nature of non-participation in the political action dimension.

Similarly, Syvertsen (2022) recognizes this platform-dependent process of mobilisation as dilemmatic since it requires participants to spend more time online instead of less. She observes that most digital detox initiatives’ social media profiles are “low-profile” (Syvertsen, 2022, p. 665), containing only logistical information on attendance and promised benefits of a detox.

An attempt to counter this paradox through an analysis of a similar case aims to contribute to discussions of digital humanism by identifying where power is constituted—particularly in the form of technological engagement that Baumer et al. (2015) describe as “less categorical and more fluid in nature” (p. 54). This perspective then highlights the nuanced ways individuals navigate their digital interactions.

2.3. Neoliberalism, Escapism, and Commodification of Disconnection

Hesselberth (2017) and Natale and Treré (2020) argue that critique of and resistance to digital capitalism in the form of digital disengagement and disconnection from technology fails to act as political action and ultimately contributes to the neoliberalist project of privatizing solutions to societal problems. As a product of consumer activism that only creates new market opportunities, this phenomenon relates to the neoliberalist model of governmentality where “individuals are unapologetically held accountable for their own (mis)use of technology, and therewith for their time-waste and burnouts, as if these can be divorced from the newly emerged economy of attention and the technological milieu that sustains it” (Hesselberth, 2017, p. 1998). Through a case of a detox camp, Natale and Treré (2020) note how participants often come from a middle or high-class background and engage in digital disconnection only temporarily. Such a practice is usually followed by a return to a technology-sustained lifestyle in a “re-charged” state that increases one’s productivity, thus maintaining the capitalist status quo. They conceptualise the activist and emancipatory potential of digital disconnection within escapism and nostalgia, arguing it is frequently undermined and absorbed by the mechanisms of digital capitalism which present disconnection as a harmless retreat associated with authenticity, mindfulness, and nostalgia (Natale & Treré, 2020, p. 628).

Similarly, when consumption becomes the central organizing principle of modern life, individuals are positioned not only as consumers of products but also as managers of their own risks and well-being. Within this framework, social and structural pressures, such as technological overload, constant availability, and

information fatigue, are reframed as matters of personal responsibility rather than collective concern. As a result, users are encouraged to engage in forms of self-regulation and behavioural optimization, internalizing the neoliberal logic that well-being and balance can be achieved through individual discipline and mindful consumption (Syvertsen & Enli, 2019). Technological fixes such as social media limitation apps, self-help literature, or tools that minimize online engagement (e.g., “dumbphones”; Ghita & Thorén, 2021) perpetuate the neoliberal notion of a capitalistic society, commodifying various facets of the less technological past. Instead of user empowerment, the need to cope with technology oversaturation is constructed by economic actors and its solution becomes possible through consumption of commodities, resulting in individuals’ self-regulation of digital use (Ghita & Thorén, 2021). Such practices relate to modes of self-optimization (Moe & Madsen, 2021) and responsabilization (Syvertsen & Enli, 2019) where temporary digital disconnection for cultivating one’s authentic self through a consumer experience analogous to a self-growth seminar becomes a risk and a responsibility of an individual, not the state.

Lastly, commodification similarly represents a crucial part of the contemporary discourse on digital disconnection, since it allows for seeing digital disconnection as business opportunities and brings commercial appeal to packaged phenomena of authenticity and nostalgia (Syvertsen, 2022). Perceiving events organized by TOC as experiences of digital disconnection through the lens of commodification allows for identifying various layers of their commodified role (Syvertsen, 2022) as well as how their influence on individuals’ identities manifests in their everyday life expressed beyond platform-mediated discourse of #digitaldetox on Instagram (Geber et al., 2025; Jorge, 2019) and Reddit (Parry et al., 2025).

Therefore, it is also the goal of this article to investigate the temporal, spatial, social, and technological contexts in which TOC’s digital disconnection events take place and similarly question the underlying ideologies embedded in these practices.

3. Methodology

The study first studies TOC’s virtual spaces through critical discourse analysis combined with participant observation. As the community expands into physical settings, event ethnography and semi-structured interviews serve as primary methods of data collection, with the resulting material analysed through inductive thematic coding. Such liquidity and multiplicity of field sites are crucial for netnography, which seeks to capture phenomena that unfold across dispersed arenas, tracing the meaning of communities not confined to a single spatial setting (Kozinets & Nocker, 2018).

Netnography is a methodology rooted in ethnographic principles of participant observation, adapted to online environments (Kozinets, 2015). This study provides the overarching framework through which diverse methods are mobilised, offering a nuanced lens on how individuals and communities interact, share narratives, engage in exchanges, follow online norms, participate in rituals, develop discursive styles, collaborate, and express creativity (Kozinets, 2015). Complementing this, in-depth interviews, participant observation, and online research enable a deeper exploration of attitudes and perceptions that shape worldviews and social meanings (Jaimangal-Jones, 2014). Within this inductive approach, methods such as event ethnography are applied flexibly and reflexively as the research unfolds with the iterative process of data collection and analysis opening new avenues of inquiry (Jaimangal-Jones, 2014).

3.1. Data Collection and Sampling

Virtual communities as social groups can be defined by their network nature constrained by audiovisual sites, social networks or platforms, mailing lists, gaming environments, or instant message spaces (Kozinets, 2002). In this project, data is collected from two field sites (both online and offline environments constructed around TOC events) through participant observation and in-depth semi-structured interviews as tools of netnographic methodologies. These data accommodate online content produced by TOC organizers such as newsletters, online event invites, posts, descriptions, and videos on Instagram (a primary platform and marketing tool to spread awareness about their activities and grow their audience). Discussions by online users in comments under TOC content are also considered.

Concentrating individuals from different societal layers in one place increases interaction between infrastructures and people; thus, with event ethnography as a form of ethnographic method, we also explore the power and prestige economies between higher class and ordinary people in TOC's physical events (see Table 1) as well as the prevailing norms or specific ways participants negotiate their identities, belonging, and matters important to them (Koch, 2023).

Table 1. Demographic information about interviewed participants from two TOC events in the Netherlands (in Utrecht on May 7th, 2024, and Amsterdam on May 22nd, 2024).

Participant	Gender	Age	Occupation	Nationality	Participation in TOC events
Sophie	Female	22	University student	The Netherlands	Twice
Gabriel	Male	35	Data scientist in a non-profit organisation	Bosnia and Herzegovina	Once
Mila	Female	34	PhD student	Croatia	Once
Rose	Female	26	University researcher and lecturer	International (non-Dutch)	Once
Tim	Male	40	Wedding photographer and spiritual coach	The Netherlands	Three times
Hana	Female	30	Shop owner and business development manager	Taiwan	Once
Emilia	Female	33	Process engineer in a biopharmaceutical company	Poland	Eight times
Jennifer	Female	22	University student	The Netherlands	More than four times
Tara	Female	34	Salesperson and music producer	North Macedonia	Twice

Through participant observation and event ethnography, the main author engaged directly with participants, gaining deeper insight into their experiences, emotions, and perspectives by taking part in the same events (Jaimangal-Jones, 2014). This immersive approach provided a broader contextual understanding and helped mitigate potential biases during in-depth interviews while enabling triangulation across ethnographic methods, allowing for more flexible research approaches (Jaimangal-Jones, 2014).

Interview data from TOC event participants were collected through convenience sampling as time and space constraints of the two TOC events allowed for limited interaction. Participants were approached in person during the events, informed about the project's aims, and invited to take part in a voluntary interview. Additionally, some participants were contacted via LinkedIn with their details accessed through the guest list on Luma, the event-hosting platform TOC used for ticket sales.

The interview questions explored participants' digital use and non-use habits as well as their motivations and attitudes toward TOC's activities. Particular attention was given to the role of TOC's promotional materials and language in shaping participants' perceptions of digital disconnection and technology as a broader cultural force.

3.2. Data Analysis

The data analysis process was divided into two parts—critical discourse analysis and thematic analysis, from which larger themes were derived.

For critical discourse analysis of online content created by initiative organizers, van Dijk's (1993) framework of critical discourse analysis principles was applied, commonly used for analysing media discourses. This framework helps understand how the discourse present in this online content is formed by the broader social, political, and economic context in which the company operates, as well as the way ideology, social power, and dominance are produced through social practices and institutions. Apart from political, military, and legal bodies, Simpson and Mayr's (2010) interpretation of power as a way of coercing control over values and ideas allows for recognising businesses as legitimate actors of dominance and power.

The discourses created by TOC (their social media profiles, newsletters, posts and videos, as well as comments by other users under TOC's posts) were subject to critical discourse analysis. In addition, data collected through event ethnography were analysed simultaneously. Finally, an important part of this analysis required identifying the present framing techniques that shape participant mobilisation as proposed by Snow et al. (1986) through determining the problem, the values embedded in the problem, and the proposed solutions by the framing agent.

In the second half, the interviews data were analysed using thematic analysis based on two TOC event case studies. This data-driven, bottom-up approach involved identifying meaningful codes and constructing themes as recurring patterns and relationships between codes emerged. The analysis followed the widely used framework developed by Braun and Clarke (2006, 2019), which entails familiarising oneself with the empirical data, generating initial codes, searching for and reviewing themes, and refining them into a coherent narrative that captures the essence of participants' experiences.

3.3. Ethics and Positionality

To gain access to the TOC events, the main author purchased two student tickets with her own resources. She recorded data for participant observation through handwritten note-taking of observed actions and social interactions to maintain the participants' anonymity. Interactions with participants-interviewees for this research originated through consociation as an incidental association with a nearby person during the

author's participation in TOC events. Still, participants involved in this research were aware of her positioning as a researcher as conversations advanced and their data was anonymized by allocating pseudonyms. Confidentiality and privacy of all interviewed participants were respected by securing signed informed consent forms during the interview process and storing the collected data in a safe environment.

4. Findings

4.1. *The Paradox of Anti-Tech Narratives and TOC's Online Content Curation*

Since February 2024, TOC has organised digital detox events in the Netherlands, the United Kingdom, France, Denmark, Spain, Italy, and the United Arab Emirates, reaching over 10 million users on digital platforms. Their online presence is distributed across various virtual spaces: on Instagram and their website, on the event-hosting platform Luma, and LinkedIn. In June 2024, TOC's Instagram held 35 posts with videos or photographs featuring their past and future events. Approximately half of the posts were in the form of a "reel," a short vertical video containing a short text in the frame accompanied by a small description about the event's details such as the venue or anecdotes from participants. It is precisely in these descriptions as well as TOC's other promotional materials like newsletters, founders' LinkedIn posts, and podcasts where certain recurring phrases and words construct an overarching rhetoric of crisis and anti-technology radicalism, framing the role of technology as a source of distraction.

For example, TOC's posts describe the status quo through a rhetoric of "today's rushed and ever-connected society" where "the world is screaming for more connection and less time spent on our phones" as included in the introduction paragraphs of many of their posts, which construct a rather pessimistic image of the current climate. As a result, TOC's symbolic language creates a sense of urgency and dramatically highlights the problem's acuteness. TOC also often returns to an idealized past in their posts, resonating with many who, in the comments, yearn for a time when limited technology use was the norm. This nostalgia then mirrors in TOC's posts: "People in Amsterdam are reliving the 90s," it says under one of their reels.

Through the rhetoric of crisis, adopting an authoritative role of saviours and responding to nostalgic feelings evoked by users, TOC instills a need in its audience that can be fulfilled through a commercial purchase of a ticket to one of their events. As a result, it is furthermore the "break from technology" rather than a long-term lifestyle that dominates TOC's discourse when describing digital disconnection and in a *301 Podcast* episode "Ilya Kneppelhout—The 100 Million People Offline Club," TOC's founder Ilya says: "We're not for a fully offline lifestyle. We aim to inspire an offline lifestyle for people to do it more often and mainly to become conscious of it, of your own behaviour and your relationship to your screens" (Engel, 2020–2025). Similarly, the boxed container where phones are put and locked during the events is referred to TOC as a "phone hotel" which reinforces the idea of surrendering one's phone for a temporary period (de Kievit, 2024).

Not advocating for a phone-free lifestyle but promoting a temporary possibility for digital disconnection purchased through commercial means contradicts another dominant aspect in TOC's discourse. A rhetoric of anti-tech radicalism is present in most of the reels and their description, demonizing phones and social media and often in a style that misleads the user about the true course of their events. There, participants distance themselves from their phones only to reclaim them after a few hours.

By frequently using phrases such as “bloody phones,” “bloody app,” or a no-phone zone emoji, the authors present technology negatively. These rhetorical strategies contribute to TOC’s image as strong anti-tech radicalists, which allows them to build on existing global radical discourse against technologies. Moreover, they instil a sense of controversy in users online, especially when such discourse is mediated by technologies that are criticised, thus building greater user interest and engagement on the platform (Kim & Ihm, 2019).

The use of resolution language demonstrates how TOC frames the way participants relate to technology use: “Over 1000 people have dumped their phone and gone offline with us,” “people in Amsterdam are done with their phones,” or “we aim to inspire people to unplug from digital devices.” Phrases like “dump,” “unplug,” or “to be done with” evoke a sense of resolution and radical non-use of technology rather than the idea of a “break from technology” that TOC organisers promote. However, digital disconnection practiced during the TOC events is always temporary and ends with the moment of returning phones to the participants, which suggests that TOC’s rejection of technology through language functions deceptively as it is never followed by phrases of “replugging” or “going back online.”

Considering the fact that TOC’s anti-tech radicalism rhetoric is published through a social media platform and mediated to individuals through a computer or a smartphone, there are other dilemmatic contradictions. An extensive use of hashtags that often refer to purely online communities (e.g., #bookstagram), a Spotify playlist created by TOC and promoted on their Instagram that can be played only through interacting with a smartphone or a computer and sentences like “follow @theoffline_club for tips and inspo to spend less time on your phone” become all an object of critique, as they encourage phone interaction and contain ambiguous language that is both against and reinforcing of technology use.

By engaging in preemptive self-critique, founders reflect on their position and content curation practices to gain control over their own narrative; they give unverifiable solutions to critiques regarding their own positionality (through statements such as “we have a rule for ourself to bulk our Instagram usage to max 30 minutes a day”) or respond diplomatically with the “break from technology” rhetoric (through messages such as “thank you for your valuable input! It’s a difficult subject. We hope to inspire people to go offline more often and change the relationship they have with social media and their phones, rather than stopping to use those completely”).

Moreover, the way TOC founders acknowledge this dichotomy of “promoting digital disconnection events on social media” themselves is by adopting it as part of their marketing strategy embedded in their rhetoric of success. What founders label as “irony” becomes incorporated into their branding narrative whenever they talk about their growing success and reaching people online: “We can’t believe that in just three months, we (ironically) went viral around the world” (The Offline Club, n.d.) or “it’s absolutely insane what’s happening right now but also ironic how the offline club is going viral online” (Engel, 2020–2025). As a form of self-serving bias, such rhetoric is only reflected through emotional language of astonishment that emphasises the positive effects of social media presence, such as user engagement, while omitting criticised implications like contributing to the attention economy of social media platforms and their parent companies (Zulli, 2017). Though such rhetoric contradicts their anti-tech radical stance, the presence of technology in their content curation becomes normalised and accepted by many users as a necessary compromise in statements such as “it’s ironic to have this online but totally necessary 🤔” or “ironic, but glad the message is out.”

4.2. TOC “Community” and “Movement” as a Marketing Strategy

While it is logical that increased awareness about their events results in more tickets sold, the commercial nature of TOC’s activities is not an implicit element in their online discourse and rather blends in with their rhetoric of “community” and “movement.” In TOC’s Instagram posts, several language choices help create an image of motivated people contributing to an emerging community or a social movement that is driven by values of human connection and smaller technological distractions, yet these images are still based around their brand and activities. With abstract statements like “we all quit our full-time jobs to focus on the offline movement for 100%” or “we’re thrilled to take our community and this movement to another level and bring the world more meaning, joy and offline vibes,” TOC desires to position themselves as part of a social change rather than a business venture by contrasting TOC with pursuing a full-time career, aiming to create a perception that the two are contradictory.

Furthermore, TOC evades lexical choices such as “company,” “business,” or “organisation” that elicit an element of maximizing profit, and instead opts for popular phrases such as “no-phone party” or those evoking a sense of religiosity, for instance by calling one of their detox sessions a “no-phone sanctuary.” Such phrases make it easier to create an image of a growing community bounded by singular values.

Still, images of a community resonate with experiences of participants like Tara, Jennifer, and Emilia, who attend TOC events regularly to escape loneliness by feeling the presence of other people and make new social connections. Tara and Emilia also share Jennifer’s sentiment on joining the events repeatedly: “It really becomes a community after you visit a couple of The Offline Clubs because you start to recognize people.” As organisers of TOC events created a safe space for meaningful conversation with strangers, these events also attracted participants with an international background who wanted to make new acquaintances.

For a Dutch university student, Sophie, not having her phone was an obstacle, as it normally allows her to express herself better in conversations: “Not being able to show things on your phone is really annoying because for me, it’s such a big part of communicating with people.” Although for the majority, such absence of technological distractions facilitated “deeper” and more enjoyable interactions. For Gabriel, making conversation in this context felt pleasant, as it reminded him of the past:

Before we had internet on the phones and wanted to find out about something during a conversation, it was impossible, so you actually had to think to get along with the amount of information available, which I really do enjoy.

TOC events were also a source of belonging for a majority of the interviewed participants due to the presence of other people with similar values and motivations for attending. Tara, a North Macedonian salesperson and music producer, attended two TOC events because she lacked the feeling of being part of a community: “My whole family is back in Macedonia. And, you know, just being around people is something that I really miss.” Gabriel, Emilia, and Tara also described how hard it is to maintain friendships outside of their home countries, especially if one relocates regularly or it is their friends who move away. Emilia, a process engineer from Poland, felt the need to socialise more when five of her friends left the city, and through MeetUp, an app that helps organise events for people with similar interests (MeetUp, n.d.), Emilia discovered TOC. Since then, she attended eight events and was able to maintain newly found social connections: “I’m trying to do it

regularly right now as it gives me a lot of rest from the mental load as well as the connection...and if someone's coming back, we are in touch."

4.3. "Performing Digital Detox": A Ritual for Unique Experiences Without Technology

On TOC events, the main rule states that all participants must surrender their phones for a couple of hours after entering the digital detox space. Furthermore, the event is divided into separate segments of what TOC calls "time to connect" and "time to yourself," accounting for a period for socialising and a period for solitary activities. Such a formal division used in almost all of TOC's events was perceived by most participants through the lens of a performative ritual—a group of people bound by a collective act of surrendering phones and a unique experience, rather than a part of their lifestyles.

Mila, a PhD student, perceived the act of giving up phones collectively as "part of a ritual," especially when she decided to leave her phone at home instead of bringing it to the digital detox event. She felt that not having her phone locked in a phone hotel with other phones was perceived as "taboo" by the organisers, hinting at the paternalistic structure of the events: "Someone has to tell you what to do because it's assumed that people don't know what to do if they don't have their phones."

Perceiving TOC events as unique experiences rather than tools for radical lifestyle change was a shared perspective that also later became digitally mediated, as participants shared photographs from these events on social media to preserve personal memories and connect with their digital social circles.

5. Discussion

5.1. TOC's Dilemmatic Mobilisation

What Syvertsen (2022) calls "dilemmatic mobilisation" manifests itself in this case study as a larger phenomenon. In an attempt to mobilise support and generate interest from potential attendees of a "digital detox," the presented dilemma stems from the need to access this information online with a certain amount of online time, counterproductive to the goal of digital disconnection. As a practical example, previous studies recorded only low-profile initiatives with minimal social media presence reaching a maximum of 1,000 followers (Syvertsen, 2022). In the case of TOC, their social media presence appears "high-profile"—reaching 250,000 Instagram followers within four months of existence. Therefore, TOC is a unique case of potentially deliberate use of the platform's affordances. Furthermore, TOC's rhetoric of self-serving bias allowed them to maintain dominance in the digital disconnection discourse by framing their online presence as a cost with a suggested benefit of the most ideal marketing strategy that reaches potential attendees through a platform they are trying to 'detox' from (TOC, n.d.).

However, findings showed that the majority of interviewed participants discovered TOC activities either through a different platform, did not have social media accounts, or used them sporadically. As a form of online spectacle, TOC content produces new data for the platform's commercial processes embedded in the structures of surveillance capitalism, where user data is traded for profit as the main mode of commercial operation (Zuboff, 2015).

Furthermore, what contributes to a heightened sense of dilemmatic mobilisation in this case is TOC's act of "nudging" attendees to follow their newsletter, share photos from events, and tag them in their posts, as well as TOC's wide array of additional promotional materials such as music playlists that can only be played through a phone or a laptop. Indeed, critical discourse analysis applied to TOC's offline and online discourse showed that they engaged in "ambiguous contemporary activism" (Casemajor et al., 2015), which describes initiatives that do not counter social change on a structural level but through mitigating the harms of individuals and society.

Highlighting cases that show how non-participation "can also be empowering," Casemajor et al.'s (2015, p. 853) framework of mediated political action considers the socio-technical ecology of digital media, distinguishing between active and passive forms of non-participation that, as a form of political action, contest exploitative ways of digital participation. Because TOC's modes of operation are dependent on Instagram for marketing and communication purposes, our critique centers around the way TOC engages in passive participation as a form of platform engagement that makes one susceptible to activities outside their control. Thus, when TOC produces Instagram content that is liked, shared, or engaged with, they are also "producing data that will be captured, analyzed and utilized toward the company's goals" ("company" meaning the platform Instagram; Casemajor et al., 2015, p. 856). Furthermore, additional online activities encouraged by TOC, such as engaging with email or Spotify, are also pervasively surveilled and create both greater social control and economic profit for these platforms (Casemajor et al., 2015).

5.2. Exchange-Value in Digital Disconnection Experiences: Paradoxical Responsibilisation and Commodification of Authenticity

As a form of late modern governing, responsibilisation counters for self-regulating behaviour of an individual to prevent health and safety-related risks like media pervasiveness (Moe & Madsen, 2021; Syvertsen & Enli, 2019). By practicing digital disconnection, one becomes part of a self-regulating society where the mitigation of the pervasive technology's impact is one's own responsibility rather than of the company that designed the pervasive elements into the technology in the first place (Syvertsen & Enli, 2019).

The findings of this study mirrored a plethora of examples for such responsibilisation. These were rooted in the experiences of TOC events as a way of increasing self-awareness about one's relationship with technology as well as outside the TOC events as part of a longer self-improvement journey that the interviewees managed individually. From the perspective of TOC and other digital detox businesses, such a process benefits their aims as their common goals evade birthing grass-roots movements or accomplishing political change, whereas the communicated rhetoric of a movement, community, and socio-cultural change (i.e., TOC's rhetoric on Instagram) becomes merely a self-serving tool to these companies (Syvertsen & Enli, 2019). However, for the user who interacts with TOC content, the pressures and risks become multi-layered, hidden, and unaddressed by TOC founders, as they publicly do not critique platforms' commercial processes and merely applaud the engagement these platforms' algorithms help them achieve.

With digital disconnection as a commodified experience, where one usually needs to pay to participate, capital is the lens through which the worth of things is estimated as a defining element of a capitalist culture (Felluga, 2015). In TOC's rhetoric, specific range goals are promised such as achieving productivity, focus, calm, and human connection. Communicated as unique experiences achievable through a commodified practice of a digital disconnection, Syvertsen and Enli (2019) similarly speak of authenticity and nostalgia

which were mentioned by both founders and users as a promise and an object of desire, now a commodified version of an idealised present based on the past.

For the expatriate individuals, the digital detox events became social hubs through a collective performance of a digital disconnection taking place in a common café or restaurant. Isolated from the outside, they create a contrast between the inside and outside world, and so, with such escapism, this “digital detox” is followed by an immediate return to the status quo when all participants retrieve their phones and go back home (Natale & Tréré, 2020).

Although the events are based in the city, they are not part of public space accessible to everyone, creating a closed society and an exclusive community. The isolated nature of these events and their temporality brings up another critical point of exclusivity and access. While TOC, as a structured social practice, holds onto specific formats of organisation, there is less space for spontaneity in terms of exploring digital disconnection on collective terms. There is only organised individual experimentation in terms of participation, managed by each visitor separately, while one is ruled by the rigid instructions of self-time and socialising time segments. Thus, the collective impact may therefore appear too superficial and ineffective, as it remains in the form of a unique experience, a commodity, and not a fluid social movement without hierarchy.

5.3. Commodified Digital Disconnection Experiences Through the Lens of Digital Humanism

As digital humanists call for improving the connection between humans and technology through analysing power relations, it might be assumed that regular temporary digital disconnection already allows humans to maintain control over the pervasive media (Prem, 2024). Though with the heightened pressures of responsabilisation that participants become part of through TOC events, it is also key to incorporate the possibility of greater control already into the design of tech companies’ technologies such as deliberately designing features that allow people to easily disconnect (Nguyen et al., 2022, p. 17). While some participants of this study called such an approach to a “healthier” human-technology relationship a process of “inventing the solution within the problem” (Gabriel, Mila), it nonetheless conforms to one of the main principles of digital humanism as voiced by Prem (2024, p. 2): “Digital technology should be aligned with human goals and values.” This approach accounts for a more human-centric ethical perspective that safeguards human values in the process of producing these technologies, apart from regulating them after their potentially harmful effects materialise through use.

While our findings support the fact that digital disconnection on one’s own and in a collective setting significantly contribute to a sense of self-awareness about one’s relationship with technology, in its digital humanist approach, this article primarily highlights and critiques the pervasive role of platforms embedded in multiple operational levels of digital disconnection initiatives. When digital detox initiatives depend on social media platforms for their mode of operation, both the company and users interacting with its content engage in passive participation as a form of contribution to the commercial activities of the platform, making them susceptible to activities outside their control. Therefore, we call for greater transparency and efforts to create an environment that deeply reflects on the core of the digital (dis)connection issue and not merely on its symptoms.

Lastly, we should keep in mind how initiatives like TOC reinforce the idea that true human connection is disappearing because of the constant presence of technology. Such a perspective risks accepting the realities that created the problem of connection in the first place, tolerating the design of obtrusive systems in which the attempts to counter media pervasiveness still emerge and operate. To retrace the desired reality of the past, the solution does not lie in new commodified workarounds that increase the need for responsabilisation and only treat the symptoms through a temporary digital withdrawal while creating new sources of commodified dependency. If we want meaningful connections back, we must seek to change the tools that humanity designed in a meaningless way.

6. Conclusion

This multi-layered study of a digital detox company, TOC, demonstrates how its discourse frames digital disconnection as a temporary practice in urban spaces where the role and effect of technology become ambiguous and unstable due to TOC's paradoxical online presence and its embedded presence at their physical events. Furthermore, an analysis of participants' motivations, attitudes, and experiences of digital disconnection gave voice to diverse personal narratives of digital detox participants and recorded their desires for digital disconnection, such as a yearning for belonging, more authentic sociality, and a space for self-reflection and self-development in a collective setting.

Findings also suggest that digital disconnection is perceived as an isolated ritual and a tool for understanding one's relationship with technology. By building on existing theories of digital disconnection, commodified authenticity, and neoliberalism, the article emphasizes how human control of media pervasiveness is enacted through self-management of technology use, hinting at increased pressures and lack of responsibility when engaging in TOC activities for the practice of digital disconnection.

On a more general level, this work addressed the role and value of corporate action in achieving social change in the case of commodified experiences of digital disconnection with a mode of operation embedded within the dominant digital platforms. It analysed and critiqued power relations manifested in the online and offline environments that emerge in the way digital detox initiatives such as TOC operate, such as through the commodification of social experience and dependency on social media platforms for marketing and branding purposes.

For this project, an approach combining netnography and multiple qualitative methods of critical discourse analysis, thematic analysis of interview data, and event ethnography provided extensive ground for a thorough investigation that countered both the online and offline environment with equal attention. We produced in-depth empirical data on the contemporary popular practice of digital disconnection in the Netherlands and critically reflected on the role of commodified technology non-use in a previously unstudied setting of an urban collective event, highlighting the impact and challenges of the digital modes with which the initiative paradoxically operates while keeping the user's role in the foreground.

However, the study faced several limitations. Despite repeated outreach to TOC through multiple channels and in-person encounters, requests for interviews with organisers were unsuccessful, limiting insight into their attitudes, histories, and strategies regarding digital disconnection. The small sample of nine participants is not representative of the wider TOC community; still, it offers rich, in-depth accounts of lived experience in this

specific context. Future research with a larger and more diverse sample with a broader range of ages, genders, and nationalities would enable more generalizable findings as well as an in-depth study of possible ways to achieve social change through digital disconnection.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

In accordance with the consent forms and ethical approval requirements, the underlying data from this research, such as the informants' identities or their statements, cannot be shared externally.

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Hypermediated Adolescence: Tactical Resilience Through and Against the Digital in Post-Pandemic China

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Abstract

The Covid-19 pandemic intensified the everyday volatility of hypermediated life. Drawing on longitudinal, multi-method qualitative material from Chinese adolescents who entered puberty during the pandemic—including platform observation, repeated interviews, family-based focus groups, and mobile ethnography—this study examines how digital resilience is enacted through routine media practices across disruption and uneven normalization. The analysis identifies four recurring practice clusters through which adolescents modulate affect, manage visibility, and negotiate relational exposure: ritualizing digital routines, narrativizing fear, playful misrecognition, and liquid platform use. These practices are interpreted through a three-layer framework of mediation: infrastructural shaping by platform affordances and algorithmic design; social scaffolding via caregivers and peer networks; and symbolic negotiation through narrative, humor, and affective framing. The study advances communication research on youth and digital media by reconceptualizing digital resilience as a set of situated communicative practices through which everyday livability is sustained within hypermediated, volatile environments.

Keywords

adolescents; deep mediatization; digital resilience; everyday digital practices; hypermediated environments; platform society

1. Introduction

The Covid-19 pandemic constituted both a public health crisis and a profound disruption to everyday social life for adolescents, reshaping schooling, peer interaction, and digital communication patterns (Marciano et al., 2022). During stay-at-home orders and school closures, adolescents increasingly relied on digital

communication to maintain peer ties, with synchronous online contact associated with reduced loneliness and depressive symptoms (Draženić et al., 2023). Digital platforms thus became infrastructures of survival for education, leisure, and social bonds, while also intensifying fatigue, disinformation, and algorithmic pressures. The pandemic magnified a condition that was already emerging: adolescence situated within what has been described as a hypermediated society, where digital systems constitute the environment of social existence (Hepp, 2019).

A growing body of research on adolescents, media use, and well-being has documented important aspects of this condition. Studies have examined associations between social media engagement and mental health outcomes, highlighting both heightened vulnerability and the availability of social support and coping resources in digital spaces (Fassi et al., 2025; van der Wal et al., 2026). This scholarship has generated valuable insights into platform-specific risks, protective factors, and individual differences. Yet much of this work remains anchored in analytical frameworks that characterize digital resilience as an individual's ability to protect and recover from detrimental online experiences (Pan et al., 2024; Qamaria et al., 2025). They are less equipped to account for adolescents' experiences in environments characterized by prolonged uncertainty, multi-platform immersion, and algorithmically mediated volatility since digital media are often described not merely as tools but as constitutive of social environments (Kramp et al., 2016, pp. 133–148). In these contexts, equilibrium is not easily restored, and adaptation does not culminate in a durable resolution. The central question shifts from whether digital resilience is possessed to how everyday life is rendered livable amid continuing instability—that is, how livable lives are made under adverse social conditions shaped by ongoing volatility (Back, 2015).

Thus, rather than asking whether adolescents are resilient in digital environments, the analysis centers on how continuity is practically sustained when schooling, peer relations, and emotional life are repeatedly reorganized through unstable, multi-platform media conditions. This study examines how such processes unfolded among Chinese adolescents who entered puberty during the pandemic, within a context shaped by prolonged and uneven disruptions to schooling and mobility alongside a rapidly evolving, highly structured digital platform environment. Building on longitudinal, multi-method qualitative material collected across pandemic and post-pandemic phases, the analysis traces a set of recurring digital practices that emerged across participants' accounts and interactions, reconceptualizing digital resilience not as an individual capacity or adaptive outcome but as a patterned configuration of cross-platform, temporally extended practices. This reconceptualization shifts the analytic focus of communication research from assessing resilience as a property of individuals to examining how continuity is practically produced within mediated environments, offering a way to theorize everyday survival under conditions where instability is no longer exceptional but structural.

2. Digital Resilience in Hypermediated Environments

Contemporary adolescence unfolds within hypermediated environments in which platforms, algorithms, and data infrastructures operate as the background conditions of social life rather than discrete channels (Hepp, 2019). Within such environments, communication is rarely episodic or bounded; instead, it unfolds across platforms, temporalities, and contexts, embedding individuals in ongoing cycles of exposure, coordination, and recalibration.

Within communication scholarship, the communication theory of resilience conceptualizes resilience as a communicative process enacted through interactional practices rather than a stable trait (Buzzanell, 2010). Related work in crisis and risk communication has examined resilience in mediated contexts as the capacity of individuals or communities to recover from disruption and restore communicative order following extraordinary events (Houston et al., 2015). At the same time, broader resilience scholarship has extended attention to more chronic and less spectacular forms of disruption, including prolonged uncertainty, infrastructural dependency, and the normalization of instability (Aldrich & Meyer, 2015). Together, these strands suggest a shift away from viewing resilience solely as post-crisis recovery and toward understanding it as an ongoing, processual accomplishment enacted through everyday communicative practices.

However, within studies of youth and digital media, digital resilience has most commonly been conceptualized as an individual capacity to manage online risks, including exposure to harmful content, social comparison, misinformation, and harassment. This line of research, shaped in part by work on children's online safety, emphasizes protective factors such as online skills and internet self-efficacy, alongside parental mediation and other forms of support (Livingstone & Helsper, 2008, 2010). Empirical studies in this tradition have generated valuable insights into vulnerability and risk mitigation, demonstrating that adolescents' outcomes vary considerably depending on socio-demographic position, platform use patterns, and access to support. However, this approach tends to conceptualize resilience as a relatively stable attribute or outcome—something individuals possess, develop, or lack—measured through indicators such as psychological adjustment, reduced harm, or effective coping.

While analytically productive, capacity-oriented models of digital resilience encounter limitations when applied to hypermediated environments characterized by continuous exposure, multi-platform entanglement, and algorithmically driven volatility. In such contexts, disruption is not episodic but structural, and adaptation does not culminate in a clear endpoint. As scholars of platform society have argued, digital media increasingly constitute the conditions of social life rather than external influences upon it (van Dijck et al., 2018). From this perspective, resilience cannot be adequately understood as recovery from deviation because there is no stable baseline to which individuals can return.

In response to these challenges, communication research has increasingly emphasized the distinction between resilience through digital media and resilience against digital media. The former highlights how platforms function as resources for sustaining social bonds, emotional regulation, and continuity of everyday life, particularly during periods of disruption. Studies of online peer support, networked intimacy, and mediated belonging show that digital communication can facilitate coping, normalization, and collective sense-making (Valkenburg & Peter, 2011). During the Covid-19 pandemic, for example, digital platforms played a crucial role in maintaining peer interaction, educational participation, and emotional connection while offline routines were suspended (Ellis et al., 2020; Odgers & Jensen, 2020). By contrast, research on resilience against digital media foregrounds the risks endogenous to platform infrastructures themselves. Algorithmic amplification, datafication, attention extraction, and content moderation failures are widely documented as sources of strain that adolescents must actively navigate (Bucher, 2018; Noble, 2018). From this angle, resilience involves practices of resistance, filtering, withdrawal, or tactical compliance, such as muting notifications, curating feeds, or collectively interpreting platform dynamics. In this perspective, resilience against digital harm rarely takes the form of disengagement alone; rather, it often requires continued participation coupled with reflexive adjustment.

Although the through/against distinction has structured much of the contemporary debate on digital resilience, its coordination in everyday life remains insufficiently theorized. In hypermediated environments, these orientations are deeply intertwined: Practices that sustain connection may also intensify exposure, while strategies of protection often depend on mediated infrastructures to remain socially viable. Digital resilience therefore appears less as a linear trajectory toward stability than as an oscillatory process of provisional adjustment. A practice-oriented perspective helps clarify this dynamic by emphasizing how resilience is enacted through routine communicative work rather than through discrete acts of coping or resistance (Couldry & Hepp, 2016; Pink et al., 2015). From this view, resilience is less a property of individuals than a patterned configuration of practices that renders everyday life livable under conditions of sustained instability.

3. Methodology

Given the fragmented, platform-crossing, and temporally uneven conditions of adolescents' digital lives under prolonged disruption during the pandemic, a multi-method qualitative design was adopted to examine how everyday digital practices are enacted and recalibrated across time (Creswell & Plano Clark, 2017; Saldaña, 2003).

3.1. Data Collection

The study employed a staged longitudinal fieldwork design centered on adolescents who entered puberty during the Covid-19 pandemic. Fieldwork was conducted in mainland China across three distinct phases: April 2020 to January 2022, June 2022 to February 2023, and February to September 2025. These phases captured adolescents' narrated experiences of initial disruption, transitional reopening, and post-pandemic everyday life. Across phases, data were generated through semi-structured interviews, family-based focus groups, online community observation, and mobile ethnography.

3.1.1. Interview and Focus Group Participants

A total of 34 adolescents participated in the interview-based components of the study, each taking part in three to six semi-structured interviews across fieldwork phases (Kvale & Brinkmann, 2009).

Interviews lasted approximately 45–70 minutes and were conducted primarily online. Seven participants additionally engaged in go-along sessions (Kusenbach, 2003) and media walkthroughs (Light et al., 2018). Interviews focused on everyday digital routines, emotionally charged experiences, cross-platform movement, and interactions with caregivers and peers around digital media use. Go-alongs took the form of co-participatory digital activities rather than continuous observation, most notably shared gameplay sessions (e.g., teaming up in multiplayer games such as *Honor of Kings*), during which participants interacted in real time while narrating their actions and decisions. Finally, media walkthroughs were conducted situationally across all fieldwork phases in participants' homes, where adolescents guided the researcher through their everyday sequences of device use (e.g., moving between game consoles, computers, and mobile phones), with particular attention to the order and routine of actions following the opening of a mobile phone.

All participants were aged 12–15 at the time of initial recruitment, with eligibility confirmed through self-report and age verification. Purposive sampling was employed to capture heterogeneity in schooling contexts, family arrangements, and patterns of digital engagement. Over the course of the longitudinal fieldwork, participants came to occupy divergent institutional pathways: By the final phase, 21 had entered general upper secondary education, eight were enrolled in private or home-schooling arrangements, and five had transitioned into vocational education tracks. Variation was also observed in everyday digital practices, with online gaming ($N = 19$), social networking and content platforms ($N = 12$), and intermittent content creation ($N = 3$) representing dominant modes of engagement. Levels of digital autonomy further differed across households, as 22 adolescents reported explicit forms of parental regulation while 12 described more informal or negotiated arrangements.

In addition, four family-based focus group discussions were conducted with adolescents and caregivers from four families, involving a total of six parents or primary caregivers. Each discussion lasted approximately 30 minutes and centered on intergenerational interpretations of adolescents' digital practices, particularly the negotiation of household rules and responses to perceived digital challenges.

Informed consent was obtained from all participants between 27 April 2020 and 1 May 2021. All participants were fully informed about the purpose, scope, and use of the study, and consented to participation, data use, and publication under conditions of full anonymity, with no personally identifying information disclosed.

3.1.2. Online Community Observation

Online community observation (Hine, 2020) was conducted across multiple digital platforms commonly used by Chinese adolescents during and after the pandemic, including three fully open QQ gaming groups (two general youth gaming chat groups and one group centered on Honor of Kings, all without entry restrictions), Xiaohongshu, Weibo, Xiaoheihe, Steam, and the Honor of Kings Companion App, all of which were active throughout the pandemic period and its aftermath.

These platforms were selected not as interchangeable sites but as functionally differentiated environments within adolescents' everyday media ecologies. Messaging-based platforms (three QQ groups) primarily supported synchronous peer interaction and informal coordination; lifestyle and content-sharing platforms (Xiaohongshu and Weibo) foregrounded visibility, self-presentation, and public commentary; and game-centered forums and companion apps (Xiaoheihe, Steam, and Honor of Kings Companion App) combined information exchange with low-stakes social interaction anchored in shared gameplay. These functional differences shaped not only how adolescents interacted but also what kinds of expression, affect, and risk were perceived as tolerable within each space. In this study, “publicly accessible” or “publicly visible” spaces refer to online environments that are accessible without individualized permission or invitation. Private accounts, direct messages, and closed groups were excluded.

Online observation was carried out across the same three phases as the interview research, collecting 320 analytically defined data units encompassing several thousand posts, comment threads, and interactional exchanges. Observational materials were screened to exclude clearly non-adolescent users, using self-disclosed age cues, schooling references, and life-stage indicators to remain broadly consistent with the study's target cohort—adolescents who were approximately 12–15 years old in 2020.

3.1.3. Mobile Ethnography Materials

Mobile ethnography was implemented during the first and third fieldwork phases, with voluntary contributions from 14 adolescents in the form of digital diaries, screenshots, and voice memos (Pink et al., 2015) documenting everyday platform use, affective states, and situational contexts. These materials were revisited in follow-up interviews to contextualize entries and reduce reliance on retrospective narration, enabling analysis of digital resilience as a processual and situational practice.

3.2. Data Analysis

The final dataset comprised 34 semi-structured interview series with 34 adolescents, four family-based focus group transcripts involving six caregivers across four families, 14 mobile ethnography items, and 320 units of platform-based observational material distributed across phases and platforms. All materials were anonymized and managed in NVivo 15. Interview and focus group audio was transcribed verbatim; mobile ethnography submissions (diaries, screenshots, voice memos) were logged as discrete entries and analytically linked to relevant interview episodes; and for publicly accessible platform materials (posts, comment threads, and fieldnotes) their source type, temporal phase, platform or interactional site, and linkage status (interview-linked or non-linked public material) were specified.

Temporal tagging followed a phase-based analytic framework developed inductively from the data and refined during analysis. The core framework comprised P0 (2017–2019) as a retrospectively invoked baseline, P1 (2020–2021) marking intermittent lockdowns and prolonged school closures, P2 (2022–2023) capturing a late-pandemic transition, and P3 (2024–2025) referring to post-pandemic everyday life. In addition to these core phase categories, two supplementary tags were used to capture temporal complexity in specific excerpts. P4 was applied to future-oriented projections, while PX was used for segments that explicitly compared, blended, or moved across multiple phases and could not be meaningfully reduced to a single-phase label.

Data analysis followed an iterative, multi-stage coding process informed by a constructivist grounded theory orientation (Charmaz, 2014). First-cycle open coding combined line-by-line and incident-based coding across the full corpus, generating 789 initial codes; each segment was simultaneously indexed by phase and data source to produce a phase- and source-sensitive analytic indexing matrix. Through constant comparison, overlapping codes were consolidated into 267 analytic concepts, retaining 20 phase-sensitive concepts whose meanings shifted across disruption, transition, and post-pandemic normalization. Second-cycle axial coding organized these concepts into 69 mid-level categories by examining co-occurrence patterns, temporal sequencing, and recurring interactional situations (e.g., routine regulation, affective escalation, cross-platform movement, intergenerational negotiation, narrative framing). Category definitions were stabilized through repeated comparison with raw excerpts, resulting in a 41-entry provisional analytic codebook, with each category specified by constituent concepts, typical contexts, phase distribution, and mediating conditions across infrastructural, relational, and symbolic dimensions. The final analytic stage employed selective coding to synthesize axial categories into four theoretically integrative resilience practice clusters, which constitute the core findings of the study (Corbin & Strauss, 2014).

All coding was conducted by one researcher. Two external scholars in communication and social research reviewed the emergent coding structure and category definitions, with feedback incorporated through targeted recoding and refinement.

4. Findings

Across pandemic disruption and post-pandemic normalization, adolescents' engagements with digital media took shape as four recurring forms of everyday practice through which uncertainty, emotional intensity, and social exposure were tactically managed within a hypermediated environment.

4.1. *Ritualizing Digital Routines*

Across the pandemic and its aftermath, as school timetables dissolved into asynchronous online classes, confinement blurred spatial boundaries, and ordinary distinctions between weekdays and weekends eroded, adolescents' digital engagements increasingly took the form of ritualized routines—patterned repetitions that functioned less as sources of pleasure than as temporal and affective anchors through which days became countable and emotions manageable under prolonged uncertainty (Paschke et al., 2021).

This ritualization was most visible during moments of acute disruption when affective exposure intensified and everyday continuity became fragile, prompting adolescents to anchor days around small, repeatable digital moments—described by one participant (Cai, P1, 13, recruited at 13, heavy multiplayer game user) simply as “the only thing that told me today had actually happened.” Participants consistently described these ritualized routines not as sources of enjoyment but as low-intensity affective technologies—repetitive, often deliberately unengaging practices that fragmented anxiety, boredom, or irritation into manageable units, preventing emotional escalation rather than resolving distress.

As institutional routines resumed, ritualized digital routines were compressed and repositioned within the interstices of educational discipline. One participant (Yang, P2, 15, recruited at 12, intensive exam track, primarily social media and casual gaming user), who returned to in-person schooling in late 2022, continued to reserve a nightly window for the same platform that they relied upon during lockdown, which now functioned as a buffer between academic demands and sleep. This practice, not abandoned but adapted to the intensified schedule, reflected a broader tendency among adolescents navigating high-stakes examination systems. Many spoke of selecting familiar content or repetitive tasks, which were brief and easily completed, to avoid emotional spillover.

For instance, Ling (P3, 17, recruited at 14, intensive exam track, primarily social media and casual gaming user) described how, during months of exam preparation, her nightly routine of scrolling and gaming became a reliable closure to her day:

At that time, everything in my life was decided by the school. When to wake up, when to eat, when to study, and even when to rest were written on the schedule. The only thing that felt like mine was that half hour before sleeping....It wasn't fun, honestly. Sometimes I felt bored the whole time. But if I didn't do it, my head wouldn't calm down. I would just lie there thinking about rankings and mistakes

and what I messed up that day. Doing so meant that the day was over. Without it, I couldn't sleep, and the next day would be even worse.

This routine marked a bodily and temporal signal of the day's end, offering a small yet consistent form of autonomy within a tightly controlled environment.

Family-based materials further illuminate how ritualized routines were embedded within intergenerational dynamics. Caregivers often expressed ambivalence toward adolescents' repetitive digital practices. While some initially viewed them as signs of overuse or avoidance, others came to tolerate or even tacitly support these routines once they recognized their stabilizing effects. In several focus group discussions, parents described learning to distinguish between excessive, escalating use and what they perceived as contained, predictable engagement. One caregiver (Ms. Zhang, P2–P3, family focus group, early 40s, mother, primary caregiver, household with explicit time-based restrictions on mobile phone) noted that although she disapproved of gaming in principle, she refrained from intervening when her child adhered to a consistent schedule and disengaged without conflict. This tacit accommodation suggests that ritualization not only regulated adolescents' internal states but also facilitated smoother negotiations with authority figures, reducing friction within the household.

In the post-pandemic period, ritualized routines were reoriented from filling absence to countering acceleration, introducing moments of continuity within temporally compressed everyday life and eliciting more ambivalent, reflexive evaluations—recognizing them as situationally useful rather than inherently positive or negative.

4.2. Narrativizing Fear

Fear circulated through adolescents' pandemic and post-pandemic digital lives not as a single emotion but as a layered, often unnameable presence, unevenly distributed across time, situations, and relationships. Unlike stress or pressure, which were linked to school or platform overload, fear was rarely articulated directly. Instead, it emerged through narrative fragments, temporal markers, and partial disclosures, reformatting overwhelming affect into tellable forms (Setty & Dobson, 2025). Narrativizing fear thus became a tactical way to acknowledge uncertainty without fully confronting its implications.

Much of this fear was chronic, embedded in adolescents' altered relationship to time. Participants and adolescents in publicly accessible platform threads (P1–P2, non-interview-linked observation) frequently described the pandemic years as a stretch of time that felt both elongated and missing, marked by phrases such as blank years, cut-off periods, or time that could not be recalled clearly. One participant (Li, P3, 12, recruited at 12, primarily a social media and online gaming user) recalled that while she could remember childhood before 2019 and her current routines, “the middle just collapses,” leaving her unsure whether particular events had occurred two or five years earlier. Fear here was not attached to a specific object but to a diffuse sense that life progression had slipped out of sync, and the future no longer seemed linear. Narrativization stabilized uncertainty by situating disorientation within shared temporal reference points—such as school milestones, age markers, or widely recognized events—reframing fears of misalignment as generational experiences rather than individual deficiencies, thus reducing their isolating effects by making it collectively intelligible.

Alongside widely shared anxieties, another category of fear proved far more difficult to narrate: fear arising from sudden disruptions within the family's life world. When illness, hospitalization, or death entered the household during the pandemic, adolescents confronted threats that exceeded the interpretive frames available in school or peer discourse. These fears were immediate and embodied, oriented toward the fragility of others rather than one's own prospects, and unfolded under conditions where ordinary support structures were suspended, including restricted hospital access, repeated testing, and prolonged uncertainty mentioned by several participants.

An adolescent (Shao, P1, 13, recruited at 13, social media-oriented, primarily casual browsing and gaming user) who was 13 at the time of her father's sudden hospitalization described the experience in a manner strikingly devoid of emotional vocabulary online, narrating it instead through procedural detail and sequence. She recalled waiting for test results that determined whether she could enter the hospital and observing her mother struggle to complete paperwork while remaining composed. She explained that she did not cry during this period—not because she felt no fear, but because fear had to be kept “quiet” so as not to burden those who were already overwhelmed—becoming embedded in the accumulation of facts rather than articulated as emotion.

Such accounts illuminate why narrativizing fear often occurred outside immediate relational contexts. These participants repeatedly indicated that they did not tell parents or teachers about these experiences, not out of distrust, but because adults were perceived as either already distressed or structurally unable to respond, particularly where family crises fell outside school concerns. In this context, anonymous or semi-anonymous digital spaces became provisional sites for narration, where fear could be acknowledged without triggering intervention, judgment, or additional obligation.

One participant (Yue, P1, 14, recruited at 14, social media-oriented, primarily lifestyle and platform browsing user rather than gaming) who accompanied a caregiver between home and hospital during repeated lockdowns described posting late-night reflections on a lifestyle platform she had previously used only for browsing. Writing about hospital lights, uncertainty over whether to hope or prepare for loss, and feeling simultaneously too young and suddenly adult, she received responses offering no solutions, only recognition and quiet support. She later reflected that these exchanges did not alleviate fear, but made it “standable”—something that existed in the world rather than only in her body.

These narrativizations did not take the form of therapeutic confession or trauma discourse. Adolescents neither framed themselves as traumatized nor oriented their accounts toward recovery or growth, instead treating fear as something to be carried and kept at a tolerable distance. Accounts often ended abruptly or shifted tone, marking implicit boundaries around what could be said, while humor—prominent in other resilience practices—was notably muted in the face of uncertainty that could not be resolved.

Over time, these fears did not disappear but became dormant, resurfacing in response to specific triggers such as news reports, anniversaries, or encounters with similar stories online. Many participants spoke of suddenly recalling details years later, often without warning, and experiencing a brief resurgence of the same quiet fear. Narrativizing fear in the post-pandemic period thus took on a retrospective dimension, as adolescents revisited earlier experiences with new interpretive resources but without fully integrating them into a coherent life story.

Across these accounts, narrativizing fear operated as a resilience practice precisely because it resisted closure. By placing fear into words, timelines, or scenes, adolescents rendered it locatable and containable without transforming it into growth, resolution, or diagnosis. In doing so, they negotiated emotional limits under constrained conditions, crafting minimal yet sufficient narratives that made fear survivable and allowed everyday digital and social life to continue despite experiences that could neither be fully shared nor resolved.

4.3. Playful Misrecognition

Alongside routines that stabilized everyday life and narratives that rendered fear speakable, adolescents repeatedly engaged in a quieter yet no less consequential practice: playful misrecognition. Rather than confronting pressure, loss, or uncertainty directly, they reframed these experiences through humor, irony, gaming metaphors, and exaggerated self-description, creating a slight semantic distance that allowed engagement without full emotional capture (Murru & Vicari, 2021).

Across interviews and platform observations, institutional and emotional pressures were frequently translated into playful idioms. Academic overload, lockdown routines, and prolonged uncertainty were rendered as game mechanics: high-stakes examinations became boss fights, extended isolation was framed as being stuck in a low-reward map, and emotional depletion was described as a health bar running low. These expressions reflected a deliberate shift in register rather than confusion between games and reality. By renaming experiences in procedural terms, adolescents displaced moral judgment and transformed endurance into something temporarily manageable and shareable.

This logic was articulated clearly by Zhou (P2, 14, recruited at 13, heavy multiplayer game user), who described how he and his classmates talked about lockdown schooling after returning to campus. Waking up late was described as respawning, missing online classes as accidental disconnects, and falling behind academically as being under-leveled rather than incapable. As he explained:

When we talked like that, it didn't mean we thought studying was a game. We knew very well that it was serious, that exams still counted, that teachers would still scold us. But if you say it directly, like "I'm failing" or "I'm useless now," it feels too heavy. When we said things like "I'm under-leveled" or "this battle is too hard," it felt like there was still a way to move....I don't think adults understand this.

Playful misrecognition thus preserved a sense of futurity by situating difficulty within a reversible logic of delay, effort, and retry.

Self-directed irony and exaggeration functioned in a similar way. Participants and many online commenters frequently described themselves online as already "finished," "ruined," or "wasted," particularly when discussing disrupted schooling or declining motivation. Interviews revealed that these hyperbolic self-descriptions were rarely literal. Instead, they operated as a pre-emptive buffer against external judgment. Mei (P2-P3, 14, recruited at 14), a social media-focused user, noted that calling herself "already done" signaled awareness of pressure while refusing the demand to account for herself in earnest terms. Saying it jokingly allowed her to speak without fully exposing herself to evaluation.

This practice was highly situational. Adolescents drew clear boundaries between peer spaces, platform interactions, and family settings. Humor about exhaustion or despair circulated freely among classmates or anonymous online audiences but was often filtered out in conversations with parents or teachers, where it risked being read as irresponsibility. Platforms characterized by relative anonymity or peer dominance, therefore, became key sites for playful misrecognition, enabling expression without immediate relational consequences.

Gaming logics provided not only metaphors but also an alternative evaluative framework. For adolescents deeply engaged in digital games, failure was framed as temporary lag rather than definitive defeat, and burnout as a resource management problem rather than a personal flaw. This was especially visible in mobile ethnography materials, such as when one participant (Qian, P2, 13, recruited at 12, primarily a social media and online gaming user) recorded a voice memo after receiving a disappointing mock exam result. Describing it as losing a round but gaining information for the next attempt, the light tone reframed the situation, preventing self-blame while acknowledging disappointment.

Longitudinally, playful misrecognition evolved from an improvised response during lockdown into a more sedimented communicative mode for engaging with uncertainty. What began as spontaneous joking under conditions of confinement became, for some adolescents, a habitual way of navigating difficulty after reopening. As pressures shifted from health risks and isolation to academic competition, employment uncertainty, and adulthood itself as an unclear or unwinnable game, the same playful idioms were repurposed to sustain partial engagement. This strategy involved being serious enough to participate, yet playful enough to avoid being overwhelmed. This practice did not eliminate suffering, nor did it always hold. Moments when humor felt forced or failed altogether were narrated reflexively as signals to withdraw or pause rather than as personal collapse. In this sense, playful misrecognition functioned as a form of digital resilience grounded in semantic adjustment rather than resolution, repositioning experience just enough to preserve agency while acknowledging constraint.

4.4. Liquid Platform Use

Across the longitudinal materials, adolescents' digital resilience was expressed not through stable attachment to a single platform but through patterned movement across platforms differentiated by social expectations, visibility regimes, and affective thresholds (Ytre-Arne & Das, 2019). Platforms were experienced as distinct social environments rather than interchangeable containers, shaping when, where, and how particular emotions could be expressed or withheld.

This mobility became especially salient under emotional pressure. Adolescents routinely relocated expressions of anxiety, frustration, or exhaustion across platforms to regulate both affective intensity and social risk. One participant (Yao, P1, 13, recruited at 13, heavy online gaming user) described his feelings when school-related anxiety escalated during periods of remote learning:

I never really say the same thing in the same place. If I feel really annoyed or scared, I won't write it where people know me. There, everything gets taken seriously, and someone might screenshot it or tell others. In games, you can complain, curse a bit, lose a round, and it's over. If it's still too much, I just switch again....Sometimes I open another app, scroll a bit, watch something stupid, and then close it.

Such platform migration reflected learned competence rather than avoidance. Through earlier experiences of misalignment—being misunderstood, judged, or exposed—adolescents recalibrated their sense of which platforms could tolerate which kinds of expression. A participant (Huang, P2–P3, 14, recruited at 14, primarily a content-sharing platform user) explained that she gradually recognized that even neutral complaints could be reinterpreted as negativity or weakness. Over time, this learning produced differentiated uses of platforms: some became spaces for curated self-presentation, others for low-stakes emotional release, and still others for withdrawal or silence. In this sense, platforms were experienced as moral and relational spaces rather than neutral infrastructures. A gaming forum, a short-video feed, and a messaging app were not equivalent channels, but environments with distinct norms of seriousness, irony, permanence, and accountability.

Mobility followed a logic of risk distribution. This redistribution of engagement also responded to perceived informational risk. A few participants described certain feeds and trending spaces as “too noisy,” overwhelming, or unreliable, prompting them to dilute exposure by shifting toward game-centered or interest-based environments where content felt more bounded and less consequential. Many participants emphasized the importance of being able to leave—temporarily or permanently—when a platform began to feel too heavy or exposed. “Letting an account die” was described as a practical reset rather than a loss, allowing adolescents to disengage without disappearance. What appeared externally as fragmentation was experienced internally as control over accumulation—of interpretation, expectation, and judgment.

Longitudinally, this logic intensified after the most acute phases of the pandemic. During periods of lockdown, when options for offline withdrawal were limited, platforms often became overloaded with emotional significance. Several adolescents described feeling “stuck” in certain digital spaces, especially those tied to school or family communication. As offline options re-emerged, many recalibrated their digital routines, deliberately loosening their attachment to any single platform via a redistribution of engagement across spaces with different degrees of demand.

Mobile ethnography revealed platform movement as patterned and situational, capturing short-term shifts often smoothed out in retrospective accounts. Daily logs and screenshots showed adolescents moving between platforms within brief time spans in response to subtle mood changes. One mobile-ethnography diary entry (Qi, P3, 13, recruited at 12, social media-oriented, primarily a casual browsing and gaming user) documented an evening sequence that moved from scrolling a social feed, to brief group chat interaction, to several rounds of a mobile game, and finally passive video viewing before sleep. Each transition corresponded to a change in emotional intensity. When interaction became draining, the participant shifted toward less demanding forms of engagement; when boredom set in, they moved again. These materials indicate that what mattered was not sustained presence on any single platform, but modulating engagement by relocating.

Family-based focus groups further contextualized liquid platform use within intergenerational negotiations over control and autonomy. Caregivers often interpreted adolescents’ platform switching as a distraction or inconsistency, expressing concern that moving across apps signaled restlessness or lack of focus, whereas adolescents described it as a deliberate adjustment. In households with explicit digital rules, such as time limits or content restrictions, platform mobility sometimes increased rather than decreased, as adolescents redistributed activity across permitted spaces to maintain emotional continuity while appearing compliant. What initially appeared as an inconsistency thus emerged, over time, as a learned tactic shaped by accumulated experience rather than impulsive wandering.

Liquid platform use, therefore, exemplifies a form of digital resilience grounded in circulation rather than stability. By refusing permanent settlement in any single platform space, adolescents preserved the capacity to engage without full exposure and to withdraw without disappearance. From participants' perspectives, mobility was not fragmentation but a practical achievement: the ability to remain present while managing emotional intensity, social risk, and relational expectations under conditions of persistent visibility.

Considered together, these practices reveal an everyday logic of digital resilience where continuity is sustained through ongoing coordination across time, meaning, and platform infrastructures, instead of relying on stable coping tactics or linear recovery. Ritualized routines provided temporal anchors for movement, associating specific platforms with particular times of day. Narrativized fear often unfolded across platforms rather than within a single narrative space, with fragments of anxiety expressed indirectly, humorously, or obliquely, depending on context. Playful misrecognition frequently served as a transitional mode, allowing adolescents to test emotional expression in low-stakes environments before withdrawing or relocating. Liquid platform use, rather than standing apart, functioned as an infrastructural condition that supported other resilience practices.

5. Discussion and Conclusion

Across four recurring practices, a shared logic becomes visible when they are read through three interlocking layers of mediation: infrastructural shaping by platform affordances and algorithmic design; social scaffolding through caregivers and peer relations; and symbolic negotiation via narrative, humor, and affective framing. These layers do not function as separate domains, nor do they align neatly with discrete forms of action. Digital resilience emerges from their constant entanglement as adolescents navigate technological volatility, social obligation, and affective uncertainty in ways that are continually recalibrated across platforms and phases.

At the infrastructural layer, digital resilience is shaped less by the instability produced through platform entanglement than through adolescents' orientation toward platform entanglement itself. Algorithmic modulation fragments attention, redistributes visibility, and intensifies affect in uneven and unpredictable ways (van Dijck et al., 2018), undermining the possibility of sustained equilibrium. Under such conditions, digital resilience does not crystallize as durable adaptation or technological mastery. It takes shape instead as a way of inhabiting infrastructural uncertainty—learning how to anticipate volatility, distribute exposure, and remain mobile within environments where relevance and visibility are constantly recalculated. What matters here is not control, but timing; not optimization, but the capacity to align momentarily with shifting rhythms and then disengage before saturation sets in.

Infrastructural shaping, however, is inseparable from the social relations through which digital practices acquire meaning and consequence. Engagements are embedded in dense relational fields involving caregivers, teachers, and peers, where digital behavior is continuously observed, interpreted, and morally assessed. Within these fields, digital resilience is rarely an individual accomplishment. It is scaffolded through negotiated boundaries, selective disclosures, and carefully managed silences (Kam et al., 2021) that allow adolescents to remain socially intelligible without escalating conflict or burdening already strained relationships. These intergenerational dynamics are approached as situational and negotiated conditions—varying across households with different degrees of regulation and autonomy—rather than as stable parenting styles, which have been extensively examined in prior quantitative research (Ren & Zhu, 2022).

Social expectations do not simply constrain resilience; they actively channel it toward indirectness and restraint, privileging forms of adjustment that preserve relational continuity over those that seek confrontation or explicit recognition. As relational conditions shift over time—through educational transitions, changing family dynamics, or evolving peer networks—the scaffolds available also change, reshaping what kinds of engagement are feasible, what kinds of withdrawal are legible, and how the oscillation between the two can be sustained without relational rupture.

Symbolic negotiation operates within and across these infrastructural and relational conditions, providing a means of modulating affect without demanding resolution (Wetherell, 2012). Here, meaning-making is oriented not toward coherence, closure, or therapeutic articulation, but toward manageability. Fragmented narratives, ironic distance, and tonal shifts allow fear and uncertainty to be acknowledged without being stabilized into fixed identities or publicly accountable claims. Such symbolic work does not aim to eliminate distress but to render it livable—to keep it in circulation without allowing it to dominate interaction or self-understanding. Over time, this produces an economical repertoire of expressive tactics, calibrated to avoid both emotional overload and social overexposure. Digital resilience, in this sense, unfolds through the regulation of intensity and recognizability as much as through the production of meaning.

Viewed in relation, these layers clarify why digital resilience in hypermediated environments cannot be understood as a linear movement from vulnerability to adaptation. Engagement and withdrawal are not opposing orientations but mutually constitutive moments within the same process. Participation generates exposure, comparison, and affective escalation that necessitate tactical retreat; withdrawal, in turn, depends on mediated forms of presence to remain socially viable and emotionally intelligible. Digital resilience thus takes shape as oscillation rather than trajectory, marked by continual movement between involvement and distance without settling into a stable endpoint. This oscillatory quality is not a sign of incompleteness or failure, but a reflection of structural conditions under which stability itself has become difficult to secure.

The temporal dimension of this process is crucial. What begins as improvisation under conditions of disruption gradually sediments into habitual orientations toward platforms, relationships, and self-expression. Yet sedimentation does not imply consolidation. Earlier disruptions linger within everyday routines, shaping how risk is anticipated, how attention is managed, and how futures are imagined.

As institutional pressures reassert themselves, digital resilience becomes more selective and compressed, oriented toward maintaining continuity rather than seeking transformation. Accumulation occurs without closure; adjustment without resolution. The result is not a return to a pre-disruption baseline, but a sensibility oriented toward fluctuation, marked by responsiveness to small shifts in infrastructural cues, relational climate, and symbolic tone rather than a search for stability.

In each cluster, adolescents work tactically: they seize low-intensity routine moments to anchor time (ritualizing), repurpose narrative and humor to keep fear and pressure at a tolerable distance (narrativizing, misrecognition), and redistribute visibility and exposure through platform switching and account lapse (liquid platform use). Accordingly, digital resilience is best conceptualized as tactical rather than strategic, unfolding through infrastructural, social, and symbolic mediation rather than culminating in durable mastery (de Certeau, 1980/2011; Kolotouchkina et al., 2023). It does not seek to reorganize platform architectures, renegotiate institutional authority, or secure durable protections. It operates within spaces not of one's own

making, sustaining everyday livability through momentary alignment, selective withdrawal, and recalibrated participation. This form of digital resilience is neither heroic nor resistant in a classical sense. Its force lies not in overcoming mediation, but in learning how to remain present—socially, emotionally, and symbolically—within environments where presence itself is constantly at risk. Sustained through continuous alignment and misalignment across infrastructures, relationships, and symbolic forms, it allows everyday life to proceed without the promise of stability. What emerges is not recovery from disruption, but a form of continuity forged within it.

The central contribution of this study is shifting the analytical unit for understanding digital resilience, relocating it from an individual psychological trait or adaptive outcome to everyday practices within hypermediated environments. The findings extend the communication theory of resilience's process orientation by specifying how such communicative processes are infrastructurally conditioned in hypermediated environments, where platform entanglement and algorithmic modulation shape when and how resilience practices can be enacted. Focusing on how digital resilience is enacted, adjusted, and sustained through situated media practices, the study moves beyond psychometric assessments and normative prescriptions, offering a process-oriented perspective that aligns with practice-based approaches, everyday life sociology, and theories of mediation.

Reconsidered from this perspective, the through/against distinction gives way to an internal tension structure, where digital resilience emerges as an ongoing process of modulation, not a fixed endpoint. This reframing clarifies why adolescent resilience is better understood as sustained adjustment under structural instability, rather than through narratives of empowerment or protection.

At the level of social reality, this perspective resists translating digital resilience into prescriptive guidance, instead highlighting how adolescents navigate uncertainty, emotional volatility, and relational challenges through their situated practices. While these practices may not align with adult expectations of healthy media use, they are crucial for making mediated life livable, preventing their misrecognition of these tactics as deviant, and framing them as meaningful and adaptive responses to contemporary adolescence.

6. Limitations and Future Research

By conceptualizing digital resilience as a set of situated, ongoing practices rather than a measurable outcome, the analysis foregrounds how digital resilience operates in practice through adolescents' efforts to sustain everyday livability under hypermediated conditions. This practice-centered approach deliberately resists outcome-based evaluation, yet it also limits the capacity to draw comparative claims about improvement, decline, or optimization over time.

Second, although the study adopts a longitudinal design, temporal depth is achieved primarily through retrospective narration, sedimented routines, and cross-phase comparison rather than continuous real-time tracking. As a result, the analysis is more attuned to practices that persist or stabilize over time, while more fleeting, abandoned, or experimental forms of adjustment may remain less visible.

These limitations point to two directions for future research. One involves tracing the longer-term trajectories of digital resilience practices across life stages and institutional transitions. The other calls for

closer attention to failed, short-lived, or costly attempts at adjustment, extending practice-based approaches beyond recognizable resilience to better capture its fragilities under hypermediated conditions.

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Conflict of Interests

The author declares no conflicts of interest.

LLMs Disclosure

A single LLM—ChatGPT (OpenAI)—was used only for language polishing at a late stage of manuscript preparation. Its role was limited to sentence-level rephrasing, improving clarity and coherence, and smoothing transitions between paragraphs.

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Between Resilience and Abandonment: Political Factors Determining Participatory Budgeting Through Digital Participatory Platforms

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Abstract

Participatory budgeting (PB) is one of the most significant democratic innovations to enhance citizens’ influence on public policy, seeing renewed growth over the last decade by merging with digital participatory platforms. However, many PB programmes fail to persist beyond their initial adoption. Which political factors affect the resilience of hybrid deployments of PB through digital platforms? Local governments, and ultimately mayors, play a pivotal role, but the extent to which political factors influence the continuity of PB programmes remains contested, with mixed evidence in the literature. To examine this relationship, we compiled a database tracking PB processes in 90 municipalities that used the Decidim platform across Catalonia from 2016 to 2025. Our findings provide insights into how political conditions shape the survival of PB initiatives. A change in the ruling party increases the likelihood of PB abandonment, though this effect is contingent upon the incoming mayor belonging to a mainstream party, particularly on the centre-left. In addition, municipalities that show signs of institutionalisation, such as prior experience in participatory processes and a participation regulatory framework, or that possess a strong local participatory culture, are more prone to sustain these initiatives.

Keywords

Catalonia; democratic innovations; local government; participatory budgeting; participatory platforms; political factors

1. Introduction

Participatory budgeting (PB) has become widespread as a prominent practice of participatory governance. However, experimentation with PB by local governments has frequently resulted in sporadic or short-lived efforts that failed to endure. While an increasing number of municipalities have initiated PB programmes, with considerable investments, only a fraction has succeeded in stabilising and maintaining them over time (Francés García et al., 2024; Spada & Ryan, 2017). A critical question remains: Which political conditions determine the survival or abandonment of PB programmes? Comparatively, the abandonment of PB has received less attention than its adoption and diffusion. Although the phenomenon has been studied in Brazil, and despite some exceptions elsewhere (Fernández-Martínez & Becerril Viera, 2022; Kukučková & Bakoš, 2023; Murray Svidroňová et al., 2023), further research is required that addresses PB over time and identifies how PB experiences become embedded in the local context (Bartocci et al., 2023). The wave of PB experiences in Catalonia, facilitated by digital platforms like Decidim, provides an additional layer of analysis to test how political factors condition PB longevity. Further research on PB abandonment is needed not only to better grasp the conditions that can lead to the erosion of democratic innovations, but also to help their resilience.

The aim of this article is to examine the political factors that influence the continuity or abandonment of PB programmes that are hybridly supported by digital participatory platforms. Throughout the article, continuity and abandonment will be used interchangeably to refer to the two sides of the same phenomenon. Naturally, we acknowledge that the boundary between continuity and abandonment is not always clear. PB programmes may persist, but with a diminished scope, ranging from the deterioration of key features to their “sudden disappearance” (Lopes Alves & Allegretti, 2012). We opted to focus our analysis on abandonment, as it offers a clear-cut measure for quantitative analysis. If continuity can be understood as a metric for the success of a democratic innovation (Spada & Ryan, 2017), abandonment clearly represents the adverse situation of failure. While this dichotomous approach may overlook certain nuances of PB erosion, the drivers of complete abandonment likely mirror those of gradual decay and also provide clues to understand erosion.

In order to address this research question, we created a database that tracks all the 90 Catalan municipalities that implemented PB through the Decidim platform, a public-common, free, and open digital infrastructure for participatory democracy (Barandiaran et al., 2024). It has become the leading infrastructure in Catalonia due to its adoption by supra-municipal bodies, which provide technical support. Despite being enabled by the platform, the processes are predominantly hybrid, with the digital infrastructure acting as a facilitator for items such as voting or communication. The database is structured across three electoral mandates, commencing in 2015, and incorporates political and contextual information about municipalities. Beyond Catalan municipalities, this platform has been deployed in cities such as Helsinki, New York, Mexico City, Rosario, Kakogawa, and Lyon.

Although PB experiences involve multiple actors, from local bureaucracies to citizens and civil society organisations, our framework emphasises that local governments, and specifically mayors, play a pivotal role in the decisions to adopt and maintain them. This makes the lifespan of PB susceptible to the shifts inherent in electoral cycles, although institutionalisation measures, the support of local actors, and a stable platform can help mitigate such fluctuations. Our results show that political factors matter in the ongoing continuity of PB programmes. In line with other researchers, we find that the ideology of the ruling party is a relevant

factor for explaining the continuity of PB initiatives. More interestingly, nuancing the findings of some previous studies (Bezerra & Junqueira, 2022; Fernández-Martínez & Becerril Viera, 2022; Spada, 2014), we also find that a change of the ruling party, in interaction with ideology, particularly with mainstream centre-left parties, increases the probability of abandonment. However, this disruption caused by electoral cycles is attenuated by factors such as a strong participatory culture, prior participatory experiences, or formal provisions.

2. The Study of PB Abandonment and Resilience

When scholars examine how democratic innovations can transform traditional governance structures, at least two key questions are relevant: their adoption and their embedding into institutional settings. Current research has extensively focused on the former: how PB programmes arise and how they spread through the territory (Chovanecek et al., 2023; Falanga & Lüchmann, 2019). However, one of the main challenges of democratic innovations is their tendency to be fragile and struggle to persist over time; PB programmes are no exception, as since their inception, they have been short-lived or easily interrupted. While studying the adoption of experiences is useful for understanding spread patterns, it does not give a comprehensive understanding of when a programme is successful over time.

Our approach to the analysis of PB abandonment differs from previous research in two ways. First, we move beyond the qualitative research tradition that has characterised the analysis of democratic innovations. While this tradition has led to fruitful analyses of PB programmes' complexities, it has also hindered the study of when these initiatives are continued and persist. A significant portion of the research has focused on case studies of best practices, which inescapably has involved a selection bias in the variability of the dependent variable, towards positive outcomes and long-lasting processes—i.e., those that persisted (Spada & Ryan, 2017). Additionally, a portion of this background has been based on cases with programmes implemented once or twice and then abandoned (Bartocci et al., 2023, p. 770). These trends make it particularly difficult to generalise evidence and to address questions concerning the continuity of PB, which is why it is pertinent to consider a larger variety of successful and unsuccessful initiatives over time. It is worth noting that, as Ryan (2021) argues, this is not to the detriment of the case study tradition. A greater accumulation of conclusions via large-*N* strategies can force us to go back to the cases and let us think about which explanations might be more crucial in those cases of particular significance.

Additionally, we expand the focus beyond Brazil. Addressing abandonment using a quantitative approach has been comparatively scarce, particularly outside Brazil, where there is an established PB tradition and the availability of the Brazilian Participatory Budgeting Census. This quantitative focus on abandonment has received less attention because it requires monitoring a high number of cases and the collection of temporal data. While there has recently been a growth in quantitative contributions investigating abandonment, mixed evidence has emerged, as different contexts involve distinct dynamics and objectives in the deployment of each PB model. PB experiences have expanded worldwide, and there is a need for quantitative approaches to examine and compare how PB performs in different contexts. In Europe, PB differs from Latin American experiences in several aspects (Sintomer et al., 2012), especially as a top-down attempt to restore citizen trust and counteract citizens' disaffection (Falanga & Lüchmann, 2019; Ganuza & Baiocchi, 2019).

The remainder of this section is organised as follows. First, we establish the relevance of the Catalan case as the primary focus of our analysis and contextualise it. We then discuss the theoretical logic underlying the abandonment of PB programmes and translate potential explanatory factors into hypotheses.

2.1. Particularities and Relevance of the Catalan Case

Catalonia stands out for its tradition of participatory governance at the local level, making it a suitable case for quantitative analysis. After 2015, there has been a new wave of PB programmes due to the improvement in the economic situation, the coming to power of new parties emphasising direct participation, the support of supra-municipal institutions, and the availability of a free, open, multipurpose participatory platform. As in the rest of Spain, the features of PBs have evolved during this last surge (López Ronda & Gil-Jaurena, 2021). Processes are no longer commonly self-regulated; they have a set of rules established by the council, voting takes primacy over forms of consensus, and there is heterogeneity in the issues for debate (Francés et al., 2018).

Remarkably, although most processes now employ digital tools, most of them are hybrid and should not be seen solely as digital processes. This means that PBs, despite using a platform, maintain significant face-to-face elements and allow collective forms of participation, alongside more individualised ones (Francés et al., 2018).

This study is based on those Catalan municipalities that have implemented PB initiatives through the Decidim platform. The infrastructure is a public-common, free, and open digital support, understood as a “technopolitical project” (Barandiaran et al., 2024, pp. 51–53). It was developed by activists from the 15-M and free software movements as a way to challenge the traditional representative model of democracy and the capitalist appropriation of technology. It aims to foster a participatory democracy through a collaborative and community-driven project. Decidim represents an example of social resilience, driven by proactive civil actors who sustain an alternative initiative that can be shared and improved by other citizens, organisations, and institutions (Tomkova, 2020). These actors have established an international support network—the Decidim Association—which works collectively to enhance the platform’s democratic features. Decidim has played a key role in expanding PB across Catalan municipalities, enabling a substantial number of processes through its infrastructure and integrating both online and offline participation (Borge et al., 2023).

In addition, several factors make the Catalan case relevant to the present analysis. First, Catalonia exhibits differential administrative and political characteristics that provide enough internal variability for testing the hypotheses identified in the literature on PB abandonment. From an administrative perspective, Catalonia has a highly fragmented local landscape, encompassing small municipalities supported by supra-municipal bodies, as well as large cities with a metropolitan scope. Moreover, the Catalan party system is notably fragmented, with multiple political parties involved in local government. This configuration increases electoral competitiveness and complicates governability. Second, the Catalan case also exhibits a degree of internal homogeneity that warrants its analysis as a distinct unit, separate from other Spanish Autonomous Communities. The Catalan party system diverges from the broader Spanish system due to the presence of Catalan nationalist parties, which leads to greater fragmentation at the local level and nuances the way parties represent mainstream positions in each local context. This diversity is further increased by the presence of locally based independent lists, which are also frequent. Overall, this landscape facilitates the

emergence of governments ruled not only by mainstream parties but also by parties which are more marginal or even non-existent at the national level.

Finally, the Catalan local system, like the rest of Spain, is characterised as a strong-mayor model. In this model, the mayor has significant powers, despite not being directly elected, but appointed by the elected councillors. In Spain, this model has been consolidated due to fears of instability in the local arena during the transition to democracy. Key features include mayors' long tenures, significant executive powers, and the autonomy of local lists. The strong-mayor model—which also fits other European cases—has been used to explain the adoption of democratic innovations in local governments (Salvador & Pano, 2018). In this model, mayors act as policy entrepreneurs (e.g., Mintrom, 2019), playing a central role in adopting major local innovations and committing to measures that enhance municipal management (Salvador & Pano, 2018). However, while it is true that the mayors in Spain wield significant powers, the requirement for election—a mere plurality of the council votes rather than a full majority—opens the door to political instability. A mayor who relies only on a plurality constantly operates under the sword of Damocles, threatened by the potential formation of an alternative coalition that can use PB as a political weapon.

2.2. Understanding Abandonment and Resilience: The Underlying Rationale

The centrality of mayors in Catalan local administration, with the authority to initiate or terminate PB programmes, allows us to view the decision to continue or abandon as an expected utility calculus. Termination becomes likely when negative factors outweigh positive ones in the municipal decision-making process. The complexity of this calculus makes it impossible to establish a precise formula; however, a variety of motivations beyond substantive opposition should be taken into account. Mayors' decision-making does not occur in isolation, but is subject to the logic of the political system and the interests of key local actors (Lüchmann, 2017).

We identify five political factors that can affect the abandonment of PB programmes: changing the ruling party, the ruling party's ideology, the mayor's political vulnerability, the institutionalisation of participation, and the municipality's participatory culture. The first two focus on the mayor's specific status—specifically whether their party is an incumbent—and their ideological background. The remaining three incorporate proxies for the mayor's potential constraints. These include the mayor's dependence on other political parties for governance, past experience and formal provisions regarding participation, and the participatory context involving civic associations and citizens.

Obviously, other factors, besides political ones, have been considered. On the one hand, we acknowledge the relevance of economic factors in various countries. External shocks such as economic crises or internal financial conditions such as debt, scarcity, or restrictive flexibility in budget allocation can trigger the curtailment of democratic innovations (Bezerra & Junqueira, 2022; Lopes Alves & Allegretti, 2012; Murray Svidroňová et al., 2023; Wampler & Goldfrank, 2022). This has been the case in Spain since the 2008 financial crisis (López Ronda & Gil-Jaurena, 2021). However, because our study is situated in a post-crisis context, we focus on political factors as the main drivers of PB, treating economic variables as controls. On the other hand, while process-design and implementation features—e.g., Kukučková and Bakoš (2023) examine decreases in the PB budget, number of proposals, or voter turnout—might be relevant to PB continuity, they also present significant methodological challenges. The lack of standardised reporting and

the high variability of PB designs make it difficult to gather consistent comparative data for large-*N* quantitative analysis. Consequently, while we recognise this as a promising line of research, as argued by Fernández-Martínez and Becerril Viera (2022), these features remain outside the scope of this study.

In the next subsections, we further develop the political factors explaining PB abandonment, alongside the hypotheses that are derived from them.

2.2.1. Changing the Ruling Party

It has been argued that newly elected politicians tend to introduce new mechanisms, routines, and experiments, or discontinue those implemented by the previous administration (Wampler, 2008). However, prior research across different countries has yielded mixed evidence with respect to the change of the ruling party on PB continuity. A substantial portion of the quantitative Brazilian evidence (Bezerra & Junqueira, 2022; Spada, 2014) indicates that this factor does not help to explain the continuity of PB programmes, or has only found a weak effect (Azevedo et al., 2022). In Spain, in line with the Brazilian literature, changing the ruling party does not seem to be an explanatory factor in itself; rather, it is the ideological orientation of the new ruling party that matters (Fernández-Martínez & Becerril Viera, 2022). Conversely, evidence from Slovakia (Murray Svidroňová et al., 2023) emphasises that the continuation of those mayors who adopted the programme positively influences its long-term continuation, although often the “entrepreneur” was the civil sector, enabling the overcoming of partisan interests. It has been noted that a high level of politicisation of PB programmes made them more transformative, but also more vulnerable to abandonment (Wampler & Goldfrank, 2022).

While acknowledging the mixed evidence, we hypothesise that the predominance of the strong-mayor model in the Catalan context—with clearly defined leadership roles in the local administration and, in particular, in promoting local innovation (Salvador & Pano, 2018)—will make PB programmes more vulnerable to electoral changes. We expect continuity to be compromised when a mayor who previously implemented a PB programme fails to secure re-election, as the ensuing transition can shift the priorities of the new local government. Although new mayors may decide to maintain these programmes, they also have incentives to pursue a policy break and distance themselves from their predecessors. Because of this, we formulate the following hypothesis:

H1: Changing the ruling party increases the probability of abandoning PB programmes.

2.2.2. Ideological Orientation of the Local Government

Historically, left-wing parties have championed participatory governance mechanisms, and PB is no exception, as a means of fulfilling ideological commitments and reflecting the executive’s political values. It originated as a hallmark of Brazil’s Partido dos Trabalhadores (PT) as part of its agenda of political change and reform. Likewise, when the model first migrated to Europe, even if supported by a widespread policy consensus, it was primarily adopted by left-leaning governments (Sintomer et al., 2012).

However, several factors have diminished the affinity between PB and specific political ideologies over time. In Europe, far from a radical mechanism of transformation, PB programmes have evolved into a “neutral”

device of good governance (Ganuza & Baiocchi, 2019), and are implemented across the ideological spectrum. In Brazil, although PB continuity was initially associated with local governments ruled by PT (Spada, 2014), it was subsequently adopted by other political parties. Some studies found unexpected effects: an increase in abandonment associated with the entry of the left, and a decrease with new parties not aligned with the left (Azevedo et al., 2022). The abandonment of PB initiatives by PT is complex and has been explained in various ways by Wampler and Goldfrank (2022). Some arguments point out that, once in power, the party shifted its focus towards alternative participatory arrangements. Other arguments emphasise that the political benefits of PBs were insufficient to serve the party's long-term electoral interests. In Spain, evidence on the implementation of participatory policies finds modest differences between ideological families, with the radical left more prone to decisiveness or intensity on these policies (Font et al., 2024). PB programmes have been adopted by political parties across different colours, although the left seems more committed to continuity (Fernández-Martínez & Becerril Viera, 2022). Furthermore, in Catalonia, independent political parties are common in local politics, focusing on promoting local perspectives and maintaining frequent connections with local associations that can align them with local participatory programmes.

Despite recognising the complex relationship between PB abandonment and ideology, we contend that not all parties in government are equally inclined to abandon these programmes. We posit that abandonment will be more politically costly for parties whose ideology and reputation are closely aligned with the promotion of citizen participation. Thus, we expect mainstream parties, whose reputation is less tied to democratic experimentation, to face lower costs of abandonment:

H2: Local governments ruled by mainstream parties are more likely to abandon PB programmes.

2.2.3. Political Vulnerability

The vulnerability of the local government, in relation to other competing political parties—i.e., having fewer seats than the majority of the local council—can impact the decision to abandon PB. In Brazil, where mayors and members of the city council, unlike in Catalonia, are chosen via a presidential system, it has been claimed that mayors would be more likely to support PB programmes to bypass city councils through plebiscitarian support. That has led some researchers to test whether being in a position of political vulnerability makes mayors more likely to support PB initiatives as a means of building a direct mandate from the citizenry (e.g., Spada, 2014). However, evidence in Brazil shows that the mayor's party's vulnerability in the city council does not affect initial adoption but decreases the probability of subsequent continuity of PB programmes (Azevedo et al., 2022; Spada, 2014).

In Catalonia, mayors are elected by the city council, and they can be invested with a plurality of seats if no absolute majority supports an alternative; nonetheless, they remain vulnerable to a vote of no confidence throughout their term. A mayor with only a plurality may form a coalition government which, although not vulnerable in itself, is likely to require more complex negotiations among coalition partners to hinder the risk of formation of an alternative coalition. In his analysis on the Brazilian case, Spada (2014, pp. 28–29) suggests that in countries where the mayor is elected by the city council, the propensity to innovate might be lower, but the survival rate higher. However, this survival might be compromised when the governing party lacks a majority of seats. The need to build coalitions and secure support from other parties requires agenda alignments that can render the continuity of PB programmes dependent on the prevailing correlation of forces.

Since PB can trigger conflict, opposition forces may exploit these challenges to catalyse the formation of an alternative governing coalition.

Taking this into account, we formulate the following hypothesis:

H3: The vulnerability of mayors, understood as a weaker position in government, will increase the probability of abandoning PB programmes.

2.2.4. Institutionalisation (Past Experience and Formal Provisions)

The decision to abandon PB programmes may also depend on various institutionalisation dynamics, ranging from formal rules and structures, such as administrative arrangements and legal provisions, to informal practices and narratives about participation (Blanco et al., 2021). In the case of Brazil, researchers have found that the degree of politicisation versus formal institutionalisation can have an impact on the continuity of PB programmes (Wampler & Goldfrank, 2022, p. 125). A high level of politicisation tends to make PB more impactful yet also more vulnerable to abandonment by subsequent governments. Instead, a more technical and formally institutionalised approach, while less transformative, is supposed to better ensure PB continuity. Although regulatory frameworks or ad-hoc rules aimed at consolidating participatory policies may help to generate expectations of continuity, they are often insufficient to consolidate the reproducibility of participatory programmes (Allegretti et al., 2021). Such provisions might be only the expression of a political commitment at a specific point in time, without necessarily binding subsequent governments.

Nevertheless, once a participatory structure is consolidated—through the establishment of dedicated administrative areas and the collaboration of and demand for it by stakeholders—it becomes harder for successive governments to dismantle (Blanco et al., 2021). Having a normalised practice promotes “path dependency” effects, which shape and facilitate the ongoing reproduction of PB programmes (Bezerra & Junqueira, 2022). It is not only that key actors in the local context expect reproducibility, but also that ongoing continuity can eventually translate into a formalised programme that overcomes partisan affinities. Because of this, we expect that steps toward institutionalisation will hinder the dismantling of PB programmes:

H4: Institutionalisation of PB experiences makes the abandonment of PB programmes less likely.

2.2.5. Participatory Culture and Associational Context

Finally, mayors need to consider the impact of their decisions on the context formed by the network of local associations and citizens upon which the PB is grounded. Abandonment should be more difficult when the programme is embedded through the active collaboration of these actors, as dismantling it may generate greater political and social costs than simply maintaining it. For example, the adoption of PB is often regarded as a stimulus for promoting participation in other areas (Bartocci et al., 2023). Civil organisations are vital to this ecosystem, as a weak civic fabric often results in poor PB performance (Bartocci et al., 2023). In Brazil, for instance, the demobilisation of civil society has been regarded as a possible co-explanation for the decision to abandon (Wampler & Goldfrank, 2022). However, the number of civil society organisations is not necessarily a guarantee of continuity; indeed, some researchers have found no correlation between the two (Azevedo et al., 2022).

The cost of abandonment is likely lower if past programmes have been associated with conflicts with local associations and citizens, or if they have been received with public indifference (Fernández-Martínez et al., 2020). The link between PB, citizenry, and civil society is ambivalent; although it provides a platform for citizen demands, it can also generate tensions and frictions. For example, civic organisations might feel displaced if they lose their role as intermediaries between the citizenry and the administration (Balcells et al., 2023; Ganuza et al., 2014). Furthermore, unfulfilled expectations can breed disillusionment among citizens and civic associations. If the process is not perceived to be working properly, PB can be replaced by other participatory mechanisms. Overall, we expect that local contexts with a stronger participatory culture will be more favourable for the continuity of PB programmes:

H5: A strong participatory culture will mitigate the probability of abandoning PB programmes.

3. Data and Methods

3.1. Data and Sample

For the analyses, we rely on our own produced database, which covers the 90 municipalities that implemented PB in Catalonia since the release of the Decidim platform. The data have been organised according to a three-electoral-mandate structure with a total of 270 observations (2015–2019, 2019–2023, after 2023). This mandate structure allows us to monitor municipal observations at different stages: from the adoption or non-adoption of a PB to its continuation or abandonment, as detailed in the forthcoming discussion of our dependent variable.

Methodological and strategic reasons justify the decision to analyse data by political mandates. Firstly, it allows us to deal with the difficulty of inconsistent concurrence in implementation cycles; some PB initiatives are implemented yearly or every two years, while others are executed once per mandate or have no regular concurrence. Thus, organising the data using the mandate as a time reference enables us to resolve this problem. Secondly, organising the data by mandates allows us to establish a clear cut-off point to measure the extent to which electoral cycles affect PB continuity or abandonment. Thirdly, as outlined by Francés García et al. (2024), in the Spanish context, the survival of processes beyond a political term is infrequent, with the most prevalent profile of PBs being a two- or three-year lifespan. It is not uncommon for a process to cool down during an electoral year, which can result in a subsequent abandonment (Lopes Alves & Allegretti, 2012). A three-mandate data set is an appropriate design for our purpose and mitigates these small fluctuations and reversible interruptions.

Given the substantial difficulties involved in studying PBs—since their design choices and characteristics can vary enormously—we underscore the advantages of Decidim. Its environment, built around modular components (Palacin et al., 2024), helps to provide clean, traceable data with minimal tagging errors throughout the collection process. For example, municipalities can implement various types of PB programmes, ranging from those targeting children and young people or specific neighbourhoods to broader programmes aimed at the entire municipality. Within each type, there can also be considerable diversity in design features. However, this variation is limited in our dataset, as nearly 90% of our observations correspond to a combination of city- and district-level PB.

Despite these benefits, focusing exclusively on Decidim may entail certain limitations. If municipalities that employ Decidim possess distinctive characteristics, this could compromise the generalisability of our findings to other PB cases. For this reason, we examined whether there were statistically significant differences between municipalities implementing PB via Decidim and the full set of municipalities that have implemented PB. We found no statistically significant differences in terms of population size, a relevant variable given that the range of municipal competences depends on it. Furthermore, although Decidim was initially associated with Barcelona’s local government, where it was launched in 2015, it was rapidly adopted by other institutions not linked to the same political party. Support for Decidim from supra-municipal institutions in Catalonia has helped make it the standard and most widely used participatory platform among municipalities, including smaller ones with limited technical resources (Balcells et al., 2023). Indeed, our sample includes municipalities with different ideological orientations, party control, and contextual characteristics, as shown in the descriptive statistics in Table A.1 (in the Supplementary File).

3.2. Operationalisation of the Variables

Our dependent variable is shaped from a preliminary four-category typology that cross-combines: (a) whether there is at least one PB implemented during the current term (t), and (b) a lagged measure ($t - 1$) if there was a PB implemented in the preceding mandate. With this cross-combination, we have categorised four possible situations for each mandate: PB not adopted, PB first-time adoption, PB continuity, and PB abandonment. This allows us to potentially study different stages, covering the lifecycle of participatory processes from adoption to continuity or abandonment. It could even include re-adoption cases, should the sample expand in the future to cover a longer time period. An evolution across terms can be found in Figure 1.

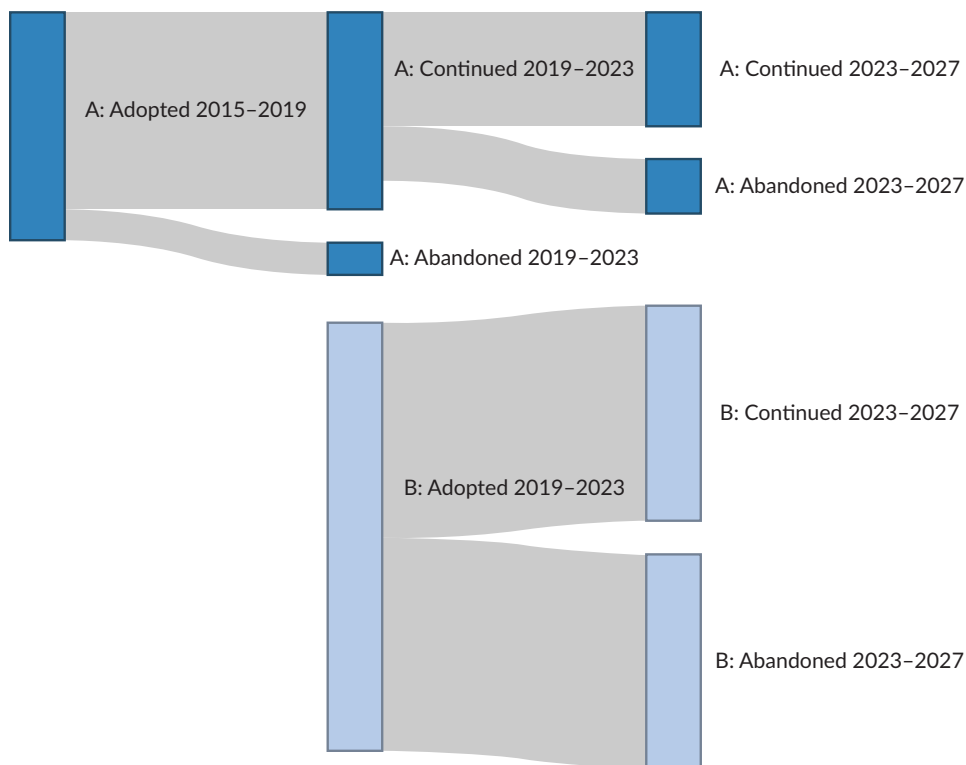


Figure 1. Evolution of the sample.

However, the dependent variable used in the models analysed in the next section is a specific subset of these cases and is specified as a dichotomous factor. It includes only observations in which PB is either continued (PB implemented in t and $t - 1$) or abandoned (PB not implemented in t but implemented in $t - 1$), thus yielding a binary measure distinguishing between cases where the local government decides to maintain or to terminate a PB inherited from the previous mandate. Our data contain a total of 93 continuations and 42 abandonments. Similar approaches with a dichotomous variable have also been used by most of the studies reviewed in the literature (Bezerra & Junqueira, 2022; Fernández-Martínez & Becerril Viera, 2022; Spada, 2014). To tag continuity or abandonment in 2023–2027, an ongoing mandate, but already beyond its midpoint, we have verified, as far as possible, whether a PB programme was planned. If there is no planning, we assume that implementation will be unlikely at this stage.

To test the hypotheses, we run two logistic regression models. We also explored more complex alternative models that can be found in Section B of the Supplementary File. We organised the explanatory variables corresponding to the hypotheses. Firstly, changing the ruling party has been operationalised as a dichotomous factor that accounts for the change in the mayor's party. This indicator links information between two terms: 1 is assigned when a change is observed compared to the preceding mandate. Party names and specific coalition acronyms between election periods have been analysed on a case-by-case basis to properly label only effective changes.

Secondly, we operationalised the mayor's party ideology as a categorical variable with four groups: (a) alternative-left parties—Catalan nationalist or otherwise—such as Comuns, Republican Left of Catalonia (ERC), and Popular Unity Candidacy (CUP), under the Greens/EFA and The Left; (b) a centre-left party, represented by the Socialists' Party of Catalonia (PSC), under S&D; (c) independent local parties, with various ideological orientations; and (d) centre-right parties—Catalan nationalist—such as Convergence and Union (CiU), PDeCAT, and Junts, under Renew Europe or non-inscrits. In the model detailed in the next section, the reference category will be the centre-left.

Thirdly, we operationalised the mayor's vulnerability as whether their party held the majority of seats on the council. Subsequently, regarding institutionalisation, past experience has been operationalised as the precedent cumulative number of PBs implemented in Decidim, while formal provisions are measured as a dichotomous factor that indicates whether the municipality had an active participation-regulatory framework in the specific mandate. Ultimately, to assess the degree of participatory culture, we have defined two tentative proxies, although they do not encompass the entire phenomenon: (a) a standardised measure of the percentage of turnout in the current mandate's local elections; and (b) civil organisation density, measured as the number of civil organisations per capita in the municipality.

We have included different control variables, starting with the population size of the municipality, categorised into two groups depending on whether the municipality has fewer than 5,000 residents or more. Initially, we employed an ordinal categorisation following the size tiers defined by Spanish legislation, as this was substantively relevant and empirically allowed us to capture potential non-linearities in the effect of population size on abandonment. After estimating the models, however, the higher categories of the variable did not display significant differences among themselves, so we opted for a simplified dichotomous version (small municipalities vs. all other sizes). This decision was supported by the information criteria for model fit, the Bayesian (BIC) and Akaike (AIC) information criteria, which take into account the complexity of

the models in terms of the number of parameters. It is also important to note that the models show some sensitivity with respect to the population variable used. The scale of the municipality is closely associated with some factors introduced in the model, such as the parties in government or the administrative and regulatory capacities, among others. For this reason, an alternative model using the logarithmic population scale, which reduces the risk of multicollinearity, can be found in Table B.1 of the Supplementary File.

Each mandate year has been included to fix time-effects in order to address a major number of the temporal confounders, with the category of reference in the 2015–2019 term. Its introduction in the model helps control major political waves associated with our main independent variables. Finally, we have employed two variables that consider the socioeconomic context and the financial capacity of the municipalities. On the one hand, a Small Area Socioeconomic Index (IST)—a synthetic index that summarises socioeconomic characteristics at a local level, such as employment, educational level, immigration, and income—is employed to have a general control on socioeconomic confounders. On the other hand, the municipal debt per capita has been included to control for potential financial constraints on the local governments. More detailed information on the variables employed can be found in Table A.1 of the Supplementary File.

4. Results

Overall, our statistical results illustrate the significance of political variables in explaining PB abandonment, even after controlling for other factors. To test the hypotheses, we estimated two different models (see Table 1). Model 1 serves as the baseline for the analysis, while Model 2 introduces an interaction term to further examine the relationship between a change of the ruling party and ideology. Both models show a good fit, with a pseudo R^2 of 0.68 and 0.71, respectively; but, given the results of the BIC and AIC, the second model is favoured for its predictive fitness. Marginal effects can be consulted in the Supplementary File (Section C). The VIF tests reveal no relevant multicollinearity.

In support of H1, we find in Model 1 that a change of ruling party increases the probability of PB abandonment. This suggests that an electoral shift disrupts continuity regardless of the ideology of the new ruling party, highlighting the vulnerability of PB programmes to electoral cycles. This statement, however, will be nuanced when examining Model 2. Regarding H2, we find only partial support. We initially expected mainstream parties—categorised as centre-right and centre-left in our model—to be more likely to abandon PB programmes than other parties. This expectation was based on the assumption that the alternative-left and independent parties are more closely identified with pro-participatory policies, making them more vulnerable to the reputational costs of abandonment. However, our findings indicate that H2 applies only to the centre-left, but not to the centre-right.

The interaction results in Model 2 provide a more precise picture of how these two variables operate, allowing us to test whether both ideology and a change in the mayoralty work together. We find that the effect of changing the ruling party on abandonment occurs when the incoming mayor belongs to the centre-left, that is, the PSC. For the sake of robustness, we examined the interaction between ideology and change of the ruling party for all other party categories. However, as already shown in Model 1, the centre-left is the only party category with a significantly divergent profile (note that this group was used in Model 1 as the reference category).

The PSC is the mainstream centre-left party in Catalonia, boasting a strong presence in metropolitan areas and a long history as a key actor in local politics. While PSC-led governments have in some cases adopted PB programmes, they are also more likely to dismantle them, when compared to other parties. This trend must be understood within the broader context of Catalan politics. Driven by social unrest due to the financial crisis and the rising independence movement, the 2010s saw the PSC displaced by other parties more sympathetic to direct democracy. However, as the PSC has recovered its political hegemony, it may have become increasingly sceptical of such innovative experiments. Interestingly, this effect is not observed within the centre-right, which includes Catalan nationalist parties like Junts or PDeCAT, with a stronger presence in small and mid-sized municipalities outside the metropolitan region of Barcelona. This discrepancy with regard to the socialist party warrants further investigation, though it could be understandable given the Catalan political context of intense competition within the pro-independence bloc.

Against H3, we find no evidence that the vulnerability of the mayor—understood as getting only a plurality of the council seats—has any effect on the probability of PB abandonment. It could be that our measure of political vulnerability is not able to capture the complexity of local politics and the way coalition dynamics work. However, and being cautious due to differentiated electoral systems, this result seems consistent with the Brazilian evidence, and does not support Spada's (2014) intuition that vulnerability in countries where mayors are elected by the local council may encourage continuity.

As predicted by H4, accumulated prior experience with PB is associated with its continuity. This suggests a learning process within local administrative structures and the development of positive expectations among the public, both of which facilitate the institutionalisation of this participatory policy through path dependency or a ratchet effect. In addition, having a participation regulatory framework also helps PB continuity, an effect that persists alongside past experience. However, as Spada (2023) suggests, there is a natural tendency for PB programmes to erode once the “novelty effect” of the process fades. Therefore, time can exert a dual influence on PB programmes, acting both as an eroding and a consolidating force. Because our study focuses on municipalities that have already adopted PB, if the likelihood of abandonment naturally increases as programmes age, that can explain the statistical significance of the 2023 mandate. However, this trend is countered by the accumulation of successive PB experiences over time, which fortifies its long-term survival.

In line with H5, both turnout in local elections and civic association density are positively associated with PB continuity. These variables are proxies that capture the capacity of political mobilisation among the local population and, consequently, the potential audience for PB programmes. As expected, a more dynamic and participative citizenry and civil society increase the political cost of abandoning PB and thus effectively act as a safeguard for these initiatives.

Finally, regarding the control variables, none of the economic controls reach statistical significance. Interestingly, no relationship was found between municipal debt and the probability of PB abandonment. This finding is consistent with a context of reduced financial pressure compared to previous periods, particularly the austerity period following the 2008 economic crisis, when participatory policies were frequently cancelled due to a lack of resources. As would be expected, municipality size significantly impacts the probability of abandonment: More populous municipalities—which typically possess higher resources and capacities—are less likely to abandon PB programmes.

Table 1. Logistic regression results. Dependent variable: PB continuity.

	Model 1	Model 2
Ruling party change	−2.69** (1.12)	−1.78 (1.21)
Ideology 4 cat: alternative-left	2.77** (1.19)	
Ideology 4 cat: centre-right	2.95** (1.52)	
Ideology 4 cat: independent	3.05* (1.71)	
Ideology 2 cat: centre-left	(Ref. category)	−2.32* (1.22)
Ruling party change*centre-left		−5.37** (2.57)
Historical accumulated PB	2.73*** (0.64)	3.25*** (0.81)
Participation regulation	2.34** (1.14)	2.39** (1.21)
Turnout % (standardised)	0.22*** (0.07)	0.25*** (0.08)
Associative density	1.14* (0.62)	1.47** (0.68)
Majority	1.13 (0.93)	1.26 (1.00)
Inhabitants: ≥5,000	6.12*** (1.86)	7.20*** (2.17)
IST	0.03 (0.04)	0.03 (0.04)
Debt per capita	−0.34 (1.93)	0.38 (1.95)
Mandate 2019	−3.53* (2.00)	−2.92 (2.03)
Mandate 2023	−7.80*** (2.33)	−8.25*** (2.56)
(Intercept)	−33.11*** (9.87)	−36.73*** (11.00)
<i>N</i>	135	135
AIC	83.89	76.44
BIC	127.47	117.11
Pseudo R^2	0.68	0.71
Chi-square	113.50	118.95

Notes: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; Model 1 ideology's reference category is centre-left; in Model 2 it is the rest of the parties.

5. Conclusions

This study contributes to the understanding of PB abandonment through evidence from Catalonia, which offers a representative European case with a strong tradition of participatory policy. Overall, the findings show that political factors play a significant role in PB abandonment, even when controlling for economic variables. While this centrality of political factors is generally acknowledged by previous studies, our findings add detail to previous literature.

We find that the survival of PB initiatives is intrinsically related to electoral cycles. A change of the ruling party, in interaction with ideology, increases the probability of abandonment—nuancing a portion of the precedent literature, which found no effect (Bezerra & Junqueira, 2022; Fernández-Martínez & Becerril Viera, 2022; Spada, 2014). The salient role of “strong mayors” places them in a prominent position towards innovation. A new mayor may be incentivised to innovate by adopting (or continuing) a PB programme. As a symbolic policy instrument, PB is often endowed with an aura of participation and transparency, serving as an easily marketable “good governance” brand. However, because its concrete impact on governance quality is often unclear—particularly when contrasted with the Brazilian experience—it can also be abandoned without incurring significant political peril. Leadership changes resulting from electoral processes create a window of opportunity for policy shifts, marking a critical juncture where PB is most vulnerable to abandonment. Our findings suggest that not all political parties behave in the same way; specifically, mainstream parties—whose reputations are less tied to participatory innovation—show a higher inclination toward abandoning PB. In our study, this is exemplified by the PSC, a dominant centre-left mainstream party in Catalonia.

The effect of a new ruling party is counterbalanced by other factors that facilitate the continuity of PB initiatives. Among these, prior experience with PB remains a crucial explanatory variable, as pointed out by previous studies (Bezerra & Junqueira, 2022; Spada, 2014). Additionally, the adoption of a regulatory framework is a key factor, and our study contributes to the limited number of existing studies that examine the role of formal PB regulations (Allegretti et al., 2021; Murray Svidroňová et al., 2023). Contextual elements related to participatory culture also help PB survival, although other studies using similar proxies found no significant association (Azevedo et al., 2022). The decision to continue or abandon PB programmes is inextricably connected to the expectations of the stakeholders involved in the process. When widely supported and accepted, participatory structures are harder to dismantle, as their removal can carry political or reputational costs.

Our study represents a further contribution to the analysis of participatory processes using Decidim. Despite its limitations, this digital platform provides a harmonised infrastructure, which enhances the systematic measurement and comparison of these initiatives. However, our results come with some caveats. To begin with, the number of municipalities and PBs using Decidim infrastructure is still growing. Thus, we expect to have a stronger sample in the future, when the timeline and the number of municipalities increase. In addition, to better understand patterns of continuity and abandonment, further attention is needed on how PB processes are internally designed, as proposed by Fernández-Martínez and Becerril Viera (2022). The conclusions would also gain robustness if we could expand the explanatory factors to include perceptions from key actors—participants, organisations, public administrators, local representatives, etc.—involved in the processes. As further research, to tackle some of these issues, we plan to conduct

interviews to triangulate the findings derived from our statistical analysis and better identify and understand the mechanisms behind PB abandonment. Although this conclusion goes beyond our findings, the availability of the public-common platform Decidim—supported by an active community and backed by a decade of implementation in numerous cities and towns—could contribute to the long-term resilience of PB programmes in Catalonia, as specific case studies suggest (Mérida & Francés, 2025).

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The data that support the findings are publicly available in the CORA repository at <https://doi.org/10.34810/data2178>

Supplementary Material

Supplementary material for this article is available online in the format provided by the authors (unedited).

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Normative Commitments and Platform Logics: Understanding Journalism's Adaptive Resilience Through Coverage of Democratic Innovations

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Abstract

This study uses participatory budgeting as a case study to examine why democratic innovations receive limited media attention, despite their alignment with journalism's civic mission. We argue that coverage of democratic innovations is structurally disadvantaged in platformised media ecosystems where algorithmic visibility, audience metrics, and economic precarity prioritise speed, sensation, visuality, and simplified narratives over procedural or complex stories. Theoretically, the article draws on traditional normative frameworks of journalism and more recent perspectives on platformisation to analyse the tensions between journalism's normative commitments and the pressures of platformisation. Against this backdrop, the concept of resilience is employed as a theoretical bridge between journalism's normative commitments and the structural dynamics of platformisation. Empirically, the study draws on 90 semi-structured interviews with journalists in seven European countries—Greece, Cyprus, Romania, Poland, the Netherlands, the UK, and Ireland—to examine how journalists navigate structural constraints while maintaining professional judgement and autonomy. The findings reveal a paradox: Journalists acknowledge democratic malaise and recognise the potential of participatory budgeting to rebuild trust and participation, yet remain reluctant to assume roles beyond detached observation. Moreover, we find that journalists accommodate platform logics in ways that allow civic-oriented reporting to persist, albeit in diminished form. To sustain coverage of underrepresented issues, journalists deploy a range of micro-strategies, such as simplified framing, outcome-focused storytelling, and human-interest narratives. We conceptualise these as forms of adaptive resilience enabling journalism to survive in hostile conditions. However, such strategies risk legitimising the platform dynamics that undermine journalism's civic mission. To address this tension, the study proposes a shift toward transformative resilience through regulatory reform and sustainable funding models as remedies for the progressive “dumbing down” of journalism.

Keywords

adaptive resilience; autonomy; democratic innovations; normative commitments of journalism; platform logics; platformisation; resilience

1. Introduction

Media and democratic innovations are closely interdependent as both contribute to strengthening democratic legitimacy and citizen engagement. Democratic innovations include a wide range of instruments such as participatory budgeting (PB), citizens' assemblies, referenda, and study circles (Baiocchi & Ganuza, 2017; Sintomer et al., 2016); they aim to mitigate public distrust by enabling more inclusive decision-making and allowing citizens to directly influence policy outcomes. Elstub and Escobar (2019) define democratic innovations as processes or institutions designed to deepen the role of citizens in governance by expanding opportunities for participation, deliberation, and influence. Yet their success depends on public visibility and monitoring, which the media is uniquely positioned to provide (Blumler & Cushion, 2014). Thus, while democratic innovations create institutional pathways for participation and collective decision-making, the media provides the communicative arena through which these practices become visible, publicly debated, and monitored. Without sustained media attention, democratic innovations risk being sidelined and overlooked, which undermines their capacity to address public disengagement and rebuild trust in governance.

In recent times, PB has emerged as one of the most significant innovations in contemporary democratic governance, offering citizens a direct say in the allocation of public funds. First introduced in Porto Alegre, Brazil, in 1989, PB has been implemented in over 11,000 cases following different formats and logics (De Vries et al., 2022). PB has been widely recognised as a mechanism that enhances transparency and accountability by involving citizens in policy and fiscal decision-making processes (Sintomer et al., 2016). Its normative promise lies in its potential to counteract citizen disengagement, address declining trust in political institutions, and provide avenues for more inclusive and responsive governance. From this perspective, PB exemplifies not only democratic innovation but also a site where institutions, and in this case local authorities and the media, must demonstrate resilience in sustaining practices that support citizen participation despite political, economic, or organisational pressures.

This article examines how journalists negotiate their normative commitments within platformised news ecosystems, specifically when covering democratically vital yet low-visibility topics. Using PB as an illustrative case study through which broader challenges facing journalism can be examined, and employing resilience as a lens to connect normativity and press platformisation, we investigate why democratically valuable stories struggle for visibility although they align closely with journalism's public mission.

The article addresses the following research questions:

RQ1: How do journalists perceive the democratic value and newsworthiness of PB and similar democratic innovations?

RQ2: How do platformisation, audience metrics, and economic pressures shape editorial decisions regarding the coverage of democratic innovations?

RQ3: What forms of resilience do journalists deploy when attempting to cover democratically valuable but structurally disadvantaged topics?

To address these questions, the article proceeds as follows. First, it outlines journalism's normative commitments and discusses how platformisation has transformed the conditions of news production. Second, it introduces resilience as a conceptual lens that connects normative theory and journalistic practice. The empirical section presents findings from a cross-national qualitative study with journalists in seven European countries. Finally, drawing on the concept of adaptive resilience, the study reveals how journalists employ micro-strategies to accommodate platform logics while maintaining coverage of civic topics, albeit in diminished form.

2. Journalism's Normative Commitments

Normative theories provide an essential starting point to understand journalism's role in democratic societies. They establish not only what journalism *is*, but also what it *ought to be*, defining the professional ideals against which practices are evaluated (Christians et al., 2009). While normative theories include libertarian, social responsibility, authoritarian, and Soviet communist models (Siebert et al., 1976), this study focuses on the social responsibility tradition. This does not suggest one model fits all democracies; rather, social responsibility emphasises journalism's civic duty to support democratic participation, public deliberation, and accountability while maintaining professional autonomy. It frames the media as a democratic institution that informs citizens, fosters public awareness, and holds power to account (Fenton, 2016; Schudson, 2007). Journalism, as Blumler and Cushion (2014, p. 261) note, is an "inescapably normative domain." That is to say, journalism plays a major role in supporting or undermining processes of citizenship and democracy. Journalism helps individuals to understand the world around them (Hess & Gutsche, 2018), and functions as a force for both social control and social change, making it central to the workings of a democracy (Thomas, 2019). However, as Hanitzsch and Vos (2017) note, we must distinguish between role *conceptions*—how journalists think they should perform—and role *performance*—what they actually do. This tension between journalism's normative ideals and practice is further illuminated by scholarship on journalistic role performance. Mellado (2020) demonstrates through cross-national research that even when journalists espouse similar normative commitments, their actual performance diverges considerably depending on structural constraints and professional cultures.

More recently, normative theories have been revisited in light of democratic challenges such as declining trust (Fink, 2019), misinformation (Waisbord, 2018), and copy-paste journalism (Saridou et al., 2017). This development goes hand in hand with what Siegelbaum and Thomas (2016) call "normative failure," referring to the fear or inability of journalists to execute normative functions of journalism as a result of growing external pressures disrupting the practices, values, and sustainability of journalism. Moreover, journalism's normative failure occurs within a wider context of growing critique and scepticism toward representative democracy (Foa et al., 2020). Declining levels of public trust are particularly pronounced toward national governments, elected representatives, and political parties (OECD, 2021). This erosion of trust is frequently associated with reduced electoral participation and the rise of populism (Norris & Inglehart, 2019). In this context, scholars argue that journalism must not only maintain independence from power but also actively contribute to civic renewal. This reflects a shift from traditional objectivist paradigms toward more engaged and democratic conceptions of the press. Historically, journalism's legitimacy has been grounded in its

autonomy from political, economic, and ideological interests (Schudson, 2007). This independence is viewed as essential to the watchdog role of the press, which ensures accountability and transparency in democratic governance. However, recent scholarship argues that detachment alone is insufficient in the face of declining public trust and growing democratic fatigue (Craft et al., 2016).

Particularly relevant in this discussion is the contested “journalist as activist” or “civic facilitator” role. Proponents argue that in contexts of democratic decline, journalism cannot remain neutral but must actively support democratic renewal (Waisbord, 2013) while critics warn that advocacy risks compromising professional legitimacy (Carlson & Lewis, 2015). This professional anxiety explains why journalists may recognise democratic innovations’ value yet resist coverage that appears promotional (Mellado et al., 2021).

Accordingly, the idea that journalism should be seen as a participatory, constructive practice that promotes civic engagement and collective deliberation rather than merely providing information and oversight is gaining ground. Deuze and Witschge (2018) contend that we should go “beyond journalism” as understood in its traditional conception and view journalism as a cultural practice embedded in communities, one that co-produces meanings and encourages public dialogue. In a similar vein, Thomas (2019) put forward the notion of “helpfulness” as journalism’s normative objective. It is argued that journalism is helpful when it expands and improves people’s opportunities. An opportunity might emerge through new knowledge (e.g., about wrongdoing in local government) or new abilities (e.g., to appreciate diverse viewpoints). Expanded opportunities could also take the form of acquired or expanded cultural capital or possibilities for political mobilisation (Thomas, 2019, p. 374).

In this regard, journalism must be reoriented around inclusivity and social justice as guiding principles (Santos & Ndlovu, 2022). Traditional commitments to objectivity and neutrality, while historically influential, often conceal inequality and reinforce dominant perspectives. This broader understanding of journalism emphasises journalism’s *civic mission*—its responsibility to sustain democratic culture, not only democratic institutions, in order to address the challenges posed by multidimensional forms of injustice in contemporary society. In this vein, journalism can support democratic innovations by informing citizens, amplifying diverse perspectives, and systematically monitoring these processes. Rather than reporting from above, journalism should interrogate power structures and the institutional contexts within which these innovations unfold. This requires rethinking the normative and professional standards that define newsworthiness. By acknowledging positionality, journalism can strengthen its commitment to transparency and accountability, while reinforcing its democratic function as a facilitator of public deliberation and a challenger of systemic injustices (Zelizer et al., 2022).

3. Platformisation and the Transformation of Journalism

Digital platforms have fundamentally reshaped how journalism is produced, distributed, and consumed (Bell et al., 2017). This transformation, theorised by Helmond (2015) as the “platformisation of the web,” describes how platforms extend their influence beyond their own websites by using technical features—such as APIs, social plug-ins, and data. Van Dijck et al. (2018) argue that platform logics have penetrated social institutions, including journalism. Accordingly, scholars speak of “press platformisation”—the process through which social media and other intermediaries become integral infrastructures for the production, distribution, monetisation, and visibility of journalism (Helberger et al., 2020; Nielsen & Ganter, 2022). As a

result, news organisations are much more dependent on platforms than the other way around (Bell et al., 2017; Poell et al., 2023).

Platform logics exert influence in at least three interconnected ways. First, algorithmic curation reshapes the pathways through which audiences encounter news. Rather than relying primarily on editorial judgment, news visibility is increasingly determined by opaque algorithmic systems designed to maximise engagement (Napoli, 2019). As the ownership of news distribution shifts from news media to platforms, the latter acquire a decisive role in determining which content gains prominence and which remains obscured (Smyrniotis & Rebillard, 2019). Moreover, platform logics shape not only which topics are covered but also how news is produced and framed (Walters, 2022). The uptake of social media logic has fuelled clickbait practices (Lischka & Garz, 2023), prioritised visuals over analytical depth, and elevated emotional or unusual stories (Nowak-Teter & Łódzki, 2023), often at the expense of interpretative and investigative reporting. As Peterson-Salahuddin and Diakopoulos (2020) observe, social media editors constantly negotiate between normative newsworthiness and interaction worthiness to enhance algorithmic visibility. Consequently, traditional journalistic values and conceptions of newsworthiness are reshaped while professional autonomy is increasingly constrained (Spyridou & Danezis, 2024). According to Perreault et al. (2025), this represents an epistemological shift, subordinating journalism's civic authority to platform-determined relevance. As a result, content requiring sustained attention is systematically marginalised over rapid consumption.

Second, audience metrics exert strong pressure on newsrooms to optimise content for clicks, shares, and other measurable indicators (Zamith, 2018). Dodds et al. (2023) show how “popularity-driven metrics” shift editorial power to platforms, reshaping newsworthiness, while Kristensen (2023) argues that “expected reception” now functions as a news value in digital journalism production. Although metrics have long shaped journalism, platforms intensify what Napoli (2011) calls the “rationalisation of audience understanding”—turning imagined publics into continuously measured and optimised data points. Recent research offers a more nuanced view of journalist–platform relations. While earlier studies stressed accommodation, newer work highlights resistance and tactical negotiation (Perreault et al., 2025; Walters, 2022). Ehrlén and Villi (2025) describe “opting out of analytics,” though such acts are usually individual and limited in impact, “more of a gesture than a real possibility,” while data-driven imperatives tend to disadvantage complex, procedural reporting vital to democratic innovations (Lischka & Garz, 2023). Metrics increasingly serve not only as optimisation tools but also as performance indicators, with direct implications for professional autonomy (Spyridou & Danezis, 2024).

Third, the growing dependency of news organisations on digital platforms has introduced new forms of economic precarity within the media ecosystem. As advertising revenue increasingly migrates toward dominant intermediaries such as Google and Meta, traditional news outlets face intensified challenges in maintaining financial sustainability (Pickard, 2020). This platform-driven redistribution of economic power has resulted in a structural imbalance where media organisations depend on platforms not only for audience reach but also for revenue generation. However, the revenue derived from these arrangements is often distributed unequally, with platforms retaining the largest share while content producers receive minimal returns (Rushidian et al., 2019).

Beyond economic asymmetries, platforms extract substantial value from user data generated through news consumption. Through advanced tracking and analytics, they gather detailed information on users'

preferences and behaviours, and monetise it via targeted advertising (Smyrnaio & Rebillard, 2019). Although news organisations produce much of the content driving this engagement, they lack comparable access to data or revenue from its monetisation (Nielsen & Ganter, 2018). This dynamic deepens what Myllylahti (2020) calls “platform capture,” whereby journalistic institutions become increasingly subordinate to the financial and algorithmic logics of infomediaries. As dependence grows, media bargaining power weakens, and journalism’s normative roles—informing citizens, holding power to account, and sustaining democratic discourse—are increasingly subordinated to market-driven imperatives.

4. Resilience as a Theoretical Bridge Between Normativity and Platformisation

This study uses the concept of resilience to explain how journalists navigate these conditions. In journalism studies, resilience has gained prominence as a framework for understanding how journalism adapts, transforms, and maintains its normative role during crises. Originating in ecological and organisational theory, resilience refers to the capacity of systems or actors to absorb shocks and adapt to change while preserving core functions (Walker & Salt, 2012). In the context of journalism, resilience has recently been taken up to describe the profession’s responses and resistance to political pressures (Jeppesen, 2016), attacks and violence against journalists (Ozawa et al., 2024), technological disruption and economic uncertainty (Mathisen, 2022), and to trauma caused by covering crises and disasters (Streedharan et al., 2019). In all cases, the notion of resilience is used to refer to strategies and attitudes employed to help journalists cope with uncertainty and threat in order to be able to perform their civic tasks. From a theoretical standpoint, resilience extends beyond mere survival; it encompasses the profession’s capacity to resist, adapt, and transform in ways that restore its civic purpose and ethical grounding within an environment of technological disruption, political polarisation, and economic precarity (Eldridge & Broersma, 2018).

Applied to journalism, resilience bridges normative commitments and the realities of platformisation. While normative theory defines journalism’s civic obligations and platformisation outlines the constraints on fulfilling them, resilience explains how journalists actively navigate this tension. It highlights agency, innovation, and learning within structural limits, rather than portraying journalism as either platform-determined or fully autonomous.

Moreover, the notion of resilience suggests that crises can also serve as catalysts for renewal (Zelizer, 2015). In this sense, resilience is not simply a return to the status quo but an adaptive process through which journalism reconfigures its practices to remain aligned with democratic values. This includes developing alternative funding models (Myllylahti & Meese, 2024), engaging more directly with communities (Jeppesen, 2016), reasserting editorial independence from political and platform interference (Ozawa et al., 2024), and developing editorial counterstrategies (Barrios & Miller, 2020). Ultimately, adopting resilience as a theoretical lens shifts journalism studies beyond crisis narratives toward a transformative framework centred on normative renewal. Resilience is thus positioned as both an analytical and prescriptive concept: It helps diagnose journalism’s structural vulnerabilities while also imagining pathways for ethical and democratic regeneration (Zelizer et al., 2022). As Carlson (2022) argues, journalism’s legitimacy rests not only on its epistemic authority but also on its moral and civic obligations.

The study distinguishes between *adaptive* and *transformative* resilience. Adaptive resilience refers to micro-level tactical adjustments that enable survival within existing structural constraints, for instance,

reframing stories for platform logics. While demonstrating professional agency, such strategies operate within parameters defined by platformisation and economic precarity. Adaptive resilience enables continuity but risks normalising degraded conditions by showing that journalism can function, albeit diminished, under adverse circumstances. Transformative resilience, on the other hand, involves efforts to fundamentally alter constraining structures through collective action, institutional reform, and regulatory intervention. This includes regulatory constraints on platform power and alternative business models that reduce algorithmic dependency. This distinction provides the basis for our analytical framework, through which we examine whether journalists' strategies function as adaptive responses or as transformative interventions, and what this means for journalism's enduring civic capacity.

5. Background: Democratic Innovations and the Visibility Problem

Democratic innovations seek to address deficits in trust, representation, and participation in contemporary democracies (Smith, 2009). PB, in particular, has been widely recognised for its potential to increase transparency, accountability, and citizen engagement in fiscal decision-making (Sintomer et al., 2016). More specifically, PB allows citizens to directly decide how to allocate portions of municipal or public budgets through structured processes of proposal, deliberation, and voting. For example, in Paris, residents voted on projects ranging from urban gardens to bicycle infrastructure; in New York, communities allocated capital funding for neighbourhood improvements. These processes typically involve multiple stages: community meetings to generate ideas, technical feasibility review, public voting, and implementation monitoring.

However, despite aligning with democratic ideals, democratic innovations often struggle to gain sustained media attention. Although coverage of PB has increased with its global diffusion, it remains largely superficial, frequently relying on press releases and showing low substantive relevance (Mendez, 2022). More in-depth reporting is more likely to highlight challenges, as negative framing rises with higher relevance. Media visibility is therefore crucial: As a communicative infrastructure for democracy (McNair, 2009), the media makes political processes observable and open to scrutiny. Without sustained coverage, democratic innovations risk remaining peripheral or vulnerable to manipulation.

6. Research Design

6.1. Sample and Recruitment

The study draws on interviews with 90 journalism professionals across seven countries: Greece, Cyprus, Romania, Poland, the Netherlands, the UK, and Ireland (Table 1). These countries were selected to capture variation across European media systems while maintaining comparability within democratic contexts. The sample includes Southern Europe (Greece, Cyprus), Eastern Europe (Romania, Poland), and Northern/Western Europe (Netherlands, UK, Ireland). Participants include reporters ($n = 54$), editors ($n = 28$), and digital content managers ($n = 8$) working across print, broadcast, and digital outlets. The sample includes journalists with varying levels of familiarity with PB: those who have covered or are familiar with PB initiatives ($n = 48$, primarily in Poland, Netherlands, Romania, UK) and those unfamiliar with the concept ($n = 32$, primarily in Greece, Cyprus, Ireland). Recruitment was facilitated through professional networks, academic contacts, and snowball sampling.

Table 1. Sample.

Country	Number of interviewees
Greece	15
Cyprus	12
Ireland	8
UK	14
Romania	11
Poland	15
The Netherlands	15

To investigate how journalists perceive and navigate the tension between journalism's civic mission and the pressures of platformisation, this study used semi-structured interviews. Interviews are particularly well-suited to capture the lived experiences, professional judgments, and interpretive frameworks of practitioners (Lindlof & Taylor, 2002). Interviews were conducted between March and December 2023 either face-to-face or via videoconferencing platforms, depending on participants' availability. Each interview lasted approximately 35 minutes. To address potential bias from cultural and linguistic differences, interviews were conducted in participants' working languages and analysed by researchers familiar with each national context. Regular team meetings ensured consistent interpretation across cases.

6.2. Data Analysis

An interview guide was developed to cover three key areas: (a) journalists' perceptions about citizen participation in PB and political processes in general, (b) parameters that would make PB and other democratic innovations more newsworthy as news items, and (c) perceptions of the role of journalism in sustaining democratic culture. Interviews were audio-recorded with participants' consent and transcribed verbatim. To ensure confidentiality, all identifying details were anonymised and participants are referred to by pseudonyms in the analysis.

The interview transcripts were analysed using thematic analysis (Braun & Clarke, 2006). The coding process followed a combined inductive–deductive approach (White & Cooper, 2022). In the first phase, transcripts were coded inductively to identify recurring themes, meanings, and concerns articulated by participants. The initial open coding revealed the following key themes: journalists' perceptions of democratic participation and PB, the newsworthiness of democratic innovations, perceptions of professional roles, and structural constraints in news production. In the second phase, deductive coding was applied using concepts derived from the theoretical framework—normative commitments, platform logics, and forms of resilience. Cross-national comparison was conducted analytically rather than through predefined media system typologies. Rather than treating national differences as variables to be controlled, the analysis focused on identifying shared perceptions and common professional responses across countries.

7. Findings

7.1. *Recognising Normative Failure: Journalists' Awareness of Democratic Deficit*

Throughout the discussions, the issue of democratic malaise emerged as a dominant concern in contemporary democratic life cutting across all seven countries. Participants referred to widespread democratic malaise characterised by declining trust, cynicism, and weakened citizen engagement. Journalists described societies oscillating between political frustration and sporadic moments of civic awakening. In Southern and Eastern Europe, malaise was frequently linked to corruption, institutional fragility, and economic precarity, while in Northern and Western Europe, to disconnection and technocratic politics. A Romanian journalist captured the prevailing sentiment: “People have stopped believing that their voice counts. They’ve seen too many promises and too few results” (Romania, #3).

Yet this recognition was accompanied by a self-critical awareness of journalism’s complicity in the problem. A Greek reporter reflected: “We have become part of the machinery that turns politics into spectacle. We talk about democracy, but our coverage often undermines it” (Greece, #2). Such reflexivity indicates that journalists acknowledge their share of responsibility and see themselves not only as observers of democratic erosion but also as its potential accomplice, an awareness that anchors a sense of professional responsibility.

Many journalists acknowledged that their own practices sometimes amplify political cynicism. The convergence of political influence, ownership concentration, and commercial priorities limits their capacity to fulfil journalism’s civic mission. A Cypriot editor noted: “You can’t talk about holding power accountable when your outlet depends on government advertising contracts” (Cyprus, #9). This recognition signals a wider sense of normative failure, the awareness that journalism no longer operates as the independent, civic institution it imagines itself to be (Siegelbaum & Thomas, 2016). At the same time, participants defended the watchdog role as essential even if it generates discomfort. A Dutch journalist explained: “If people lose trust in politicians because we reveal wrongdoing, that’s not our fault; it’s part of democracy” (The Netherlands, #12).

The contradiction here is instructive: Journalists maintain the ideal of serving democracy while operating within systems that incentivise negativity and dependence. Their reflections illustrate an ongoing struggle to balance critical scrutiny and sustainability with constructive contribution, a negotiation at the core of journalism’s normative (re)definition in the digital age (Carlson, 2017; Wu et al., 2019).

7.2. *Mixed Attitudes Toward PB and Professional Resilience*

Awareness of PB varied sharply among journalists. In Poland, the Netherlands, Romania, and the UK, respondents had experience with PB initiatives and generally regarded them as promising, though fragile, democratic experiments. In Greece, Cyprus, and Ireland, PB remained largely unknown, framed as a distant yet positive concept. Overall, journalists’ views were nuanced: While they endorsed PB’s democratic ideals, they remained sceptical about its practical impact, citing concerns about the capacity and credibility of the institutions tasked with implementing these initiatives. A Greek journalist summarised this ambivalence: “It’s a good idea on paper, but our institutions are not ready for it. Participation is used more as a slogan than a practice” (Greece, #8).

This scepticism toward institutional capacity coexists with a reluctance to see journalism as responsible for strengthening democratic innovations. Most interviewed journalists argued that their role is not to promote participatory tools but to observe, listen, and report. Maintaining neutrality and amplifying diverse voices—rather than acting as advocates—was viewed as central to their professional mandate. A journalist from the UK noted: “There is a trend for journalists to become activists and activists to call themselves journalists, leading to public confusion” (UK, #1). A Greek journalist articulated this position explicitly: “From the very beginning, the mission of journalism was to inform citizens. This is fully sufficient. If journalism does something different, it’s not journalism anymore” (Greece, #7).

A Dutch journalist articulated a more assertive view of journalism’s responsibility to provoke public debate through reporting and to play an active role in sustaining democratic culture:

As a journalist, you have a role in controlling politics; you have a role in informing readers; properly informing readers and making clear what choices they have. But ultimately, it is up to politicians themselves to get people to vote. That is in the end not the role of journalists. (The Netherlands, #3)

These contradictory positions reveal deeper tensions in journalistic role conceptions. The Dutch journalist’s focus on “controlling politics” reflects watchdog traditions in Northern European contexts with stronger press freedom. The Greek journalist’s stricter informational stance suggests a defensive response to greater political pressure. From a resilience perspective, these differences can be seen as context-specific adaptations: In more precarious environments, journalists maintain stricter boundaries as protection, while in more stable settings they can assume broader professional roles.

Despite differences in role conceptions, participants consistently attributed the success or failure of PB solely to institutional shortcomings. This externalisation of responsibility operates as an adaptive resilience strategy: It protects professional identity by avoiding the risks of more engaged coverage. The prevailing view confines journalism to reporting and questioning, rejecting advocacy. While this stance aligns with role conceptions prioritising neutrality and information provision (Mellado, 2020), it reveals the limits of resilience focused on survival. By adhering to strictly informational roles, journalists adapt to platform and economic pressures in ways that marginalise coverage of democratic innovations. At the same time, material constraints and weak press freedom safeguards (“Supporting freedom of expression,” 2021) limit their capacity to engage more critically with complex issues, raising doubts about whether a purely informational approach sufficiently supports democratic practice.

7.3. The Limits of Adaptation: When Resilience Reinforces Constraint

Almost all participants agreed that PB holds normative importance yet lacks news appeal. The core dilemma is structural: PB stories fail to meet the dominant criteria of newsworthiness—conflict, novelty, emotion, and simplicity—and thus struggle to gain traction within platformised media ecosystems. “PB is not sexy,” said an Irish journalist, “no scandal, no drama—so editors ignore it” (Ireland, #3). In a similar vein, a Polish journalist noted: “The democratic process is an extremely boring topic for the audience. No one would publish that. The process is too complicated” (Poland, #5).

This recognition of structural incompatibility marks the starting point of adaptive resilience: Journalists see the clash between democratic values and platform logics but adjust to the latter instead of challenging it.

Resilience thus takes the form of accommodation—professional survival achieved by accepting platform demands as unavoidable rather than open to change.

Elaborating further, the findings indicate that across all seven countries the influence of digital platforms and audience metrics has emerged as a critical factor shaping journalistic approaches to covering PB and other democratic innovations. The shift from traditional to digital media environments has fundamentally transformed editorial decision-making, often to the detriment of complex, policy-oriented reporting such as PB. In particular, the pressure to generate traffic is identified as the primary constraint:

Journalists should find a way to adjust what they want to say to what people want to read, and to present it in such a way so that people will want to read it; they must also know how the algorithm, the system, the social media, and the search engines can help them so that their content comes on top. Because if you write something and nobody reads it, your work is lost, there is no reason to do it at all. (Cyprus, #8)

The Cypriot journalist's reasoning reveals how platform metrics have displaced civic value as journalism's legitimating principle. Algorithmic visibility becomes not merely a practical consideration but an existential necessity. This algorithmic imperative fundamentally reshapes journalistic priorities, subordinating editorial judgment to platform visibility (Carlson, 2018). The click-driven paradigm directly undermines the possibility of substantive PB coverage, which requires explanation and context rather than sensationalism and visuals. Besides algorithmic visibility, participants highlighted how platforms demand "expected reception" (Kristensen, 2023), creating a destructive trade-off between speed and quality. One journalist observed: "Unfortunately, our audience wants to look through pictures, watch a short video, or read a short piece of information" (Romania, #9).

The acceptance of compressed formats and simplified narratives not only undermines the possibility of covering PB's procedural complexity, but also essentially exemplifies adaptive resilience at work: Journalists modify content to fit platform affordances, thereby maintaining relevance within algorithmic ecosystems. However, this adaptation simultaneously reinforces the very constraints that marginalise substantive civic coverage.

Beyond perceptions of low audience interest, journalists also attribute limited and superficial coverage of PB and other democratic innovations to resource constraints, especially time and funding. Newsroom downsizing (Porlezza, 2019) and increased productivity pressures have led fewer journalists to produce more content, fostering practices such as churnalism and low-cost reporting (Saridou et al., 2017). In this context, Dutch and British journalists in particular emphasised how platform-driven economic logics have been especially damaging to local journalism—precisely the level at which PB coverage would be most relevant. As one respondent noted: "I think there have been heavy cuts in local journalism, which means that what is happening there is followed less" (The Netherlands, #4). The decline of local media thus undermines reporting on democratic innovations that are inherently local in character. Moreover, the platform economy's concentration of advertising revenue in large national and international outlets systematically deprives the local journalism ecosystem of resources, even though this is where PB-related stories would most naturally find their audience.

The decline of local journalism shows the limits of adaptive resilience. When resources are significantly constrained, individual efforts cannot offset systemic shortages. This highlights the need for transformative resilience, namely collective action to reform journalism's political economy through regulation, public funding, or alternative business models. Yet such strategies are largely absent from journalists' accounts, suggesting that resilience operates primarily as a defensive mechanism rather than organised resistance to deteriorating conditions.

7.4. News Judgement, Autonomy, and the Internalisation of Constraint

Across all countries studied, journalists consistently described their autonomy as conditional rather than absolute. A Greek reporter captured this paradox succinctly: “[Journalism] is a place where you are free to decide, as long as your story gets clicks” (Greece, #7). This formulation exposes how datafication has fundamentally reconfigured professional decision-making. What appears as editorial freedom operates within pre-established parameters defined by audience metrics, advertising revenue, and platform visibility requirements (Zamith, 2018). The shift from professional judgement to datafication represents a profound transformation in journalistic culture (Spyridou & Danezis, 2024). Where news judgment once emerged from professional expertise and normative commitments to public service, decisions increasingly derive from algorithmic feedback loops. The prevalence of platform logics—speed, metrics, appeal—pushes journalists to privilege content that circulates easily, even when it contradicts public-interest imperatives. As one Dutch journalist put it: “You can write the best civic story, but if it doesn’t trend, it disappears in minutes” (The Netherlands, #3). This “algorithmic consciousness” (Bucher, 2018) reflects the voluntary incorporation of platform logics into editorial judgment. Journalists do not merely respond to metrics; they embrace them to produce content that aligns with predicted performance. The subsequent erosion of autonomy appears to be internalised as part of professional practice rather than experienced as an external imposition, with one participant observing that journalists “know how the algorithm, the system, the social media, and the search engines can help them so that their content comes on top” (Cyprus, #8). Such views reveal how adaptive resilience involves not just professional adjustment but epistemological accommodation: accepting platform logics as natural law rather than political-economic configuration subject to challenge and change.

Overall, platform logics put editorial autonomy under pressure. While many journalists reported feeling personally autonomous in story selection, they acknowledged broader structural constraints. A Greek journalist noted: “Stories with little commercial interest are considered of minor importance. Sometimes we are self-censored as we struggle to write stories that would have a commercial impact” (Greece, #2). This self-censorship, driven by internalised metrics awareness, represents adaptive resilience at its most problematic: Journalists pre-emptively exclude content deemed commercially unviable, thereby reproducing the very constraints they seek to manage. Rather than external censorship, the most insidious effect of platform logics lies in the voluntary alignment of professional judgment with commercial imperatives.

7.5. Adaptive Resilience: Micro-Strategies for Survival

Despite these constraints, journalists do not simply accept the decline of their professional authority. They employ various strategies to keep democratic innovations visible, even when audience interest seems low. These editorial practices reflect adaptive resilience—creative efforts to preserve civic content within hostile conditions. However, they are ambivalent, as they both support survival and legitimise existing constraints.

Some participants suggested exploiting metrics strategically, using engagement data to argue for the long-term civic value of democratic innovation coverage. The vast majority of respondents argued that either a human-interest angle—stories focusing on individuals transformed by PBs—or links to tangible outcomes can make PBs newsworthy within platform logics. A Cypriot journalist explained: “If the PB builds a park or a playground, then we have a story. People connect to results, not procedures” (Cyprus, #10). These micro-strategies reflect adaptive resilience: efforts to reframe procedurally complex democratic processes as outcome-focused narratives or personalised stories, thereby making them legible within platform logics.

Adaptation is shaped not only by commercial pressures but also by changing relationships with audiences. Journalists described audiences as fragmented, distracted, and less interested in complex civic issues. As one Polish journalist noted: “People don’t hate politics, they just don’t see why it matters” (Poland, #7). This perception encourages simplification. Journalists shorten and simplify coverage to match what they believe audiences want, which in turn reinforces more superficial storytelling. A Cypriot journalist explained: “We have to speak simply, otherwise no one reads us” (Cyprus, #10). The tension between simplicity and depth reflects journalism’s struggle within attention-driven media environments. What is framed as “reader-friendliness” often aligns with engagement optimisation. Efforts to make complex issues accessible can therefore end up adapting to platform logics rather than challenging them.

However, participants also recognised that such strategies cannot compensate for structural asymmetries. Without sustainable funding models, institutional safeguards for press freedom, and regulatory frameworks that constrain platform power, resilience operates as strategic adaptation rather than resistance and transformation in the direction of restoring journalism’s civic purpose.

From a theoretical standpoint, the resilience described in this study operates primarily as adaptive rather than transformative. It constitutes neither passive endurance nor active resistance but strategic navigation within constraint. Journalists deploy creativity and agency to maintain civic coverage in diminished form, demonstrating that journalism can function, albeit degraded, within platformised ecosystems. Yet this very demonstration carries risk: By showing that journalism survives within hostile conditions, adaptive resilience may inadvertently legitimise those conditions, reducing pressure for structural transformation. The ambivalence of adaptive resilience lies precisely in this tension: While it enables professional continuity, it may do so at the cost of normalising the very conditions that erode journalism’s democratic capacity.

8. Discussion

This study attempts to address several gaps in existing literature. First, while scholarship has extensively documented platformisation’s effects on journalism broadly (Nielsen & Ganter, 2022; Petré, 2021), we demonstrate how these dynamics specifically disadvantage coverage of procedurally complex democratic innovations. Second, we extend resilience theory beyond crisis response (Mathisen, 2022; Ozawa et al., 2024) to everyday adaptation to structural constraints. Third, we provide cross-national evidence of how journalists across diverse European contexts navigate similar tensions, suggesting platformisation as a homogenising force and adaptive resilience as a coping mechanism to safeguard professional practice.

Our framework brings together three perspectives that are often treated separately. Normative theory defines journalism’s ideals, platformisation explains the structural constraints it faces, and resilience shows

how journalists respond through adaptation and agency. Together, they present journalism as actively negotiating constraints—rather than being fully determined by them or fully free—a negotiation with important consequences for democracy.

The findings show that editorial decisions are increasingly shaped by algorithms, audience metrics, and economic insecurity, which prioritise visibility and engagement over democratic depth (Nielsen & Ganter, 2022). This reflects a broader shift in journalism from a relatively autonomous profession to a more fluid and precarious field (Deuze & Witschge, 2018). Professional authority, once grounded in editorial judgment and civic reasoning, is now often subordinated to metrics and data (Carlson, 2018). News judgment becomes a response to algorithmic visibility rather than democratic significance (Petré, 2021), narrowing what counts as newsworthy to what performs well with audiences (Spyridou & Danezis, 2024). These developments raise pressing concerns about platform dependency and editorial autonomy (Dodds et al., 2023).

The findings show that journalism adapts to platform logics, allowing civic reporting to continue in reduced form. Journalists use micro-strategies such as simplification, outcome-focused angles, and human-interest framing, to justify coverage of underrepresented topics. This reflects adaptive resilience: Journalism survives in difficult conditions, but by internalising the very pressures that threaten its normative role. This ambivalence is crucial. By operating effectively within platform systems, journalism may legitimise the commercial and algorithmic forces limiting its autonomy. In this way, professional survival can reinforce, rather than challenge, structural dependency (Pickard, 2020).

A further dimension of this paradox lies in the persistence of journalism's informational paradigm. Even when journalists recognise the democratic potential of PB, they remain reluctant to assume roles that move beyond detached observation. This professional conservatism reflects the enduring influence of occupational norms that prioritise neutrality and objectivity (Mellado, 2020). Consequently, journalism continues to describe democratic decline without necessarily engaging in practices that could help reverse it; journalism professionals position themselves as observers rather than participants in processes of civic reconstruction, thus narrowing journalism's democratic potential (Zelizer et al., 2022).

While adaptive resilience preserves some aspects of journalism's civic purpose, the findings underscore the absence of transformative resilience, namely the capacity to alter structural conditions rather than merely endure them. Transformative resilience would entail collective rather than individual adaptation, addressing systemic constraints through regulatory reform, sustainable public funding, and institutional safeguards for editorial independence (McChesney, 2015; Pickard, 2020). Without such systemic interventions, resilience remains primarily defensive, ensuring survival while leaving the political economy of platformised media intact.

The comparative findings support this interpretation. Although the nature and intensity of constraints differ across regions—political influence and financial insecurity being more pronounced in Southern and Eastern Europe, and platform dependency and commercial pressures stronger in Northern and Western Europe—the underlying tension between journalistic ideals and structural limitations is consistent. Platformisation acts as a unifying force that overrides national differences, aligning distinct media systems under shared algorithmic and market-driven priorities (Nielsen & Ganter, 2022). Despite these pressures, journalists across countries continue to invoke core professional values such as truth, accountability, and service to the public. However, these ideals increasingly function as expressions of professional identity

rather than principles that shape everyday practice, reflecting a widening gap between what journalism stands for and what it actually does. In this respect, the findings support journalism's normative failure (Siegelbaum & Thomas, 2016) and raise questions about the future of journalism as an institution serving democracy and democratic culture. Taken together, these findings suggest that journalism's democratic function cannot be restored through micro-strategies. Journalism's civic mission has become structurally incompatible with the economic and technological systems that now define it. In this context, reclaiming journalism's normative values entails policy intervention and new business models to allow journalism to reassert its moral and epistemic autonomy.

9. Limitations and Future Research

Several limitations warrant acknowledgement. First, our sample, while cross-national, focuses on European democracies and may not generalise to other contexts. Second, we rely on journalists' self-reported perceptions rather than newsroom observation or content analysis. Third, our focus on PB, while revealing, represents only one type of democratic innovation. Finally, this study captures a specific moment (2023) in rapidly evolving platform dynamics. Future research should examine coverage of other democratic innovations, and explore whether alternative funding models (membership, philanthropy, public subsidy) enable more substantive coverage of complex civic topics.

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Conflict of Interests

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Navigating Digital Surveillance in Later Life: Determinants of Identity Masking and Data Protection Practices

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Abstract

Surveillance is a systemic and systematic threat exacerbated by the context of polycrisis. Recent political and economic processes, focused on intensive data collection, have led to multiple agents engaging in both vertical and horizontal forms of surveillance. Within this context, this study addresses a gap in academic research by identifying the determinants of two types of protection practices that demonstrate the ability of older internet users in Spain to exercise resilience against digital surveillance: identity masking and data protection. Through logistic regression models, we analyse responses to an online survey ($N = 505$) conducted in late 2023 on perceptions and practices regarding surveillance by five agents: corporations, governments, social institutions, individuals, and malicious actors. Results indicate that greater engagement in both identity masking and data protection practices is related to ageist self-stereotypes and problematic conceptions of digital technologies, as well as to high and negative perceptions of surveillance by other individuals. However, perceptions of the remaining agents show no consistent effects on protection practices. These findings generate an interesting dialogue with previous contributions on resilience and surveillance, and invite further qualitative and contextual research into older adults' resilience and resistance to digital surveillance.

Keywords

data protection; digital protection practices; horizontal surveillance; identity masking; older internet users; digital surveillance; resilience to surveillance; vertical surveillance; Spain

1. Introduction

How, why, and by whom surveillance is exercised have all changed drastically over recent decades. Beyond being a source of political power, it has also become a global economic priority, and consequently, a myriad of agents engage in vertical and horizontal forms of surveillance for diverse purposes. As a result, surveillance has become a systemic and systematic threat to fundamental rights, liberties, and social justice (Raab et al., 2015; van Dijck et al., 2018; Zuboff, 2019).

This constant and unavoidable exposure to surveillance threatens fundamental rights such as privacy and data protection (DP). It hinders conscious control over the generation, spread, and use of the data produced by our daily activities, and hyper-exposes our identity by revealing several aspects of our lives to a growing number of social actors. However, research has shown that the perception of digital surveillance is not always related to greater engagement in digital protection practices (Gerber et al., 2018). While this evidence has been widely discussed, the specific case of older adults remains understudied, reinforcing digital ageism (Marciano, 2025).

This study aims to determine the determinants of digital protection practices adopted by older internet users (aged 60 and over) in Spain against surveillance. Spain is particularly relevant for the study of digital surveillance in later life, given the rapid expansion of internet use within this demographic, a process notably accelerated by the Covid-19 pandemic (Instituto Nacional de Estadística, n.d.). The country represents a characteristic instance of a Southern European welfare and digital ecosystem, distinguished by strong familial networks and with a past linked to a dictatorship in which study participants grew up.

To achieve this goal, we analysed data from an online survey as part of the international research project *Aging in Data*, conducted in late 2023. The project targeted the practices and perceptions of older internet users regarding five different surveillance agents. In addition to a set of articles that focused on each of the five surveillance agents separately across various countries (Fernández-Ardèvol et al., 2026; Gallistl et al., 2025; Léveillé et al., 2026; Nimrod et al., 2025; Rosenberg et al., 2026), this article examines all the agents simultaneously in Spain. Responses ($N = 505$) provide insights into older adults' digital attitudes and usage, as well as perceptions and evaluations of digital surveillance by the five agents. We relied on logistic regression models to analyse the relationship between the variables and two types of digital protection practices that emerged from our study: identity masking (IM) and data protection (DP). The question guiding our analysis is whether there is a distinct relationship (if any) between the high and negative perception of vertical (by institutional agents) and horizontal (by individuals) surveillance and IM or DP practices in later life.

We adopt a gerontoveillance (Marciano, 2025) perspective that incorporates the unique social and cultural dimensions of ageing, rather than framing surveillance merely as a care-related issue in later life. In doing so, we contribute to a much-needed understanding of the intersection of digital ageism and digital resilience to nowadays' pervasive surveillance in increasingly digitised ageing societies. Moreover, the study opens the door to further research that would help to find innovative ways to conceptualise digital resilience and to tackle sociodigital inequalities. The article is structured as follows: This introduction is followed by a review of the most recent and relevant academic literature on the subject. We then elaborate on our methodological approach for an analysis of the survey data, followed by a presentation and discussion of the principal findings. We conclude by acknowledging the limitations of our analysis and outlining potential directions for future research emerging from this work.

2. Older Adults' Resilience to Surveillance in a Polycrisis Scenario

2.1. A New Permanent Digital Surveillance System

In recent decades, a permanent digital surveillance system has been built up with significant implications for people's lives (Snowden, 2019; Zuboff, 2019).

State power has been traditionally linked to surveillance. From the mid-1900s until the fall of the Berlin Wall in 1989, the Stasi spied on the most intimate aspects of ordinary people. A vast network of informants was built, inducing civilians to betray their relatives and friends by reporting almost every aspect of citizens' lives. This was one of the most repressive and aggressive instances of state surveillance to date (Macrakis, 2008; Mayer-Schönberger & Cukier, 2014). In Spain, during Franco's regime (1939–1975), the Social Investigation Brigade was known for its harsh techniques of torture, infiltration, and “permanent and total surveillance” of all “enemies” of the state (Boletín Oficial del Estado, 1941). Years later, the al-Qaeda terrorist attacks in September 2001 constituted a turning point in the scope and scale of surveillance techniques. Already in 2001, Lyon (2001) highlighted an escalation of computer power allowing the storage, matching, retrieval, processing, marketing, and circulation of everyday life data. To prevent such an attack from happening again, the US Intelligence Community boosted a mass surveillance system. The US National Security Agency hired ICT specialists such as Edward Snowden, who, in 2013, overwhelmed by the magnitude of the mass surveillance system he had helped to create, revealed programmes such as PRISM (Snowden, 2019). In parallel, data also became a global economic priority. With the rise of “surveillance capitalism” (Zuboff, 2019), data became a raw material at the centre of a new economic order shaped by the growing influence of big technology corporations. Their ability to develop the technology for gathering and exploiting data, and their determination to commodify it, made these corporations inescapable digital intermediaries (Poell et al., 2019), becoming some of the richest companies in the world (“Fortune global 500,” 2025).

As a result of these political and economic processes, Western societies are experiencing a major digital transformation configured around the intensive collection of data (Mayer-Schönberger & Cukier, 2014; van Dijck et al., 2018). Although surveillance—from the French *surveiller*—implies an intrinsic hierarchical superiority of the surveilling agent over the surveilled, the terms “vertical” and “horizontal” are respectively used in academic literature to refer to surveillance carried out by institutional agents (e.g., schools, governments, corporations) and by other individuals (Quinn & Epstein, 2023). Terms such as “lateral surveillance” (Andrejevic, 2002), “participatory surveillance” (Albrechtslund, 2008), “social searching” (Lampe et al., 2006), “social surveillance” (Marwick, 2012), and “intimate surveillance” (Leaver, 2017) refer to peer or horizontal surveillance, with nuances. Regarding parent–child, child–parent, and parent–parent digital surveillance, Mols et al. (2023) advocate for the term “family surveillance.”

Surveillance in this context (also known as “dataveillance”) is inherent in the daily use of ICTs and has become pervasive, systemic, and systematic (Büchi et al., 2022). Consequently, a wide range of surveillance agents can now gather and process data. Essentially, corporations, governments, social institutions, other individuals, and malicious actors analyse data for a variety of purposes, including political or social control, economic profit, caring for relatives, or a combination of these (Nimrod, 2024).

2.2. Resilience to Surveillance in a Polycrisis Scenario

Resilience is a controversial concept, whose lights and shadows have been discussed by different academic schools of thought (Bourbeau, 2013; Neocleous, 2013). Feminist theory, for example, has criticised how neoliberalism has used it to reframe structural issues as personal, often placing the onus on vulnerable individuals or groups to resolve them (McAfee & Howard, 2023). Raab et al. (2015) critically analyse pertinent contributions to resilience studies and apply them to the context of mass surveillance after Snowden. Drawing on their work, we define resilience to surveillance as the individual or social capacity to cope with, withstand, recover from, or successfully adapt to the impact, stress, and shock caused by surveillance. Resilience is, thus, a prerequisite for resistance, which can be considered a response that focuses on opposing, protesting, or implementing defensive measures to manage current surveillance. In the face of surveillance, digital protection practices are therefore evidence of the capacity for digital resilience.

Surveillance has usually been justified in the name of resilience to security threats, appealing to the traditional trade-off model between security and privacy (Monahan, 2012), as often happens with unpopular and repressive measures (Klein, 2007). Moreover, the current polycrisis scenario (Morin & Kern, 1999)—characterised by intersecting financial, ecological, migratory, geopolitical, and health crises—has recently been highlighted as a growing global risk (Serhan, 2023; Tooze, 2022; World Economic Forum, 2023), thus keeping arguments in favour of surveillance constantly active. Interestingly, Raab et al. (2015) note that, while this praxis has paradoxically forged a public understanding of “surveillance as resilience,” the profoundly negative threats of surveillance require characterising and studying “resilience to surveillance.” Hence, they conceptualise three fundamental elements of resilience to surveillance: (a) the reference point of normalcy, (b) the timescale, and (c) the role of perception. Firstly, resilience actions may encompass diverse strategies to anticipate, prevent, tolerate, absorb, recover, restore, resist, learn from the past and the present, and plan for the future. Their aim is to return to a previous state of normalcy or evolve towards a new one. Therefore, the reference point of normalcy operates as a driver for resilience. Even so, different social groups may differ in what is or should be “normal,” and may evaluate differently the positive or negative nature of a given stress or shock, or the measures to counteract it. Secondly, the timescale of a stressful, aversive change is crucial for examining resilience. If its intensification is too slow, it may go unnoticed and its impacts can be hardly recognisable, thereby failing to prompt conscious and effective resilience. If, on the contrary, it is sudden, its consequences may be more clearly recognisable, which (in principle) facilitates resilience, unless full recovery is slow, partial, or uneven, blurring the effects of resilience and hindering its effectiveness. And thirdly, perception is key. Both the reference point of normalcy and the timescale influence citizens’ perception of the situation and, consequently, their disposition for resilience. The perception of a shock-like stress differs strongly from a gradual, incremental, and sustained one. In the first case, the moment of perception is immediate, causing a well-identifiable shock. In the second, it is belated, eroding the reference point of normalcy and causing sustained stress that may be difficult to identify and resist.

Surveillance shocks such as the Snowden case or Cambridge Analytica increased citizens’ concerns and led to certain resilience strategies (Boerman et al., 2021). However, they merely allowed a glimpse of a system that has been (and still is) stealthily, ubiquitously, and gradually deployed, with detrimental “chilling effects” that cause the “self-inhibition of (legitimate) behaviours” (Büchi et al., 2022, p. 2), including resilience to surveillance (Raab et al., 2015).

Although surveillance often impacts the whole population, it also tends to particularly harm certain individuals or social groups. This is the case of older adults, who have become the focus of both vertical and horizontal digital surveillance (Berridge & Fox Wetle, 2020). Nevertheless, despite many studies examining perceptions, attitudes, and practices regarding surveillance of younger citizens, or comparing younger and older cohorts, often with a low average age, the relationship between older people and surveillance remains understudied. Apart from some recent contributions (Marciano, 2025), exceptions are limited to the specific field of health and care (Friedman et al., 2022; Gupta & Chennamaneni, 2018; Marston et al., 2019; Morrison et al., 2021; Mortenson et al., 2015). Indeed, studies on the digital practices of older adults are often reduced to whether or not they use digital technologies and tend to present them as a “homogeneous group characterised by technophobia, digital illiteracy, and technology non-use” (Neves et al., 2018, p. 237).

Further emphasising the importance of studying surveillance in later life, research indicates that surveillance resilience is context-dependent and generation-specific. It depends on the exposure to global technological developments and the sociohistorical context in which each generation formed its views on surveillance (Kalmus et al., 2022; Raab et al., 2015). Thus, it is particularly relevant to study citizens' attitudes towards contemporary surveillance among those who experienced totalitarian or authoritarian regimes. Kalmus et al. (2022) demonstrate consistent generation-specific differences in the predictors of tolerance toward state or corporate surveillance by comparing an older cohort that mainly formed their worldviews under authoritarian regimes with a younger group without the same experience. Results indicate higher perceptions of state surveillance among older adults exposed to authoritarian or totalitarian regimes (in this case, Portugal and Estonia), more tolerance toward online state surveillance among the older group, and more tolerance toward corporate surveillance among the younger one. Similarly, Raab et al. (2015) report that citizens who have been exposed to long authoritarian regimes have increased vulnerability and decreased resilience towards new forms and technologies of surveillance. While their suspicion of the state remains high, they are more susceptible to surveillance exerted by private agents who are not perceived as harmful. In this respect, Duffy and Chan (2019, p. 121) note that people's behaviour is influenced by “imagined surveillance” or how they perceive the scrutiny they are subjected to and the opportunities or risks it may present, depending on whom they imagine is watching (Litt & Hargittai, 2016).

Consequently, this article closes a pertinent gap in the literature by concentrating on the factors that influence engagement in digital protection practices and their correlation with perceptions of digital surveillance among adults who are likely to have spent their childhood and youth in Francoist Spain.

2.3. From Perception to Resilience to Surveillance

The threats posed by digital surveillance have been widely discussed in terms of privacy harms. Although some studies confirm a positive correlation, scholars have also highlighted a “privacy paradox” demonstrating that people's digital practices do not necessarily align with their surveillance concerns (Gerber et al., 2018). This evidence underscores the importance of carefully analysing the role of perception in the ability to exercise digital resilience against surveillance through specific digital protection practices. Proponents of the “privacy calculus” approach argue that digital practices reflect a rational calculation of the risks and benefits of using digital technologies, which influences the likelihood of engaging in digital protection practices or leads to non-protective behaviours (Barth & de Jong, 2017; Dienlin, 2023), including among older people (Gupta & Chennamaneni, 2018). The proven discordance between practices and

concerns, which from the privacy calculus perspective is not necessarily paradoxical, has been attributed to informational gaps, cultural backgrounds, or negative privacy experiences (Kalmus et al., 2022), as well as online apathy or digital resignation (Draper & Turow, 2019; Hargittai & Marwick, 2016). Segijn et al. (2022) found a positive relationship between the perceived level of surveillance (PS) and privacy concerns, privacy risk perception, perceived vulnerability, perceived severity, creepiness, surveillance concerns, and perceived personalisation.

Engagement in digital protection practices in the face of surveillance or privacy threats has been linked to privacy and surveillance concerns and attitudes, and to factors often associated with the digital divide. These include digital knowledge, skills, experience, the diversity of internet use, and sociodemographic factors like education, gender, age, and socioeconomic status (Bartol et al., 2024; Büchi et al., 2021; Hänninen et al., 2025). Boerman et al. (2021) contend that individuals are more likely to protect their privacy online when they believe their protective practices are effective, and perceive the collection, use, and sharing of their personal information on the internet as a severe problem. However, their findings did not reveal a connection between perceived susceptibility to online privacy threats and perceived self-efficacy in protecting privacy online. Kalmus et al. (2022) identify self-confidence and functional diversity in internet use, trust in the media, digital skills, attitudes, values, and mindsets as predictors of tolerance toward surveillance. Furthermore, they note that people tend to be more concerned about others receiving sensitive information about them than about algorithms collecting their data. Conversely, Quan-Haase and Ho (2020) argue that older adults are less concerned about social privacy than about security or institutional privacy, and Dombrowski (2023) highlights the social and context-dependent nature of privacy protection.

Regarding older adults, Mariano et al. (2022) highlight that the anxiety linked to the worry of confirming negative age stereotypes about technological inability leads older adults to decrease their use of technology. This is influenced, in turn, by the perceived usefulness and ease of use of technology. Ageist (self-)stereotypes regarding technology use are therefore a relevant factor in understanding older people's digital practices (Köttl et al., 2021; Mannheim et al., 2023). Similarly, in addition to the digital divide, Marston et al. (2019) identify apprehension about digital technology, a lack of interest, and difficulty in learning to use it as detractors of older adults' technology use. Conversely, having access to technology, perceived learning and sharing opportunities, being connected with relatives and friends, or being reachable in case of a health emergency are drivers for technology use in later life. In that regard, Boström et al. (2013) previously noted that older people often have ambivalent feelings and attitudes towards online surveillance: While they highly value privacy, they will accept some surveillance if it ensures security, leading to both positive and negative feelings about surveillance. Trust in the surveillance agent and the perceived need for surveillance have also proven to play a relevant role in its acceptance (Thompson et al., 2020). The term "careful surveillance" acknowledges this conflicting relation between trust and certain horizontal forms of surveillance including self, mutual, everyday, interpersonal, careful, and caring surveillance (Andrejevic et al. 2021).

Finally, studies indicate that surveillance concerns may be addressed differently by diverse types of digital protection practices. Thus, it has been argued that it is crucial to differentiate between practices intended to enhance general caution or limit the self-disclosure of information from those aimed at technically safeguarding privacy (Boerman et al., 2021; Buchanan et al., 2007); as well as between those intended to address the audience, the content, or the connection to one's identity (Duffy & Chan, 2019).

3. Methods

Drawing on the literature discussed, this study focuses on identifying the factors determining the adoption of different digital protection practices by older internet users. Following the surveillance network framework (Marciano, 2019), we analyse the perceived surveillance and the positive or negative evaluation of five agents as identifiers of vertical and horizontal contexts in which surveillance can occur (Quinn & Epstein, 2023). Vertical surveillance originates from commercial corporations and companies (e.g., retailers, department stores, technology companies), government agencies and state or local authorities, social institutions (e.g., non-profit organisations, religious institutions, political movements, social clubs), and malicious actors (e.g., scammers, criminals, entities involved in defrauding or stealing information). Horizontal surveillance originates from individuals (e.g., family members such as children and siblings, close friends). Based on the literature, we additionally consider three other sets of factors expected to influence surveillance acceptance and digital protection practices. The first is attitudes towards digital technology (or digital attitudes): self-stereotypes and the feeling that technologies are problematic may compromise older individuals' adoption of new technologies. The second is whether more digital usage leads to higher digital protective practices, and the last is sociodemographic characteristics such as age, gender, and income.

Analyses were conducted with SPSS v29 (principal components analysis) and R v4.4.1 (logistic regressions—glm function available on the base “stats” package).

3.1. The Sample

Given the relevance of the Spanish context for studying digital surveillance in later life, we analyse data gathered in Spain ($N = 505$) from a survey conducted in late 2023 across six countries through an opt-in online panel, as part of the Aging in Data project. The questionnaire (available in Nimrod, 2024) was originally written in English and subsequently translated into Spanish by the same research team involved in the project. To fully ensure consistency, an iterative process of back-translation was carried out until the translation accurately matched the original. The questionnaire design operationalises a range of attitudinal factors and self-declared behaviours related to ICT uses, the perceived surveillance by different agents, attitudes and concerns about the use of digital technologies and surveillance outcomes, and online protection practices. It also includes sociodemographics and other potential confounders.

With an average age of 67.89 years ($SD 1.16$), up to 60% of respondents identified as male, and almost one-third (29.9%) declared educational attainment up to high school. The usual selection biases in online surveys (e.g., Cea D'Ancona, 2025) were influenced by the digital divide affecting later life in the country (Instituto Nacional de Estadística, n.d.). Informed participation in the study required more than basic digital skills, resulting in a sample that was younger and better educated than the average Spanish population aged 60 and over, with an over-representation of male participants. Furthermore, 47.5% of respondents reported living in a large city or its suburbs (only 22% in a rural area), 78% had children, and 62% were retired. Regarding digital practices, one-to-one communication was the most frequent purpose of internet use, with 30% always using the internet for this purpose (57% doing so often). These sociodemographic and sample features will be considered for a more nuanced discussion.

3.2. Key Variables

To measure older adults' digital protection practices, we analysed 14 items with values ranging from 1 (*never*) to 5 (*always*). The data demonstrated the necessary underlying correlation (KMO 0.970, Bartlett's test of sphericity $p < 0.001$). We used a principal components analysis with Varimax rotation of 13 variables (one excluded because of a lack of significant load in the principal components analysis, leading to loads of at least 0.49 for the remaining). To handle missing values, we used mean substitution, a valid approach in social sciences when the underlying correlation is high and missing values are limited (in our case, always below 5% except for one variable, which was 6.6%). The two extracted factors (eigenvalues > 1) explained 55.6% of the variance. Results revealed an underlying structure of two factors which constitute interpretable and meaningful types of protective practices: IM and DP. Drawing on evidence from the aforementioned studies, they are sufficiently relevant to be analysed separately. Given the modest percentage of the explained variance, IM and DP were operationalised as affirmative (value 1) when participants reported undertaking at least sometimes more than half of the practices listed in Table 1 (value 0 otherwise). This threshold acknowledged the impossibility of always implementing the analysed practices and sought to identify cases in which digital protection was varied and, as a result, appeared more integrated into individuals' daily lives. The dichotomisation process also resolved the issue of missing values. Table 1 presents the elements and distribution of each type of protection practice. IM refers to a range of strategies that enable users to protect their personal identity or individual traits through procedures that do not necessarily require advanced digital skills. DP, on the other hand, encompasses a range of practices aimed at protecting data, some of which require a higher degree of digital competence. Notably, IM and DP show distinct patterns of

Table 1. Elements and distribution of IM and DP protective practices (endogenous variables; $n = 503$).

While using the internet, how often do you do the following things? (1 <i>Never</i> –5 <i>Always</i>).	Mean	SD*	Missing N*
Identity masking (IM)			
Decide not to use a website because they ask for your real name	2.53	1.280	13
Delete or edit something you posted in the past	2.16	1.168	18
Use a temporary username or email address	1.95	1.116	9
Use a fake name or untraceable username	1.86	1.130	6
Give inaccurate or misleading information about yourself	1.77	1.046	9
Ask someone to remove something that was posted about you online	1.65	0.987	18
Use a public computer to browse anonymously	1.50	0.937	5
Data protection (DP)			
Clear cookies and browser history	3.28	1.289	8
Restrict the amount of personal data seen by other people in your social media profiles	3.13	1.389	13
Use a pop-up window blocker	2.67	1.367	20
Set your browser to disable or turn off cookies	2.58	1.287	22
Encrypt your communications (or make sure that the communication is encrypted by the app)	2.20	1.248	33
Use services that allow you to browse the web anonymously, such as a proxy server, Tor software, or a VPN	2.02	1.229	22

Note: * Missing values replaced by the respective variable average.

response regarding their frequency. The respondents reported doing DP practices nearly twice as frequently as IM practices on average, although some items in each construct were reported to be performed more frequently than others.

Table 2 shows the variables that we analyse as potential determinants of IM and DP (for a more detailed version, see Table S.1 in the Supplementary File).

Firstly, we examined the perceived surveillance (PS) by the agents in the study: corporations, governments, social institutions, individuals, and malicious actors. Respondents were presented with statements, following

Table 2. Exogenous variables in the logistic models (ordered by variable type) and their distribution ($N = 505$).

Continuous variables	Mean	SD
Device usage (number of devices)	2.89	1.156
Self-stereotypes (factor)	0.00	1.000
Problematic conceptions of digital technologies	2.60	0.861
Age	67.9	6.352
Discrete variables	N	%
Internet usage (weekly usage range, hours)		
0-7	112	22%
8-14	129	26%
15-21	121	24%
22-28	64	13%
>28	76	15%
NA	3	
Perceived surveillance (PS)		
Corporations (high)	342	68%
Governments (high)	256	51%
Social institutions (high)	164	32%
Malicious actors (high)	283	56%
Individuals (high)	88	17%
Negative evaluation of surveillance (NE)		
Corporations (high)	196	39%
Governments (high)	159	31%
Social institutions (high)	114	23%
Malicious actors (high)	253	50%
Individuals (high)	40	8%
Gender identity		
Male	304	60%
Female/Other	201	40%
Income declared		
Below average	368	73%
Above average	137	27%

the scale validated by Segijn et al. (2022). For each agent, respondents were invited to provide information on four dimensions: “To what extent do you believe that on the internet, [this agent is]...watching your every move/checking up on you/looking over your shoulder/entering your private space?” Answers ranged from (1) “strongly disbelieve” to (5) “strongly believe.” Those answering (4) or (5) were then asked to evaluate the surveillance by that specific agent. Negative evaluation of perceived surveillance (NE) reflects the perception of those who considered such surveillance as either much more negative or more negative than positive. For the first measure (PS), we dichotomised responses, classifying individuals as having a “high perception” if they answered (4) or (5) on at least one item. The second measure (NE) is also dichotomous, identifying individuals who simultaneously perceived high surveillance and expressed a strong negative assessment of it. The responses for these two variables highlight several points. The agent with the highest level of PS is corporations (68% perceived it as high), followed by malicious actors (56%), and governments (51%). At the other end of the scale, social institutions (32%) and individuals (17%) are less often perceived as surveillance agents. When considering the assessment of surveillance when it is highly perceived, malicious actors are the most negatively evaluated (89%), followed by social institutions (70%), governments (62%), corporations (57%), and individuals (45%). In all cases, almost half of those with a high perception of surveillance by an agent evaluate this surveillance negatively.

Secondly, we analysed the number of devices and the frequency of internet usage. Respondents declared using an average of nearly three devices to access the internet, and half of them spent between eight and 21 hours on the internet per week. Thirdly, there are two indicators concerning attitudes towards technology. The first is age-related self-stereotypes regarding digital technologies (“self-stereotypes”) which include three items: “If young people are residents in technology-land, I may be considered an immigrant”; “I am better at understanding and using technology than young people” [reverse coded]; “I am typically behind younger persons in my family in the technologies I use.” We operationalised a single continuous measure of this variable using the factor score derived from a principal components analysis (KMO 0.62, Bartlett’s test of sphericity $p < 0.001$). Then we operationalised problematic conceptions of digital technologies as an average measure of three statements, after confirming that they shared common variance, measured with values ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The items were: “The constant developments and upgrades in technologies are a burden for me”; “Technologies make me do things more slowly”; “Technologies create many more problems than I would otherwise experience.” Finally, the sociodemographic variables serve as control variables, primarily considering age, gender self-identification and household income.

3.3. Model Specification

In Section 4, we discuss four logistic regression models aimed at explaining IM (Model 1, Model 3) and DP (Model 2, Model 4). Models 1 and 2 focus on PS by the five agents, whereas Models 3 and 4 consider NE of such surveillance. Beyond these, the models have the same structure and include digital attitudes, digital usage, and control variables as explanatory variables (Table 3). Note that previous specifications—not reproduced here—included other key items (mainly self-perceived digital knowledge and privacy risk), which were eventually excluded because they showed no stability across the models and did not improve the overall models’ goodness of fit. Besides, the final socioeconomic variables are limited to age, gender, and income because the last two were found to capture other compositional effects (e.g., income captured the educational level)—possibly a consequence of the sample characteristics—and allowed a more straightforward interpretation. This approach

allows a parsimonious evaluation of the distinct effects on IM and DP while comparing differentiated analyses of surveillance perception among the older adults in the sample.

4. Results and Discussion

The four models have pseudo R^2 values ranging from 0.09 to 0.16 and adjust better for IM than for DP. They are also more stable when focused on the same dependent variables (i.e., Models 1 and 3, and 2 and 4). The variance inflation factors were verified, and no relevant multicollinearity was found (see Table S.2 in the Supplementary File). There is a compositional relationship regarding both IM and DP in the sample. Individuals who identified as female or with gender identities other than male are less likely to engage in either type of digital protection practice (coefficients between -0.456 and -0.409 , Models 1 to 4). In parallel, higher income levels are negatively associated with IM and DP (coefficients between -0.552 and -0.407 , Models 1 to 4).

Models' estimations (Table 3) reveal two robust determinants of both IM and DP. Firstly, age-related self-stereotypes show a significant relationship in the four models, with negative coefficients from -0.397 to -0.431 . Secondly, the results are also robust across the four models concerning conceptions of digital technologies. Stronger problematic conceptions of digital technologies are associated with more engagement in IM and DP (parameters between 0.269 and 0.677). These results confirm the powerful role of age-related stereotypes and negative feelings towards digital technologies as mediators of the digital protection practices of older adults in the presence of surveillance (Boström et al., 2013; Mariano et al., 2022; Marston et al., 2019).

The number of devices and the frequency of internet usage have poor explanatory power, as neither yielded statistically significant parameters in any model. Regarding this result, the nuance introduced by Kalmus et al. (2022) enables an insightful interpretation in relation to the problematic conceptions of digital technologies and the role of self-stereotypes, as the relevance of use is not necessarily its intensity but the fact that it is self-confident and functional.

Regarding the influence of PS and NE, the results indicate that individual surveillance agents play a differentiated role. A high level of PS by other individuals, and its NE, are both consistently associated with engagement in digital protection practices across three of the four models. In particular, IM is increased by both PS by other individuals (0.693, Model 1) and its NE (0.943, Model 3), whereas DP is significantly increased by a NE of this agent (0.742, Model 4). Additionally, in Model 1, only PS by commercial corporations shows a significantly NE (-0.580) with IM, suggesting that individuals with higher levels of PS by corporations are less likely to engage in IM practices. Neither PS from other agents, nor their NE, are related to IM or DP.

Responding to our guiding research question, our results indicate a distinct relationship between the PS and NE of vertical and horizontal surveillance and the IM and DP practices of older internet users in Spain. This finding allows for an interesting discussion and several considerations. Firstly, our research demonstrates that, among older internet users in Spain, PS depends on the surveillance agent and, by extension, on the surveillance context (vertical or horizontal; Kalmus et al., 2022; Quan-Haase & Ho, 2020). Moreover, when this perception is high, its evaluation is predominantly negative. Secondly, the differing performance of IM and DP in the models confirms the analytical and conceptual pertinence of studying protection practices

Table 3. Logistic regressions: IM and DP models.

		Model 1 IM	Model 2 DP	Model 3 IM	Model 4 DP
Digital attitudes	Self-stereotypes (factor)	-0.412*** (0.146)	-0.431*** (0.117)	-0.423*** (0.144)	-0.397*** (0.115)
	Problematic conceptions of digital technologies	0.655*** (0.159)	0.269** (0.131)	0.677*** (0.160)	0.277** (0.131)
Digital usage	Internet usage (range of hours)	0.059 (0.087)	0.033 (0.073)	0.065 (0.087)	0.040 (0.072)
	Devices usage (number)	-0.099 (0.108)	0.081 (0.091)	-0.087 (0.107)	0.115 (0.091)
PS & NE of such surveillance, by agent	Corporations (PS)	-0.580** (0.284)	-0.030 (0.231)		
	Corporations (NE)			-0.245 (0.264)	-0.174 (0.215)
	Governments (PS)	0.130 (0.293)	0.193 (0.232)		
	Governments (NE)			-0.040 (0.306)	-0.096 (0.248)
	Social institutions (PS)	0.335 (0.291)	0.236 (0.246)		
	Social institutions (NE)			0.309 (0.321)	0.229 (0.272)
	Malicious actors (PS)	0.297 (0.275)	0.279 (0.218)		
	Malicious actors (NE)			-0.109 (0.244)	0.140 (0.198)
	Individuals (PS)	0.693** (0.294)	0.249 (0.274)		
	Individuals (NE)			0.943** (0.402)	0.742* (0.403)
Control variables	Age (log)	-2.001 (1.329)	-0.261 (1.084)	-1.637 (1.352)	-0.122 (1.084)
	Gender (female & other)	-0.456* (0.244)	-0.428** (0.199)	-0.440* (0.241)	-0.409** (0.198)
	Income (above average)	-0.552** (0.281)	-0.407* (0.219)	-0.522* (0.278)	-0.408* (0.218)
	Constant	5.73 (5.691)	-0.016 (4.661)	4.189 (5.771)	-0.470 (4.653)
	R ² Nagelkerke	0.16	0.10	0.14	0.09
	Log likelihood	-242.751	-328.771	-246.657	-330.874
	Akaike Information Criterion	511.502	683.541	519.314	687.748

Notes: $n = 502$; reported values $-\beta$ (SD); *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

separately (Boerman et al., 2021; Buchanan et al., 2007; Duffy & Chan, 2019). Thirdly, the inconsistent association of PS by corporations with IM (not consistent in the case of NE in either of the models or in relation to DP when examining PS), and the lack of relationship of both the PS and NE of the remaining agents with IM and DP (with the exception of individuals), reinforce previous findings on the discrepancy between concerns about digital surveillance and the absence of digital protection practices (Gerber et al., 2018). This also highlights the importance of studying vertical and horizontal surveillance separately, as they may be influenced by different factors that compromise protection against them (Andrejevic et al., 2021; Boerman et al., 2021; Dombrowski, 2023; Kalmus et al., 2022; Thompson et al., 2020). In this regard, the influence of PS from individuals (horizontal surveillance) and its NE in both IM and DP is interesting when considering some contextual elements. One is that surveillance by individuals is the least perceived as high, and that half of those who perceive it as high evaluate it negatively. Another is that, even if DP practices are more frequent, IM shows more association with PS or NE. It should be noted that one-to-one communication is the most frequent internet use purpose of respondents, and the vast majority of them have children. Lastly, trust in the surveillance agent and the need to stay connected with them are relevant drivers of surveillance acceptance (Marston et al., 2019; Thompson et al., 2020), independently of whether this may generate ambivalent or negative feelings (Boström et al., 2013). Ultimately, our study does not confirm previous associations of digital protection practices (Kalmus et al., 2022) with knowledge gaps or the perceived risk to privacy, given that these did not perform well in our models. Instead, it draws attention to the relevant role of self-stereotypes and problematic conceptions of technologies as potential predictors of apparent digital apathy or resignation in later life (Draper & Turow, 2019; Hargittai & Marwick, 2016).

Based on our results, qualitative studies would be useful to explore further why horizontal—and not vertical—surveillance activates digital protective practices. From the perspective of horizontal surveillance (whether in later life or not), digital protective practices may constitute ways of negotiating trust, intimacy, safety, and control with others to sustain digital autonomy (Andrejevic et al., 2021). Thus, our study suggests that older people appear to be in a period in which surveillance by other individuals, and therefore horizontal forms of surveillance, might be under special negotiation. The role of perceived severity and ineffectiveness of protective practices against vertical surveillance is also worth exploring further (Boerman et al., 2021), as well as whether surveillance protection is related to a rational calculus (Dienlin, 2023; Gupta & Chennamaneni, 2018) or ambivalent feelings and attitudes (Boström et al., 2013). It is also relevant to further investigate the social and contextual elements shaping older adults' protection practices, including the generational experience of the Spanish dictatorship, along with the slow and stealthy transition to a mass digital surveillance system (Dombrowski, 2023; Kalmus et al., 2022; Raab et al., 2015) marked by a context of polycrisis. These are structural factors that also affect “possible” and “effective” protection practices against surveillance.

5. Conclusion

This study offers novel insights into the determinants of digital resilience to surveillance among older internet users in Spain, successfully dissecting protective practices into two distinct strategies to prevent and cope with surveillance: IM and DP. It does so in a context of polycrisis that keeps arguments in favour of a mass surveillance system constantly active. This system has been stealthily, ubiquitously, and gradually implemented over recent decades, eroding the reference points of normalcy and causing sustained stress that may be difficult to recognise and resist.

Results indicate that only the high and negative perception of horizontal surveillance (by individuals), alongside ageist-related digital attitudes, are associated with greater engagement in both IM and DP practices among older internet users in Spain. Neither the high perception nor the negative evaluation of vertical surveillance (by corporations, governments, social institutions, or malicious actors) play a relevant role. We therefore conclude that it is of paramount importance to cautiously assess the role of high surveillance perception as a predictor of resilience to surveillance to avoid: firstly, placing the burden on individuals to cope with its detrimental effects; and secondly, seeking individualistic answers to the lack of association between the high levels of perception and negative evaluation of surveillance and the lack of engagement in protection practices. To thoroughly understand older adults' protective practices against surveillance, it is relevant to analyse, at least, their perception of: (a) the context and vertical or horizontal nature of surveillance and its effects; (b) the surveillance agent—acknowledging the conflicting influence of dynamics of trust and care, or the potential benefit of being under its surveillance; (c) the effectiveness of diverse types of digital protection practices when facing specific surveillance agents; (d) ageist stereotypes regarding digital technologies; and (e) the useful and confident or, on the contrary, problematic conceptions of technologies. These perceptions must be contextually assessed in relation to the generation-specific experience of surveillance, including the sociocultural background and the global technological developments witnessed. All of these factors shape the reference point of normalcy, the timescale, and the perception of surveillance, and consequently, resilience and resistance to it.

This study has limitations. Firstly, the sample of older internet users is not fully representative of the general Spanish population aged 60 and over. Specifically, due to the digital divide affecting later life, the participants are typically younger, better educated, and there is an over-representation of male respondents. Besides excluding less digitally proficient users, an opt-in online panel might skew the sample towards particular forms of digital privacy concerns, a dimension that warrants further research. Furthermore, as this analysis relies on cross-sectional data, the assumed causal relationships in the logistic regression models are theoretically grounded but cannot be definitively established.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

Data and materials to be archived at Concordia University's Borealis Data Repository (<https://borealisdata.ca/dataverse/concordia>).

Supplementary Material

Supplementary material for this article is available online in the format provided by the authors (unedited).

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When Trust Facilitates Risk: Older Adults' Navigation of Deceptive Content in Urban China

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Abstract

Older adults in China are increasingly active digital users, but they encounter distinctive challenges when navigating deceptive content online and offline, including misinformation, disinformation, and cyber fraud. Drawing on 35 in-depth interviews with older adults aged 50+ in urban Beijing, this exploratory study examines how older users encounter, interpret, and respond to deceptive content in everyday digital practices. Instead of relying solely on individual cognitive skills, participants described resilience as emerging through interconnected multiple layers of support, including family consultation, peer discussion, platform-level safeguards, and institutional assistance. The analysis identifies a recurring tension within trusted social networks: While relational expectations and norms of reciprocity may encourage information sharing, they may also discourage correction, creating what this study conceptualizes as a *human sentiment barrier*. This concept builds on sociological research on the downsides of strong-tie social capital, illustrating how the same relationships that provide emotional support can also facilitate the circulation of misleading information. By illustrating how older adults' evaluations of digital content are shaped by relational, cultural, and institutional contexts, this study reframes digital resilience as a socially embedded practice rather than an individual skill. Findings highlight the need for interventions that strengthen the social and infrastructural environments through which older adults make sense of online information.

Keywords

digital resilience; disinformation; mianzi; older adults; renqing

1. Introduction

The increasing digitalization of everyday life has ushered society into a hypermediated environment (Brennen & Kreiss, 2016). The digital transformation benefits information access and social engagement (Hülür & Macdonald, 2020) by allowing information to be circulated at unprecedented speed and scale. However, information circulated within such an environment not only often blurs the line between truth and falsehood but also creates new vulnerabilities to exposure to false or misleading content (Van Duyn & Collier, 2019), particularly for those with low digital literacy (Smit et al., 2023).

Older adults are among the most affected. Research consistently demonstrates that older adults aged 65 and above exhibit lower digital literacy compared to younger people (Guess et al., 2019). Their vulnerability is first associated with aging. Park et al. (2002) have demonstrated that the cognitive processing speed, working memory capacity, and attention to peripheral information decline with aging. Moving beyond cognitive disadvantage, their vulnerability is also socially related. Older adults often rely on interpersonal trust networks, such as family members, friends, or neighbors. However, due to digitalization and a hypermediated environment, these tightly knit communities have instead become breeding grounds for the dissemination of misleading content and disinformation (R. Wang et al., 2020).

This challenge is exacerbated in the Chinese context, where rapid demographic transitions and technological advancement have created unique vulnerabilities for the elderly population. China is experiencing a fast transition toward an aging society. According to the latest national census (2021), citizens aged 60 and above account for 18.7% of the total population, or around 264 million people. This number will surpass 300 million by 2025 (National Bureau of Statistics, 2021). Furthermore, statutory retirement ages differ by gender and occupation, with many women retiring at 50 to 55. This creates a demographic group of “younger elderly” who are not conventionally categorized as seniors but who are highly active users of mobile platforms and frequently exposed to digital content. This broader 50+ group warrants analytical attention, especially because they represent an important segment of digitally engaged older adults.

China’s unique demographic and sociotechnical conditions intensify these challenges. Rapid population aging intersects with accelerated digitalization: As of 2025, internet penetration in China reached 79.7%. Notably, the proportion of internet users aged 60+ increased from 6.7% to 14.1% between 2020 and 2025 (China Internet Network Information Center, 2025). This trend suggests that the broader 50+ age group, which exhibits higher adoption rates than the 60+ age group, constitutes a large and rapidly growing segment of the Chinese digital population. Many older adults rely on digital platforms, such as WeChat, Alipay, and Douyin, for daily communication, information acquisition, and financial services. However, rapid digitalization often outpaces the development of digital literacy, technical support, and institutional safeguards, which creates structural vulnerabilities that disinformation actors exploit (Sun et al., 2020; Zhang et al., 2022).

To be more specific, the confluence of demographic aging and digital transformation has created a fertile ground for multiple forms of deceptive content, including misinformation (unintentionally shared false information), disinformation (intentionally fabricated content), and economically motivated online fraud. Research has shown that health-related disinformation and investment scams are designed to exploit the trust and limited digital literacy of elderly citizens (Sun et al., 2020). The Covid-19 pandemic further

exacerbated these vulnerabilities. As elderly citizens were both highly motivated to seek health-related information and highly vulnerable to disinformation, they became primary targets for health disinformation and fraudulent medical advice in China (Zhang et al., 2022). In addition, older adults lack the necessary cognitive and digital literacy to navigate complex online ecosystems. Their vulnerability to disinformation is not simply an individual incapacity but the result of broader structural imbalances within China. Many older adults in China live in fragmented social situations. In rural areas, grandparents often live together with their grandchildren, another vulnerable group, as their adult children work elsewhere for prolonged periods (Jackson & Liu, 2017). This living arrangement isolates older adults from trustworthy guidance in evaluating information, which exacerbates their susceptibility to disinformation or deceptive content.

Given demographic aging, uneven educational attainment, and a hypermediated digital ecology, Chinese older adults constitute a particularly vulnerable group to the challenges of disinformation. Thus, there is an urgent need to understand how Chinese older adults perceive, interpret, and respond to disinformation within their daily media practices. Research on digital resilience to disinformation has often concentrated on younger users or Western contexts, highlighting media literacy interventions and individual cognitive strategies (Kont et al., 2025; Smit et al., 2023). While valuable, such perspectives overlook the communal and cultural dynamics that shape digital resilience in non-Western societies. In China, older adults often rely on community-level governance structures, such as neighborhood committees (社区居委会, *shequ juweihui*) or community grid workers (网格员, *wanggeyuan*). This structural setting means that resilience is not solely an individual capacity but is embedded in intergenerational exchanges and community verification practices. This study re-examines digital resilience to disinformation under conditions of polycrisis by focusing on how elderly citizens in China encounter, interpret, and respond to disinformation. Specifically, it asks:

RQ1: How do elderly citizens in China encounter disinformation in their daily digital media practices, especially during events like pandemics or in cases of cyber fraud?

RQ2: What types and thematic frames of disinformation are most likely to deceive elderly citizens in China, and how are these messages crafted and disseminated within their social networks?

RQ3: What strategies and social resources do elderly citizens use to evaluate the credibility of information in a hypermediated environment?

To answer these questions, this study employs a qualitative approach based on 35 semi-structured, in-depth interviews with elderly participants aged 50 and above (In China, many women retire at the age of 50 and remain highly active online). Participants were recruited mainly through personal referrals, senior activity centers, and neighborhood committees. Interviews mainly revolved around three aspects: (a) exposure to disinformation in daily digital practices; (b) evaluation strategies; and (c) responses after recognizing disinformation or cyber fraud.

The article is structured as follows. It first reviews the literature on disinformation and digital resilience. Next, it situates the Chinese case within global debates on hypermediation and polycrisis. It then outlines the methods and presents the findings from the interviews. The discussion and conclusion sections discuss the implications of these findings for rethinking digital resilience in hypermediated societies, highlighting the role of communal strategies and community-driven verification practices. By centering the voices of Chinese

elderly citizens, this study underscores the need for a more inclusive and context-sensitive understanding of digital resilience.

2. Disinformation and Digital Resilience

Disinformation is characterized as verifiably false or misleading content that is intentionally fabricated and disseminated to deceive. UNESCO defines it as “deliberate (often orchestrated) attempts to confuse or manipulate” (Ireton & Posetti, 2018, p. 7), advancing specific agendas such as political manipulation and social division. In contrast, misinformation involves the unintentional spread of falsehoods, while malinformation involves weaponizing accurate information to cause harm (Wardle & Derakhshan, 2017). Although cyber fraud shares certain characteristics with disinformation, such as its exploitation of cognitive biases and manipulation of information asymmetries, it is analytically distinct because its primary objective is economic gain rather than opinion shaping (Chiluwa & Samoilenko, 2019). To avoid conceptual conflation, this study treats disinformation, misinformation, and cyber fraud as related but distinct categories of deceptive information, distinguishing them based on intentionality. Throughout the article, the term disinformation is used specifically to refer to intentionally fabricated content designed to mislead, while misinformation and fraud-related deceptive practices are labeled accordingly when they arise in empirical data.

This intentionally manipulated content is widely distributed and circulated on social media, where producers exploit cognitive vulnerabilities to amplify reach (Tandoc et al., 2018). The situation is further exacerbated by social media’s algorithmic curation mechanisms, which feed users with personalized content. These algorithms create feedback loops, such as echo chambers and filter bubbles (Del Valle & Bravo, 2018). Users are repeatedly exposed to reinforcing viewpoints, thereby accelerating their virality (Vosoughi et al., 2018). This not only blurs epistemic boundaries but also erodes public trust in institutions, media outlets, and even interpersonal networks, as users become increasingly skeptical or polarized in their information consumption habits (Shu et al., 2020).

Disinformation exploits heightened uncertainties to deepen societal rifts, serving as a destabilizing force in polycrisis environments (Brennen et al., 2021; Lee, 2020; Tolz & Hutchings, 2023). Characterized by cascading, interconnected crises such as the Covid-19 pandemic, geopolitical conflicts, and climate disruptions, “polycrisis” describes overlapping shocks that amplify each other, creating fertile ground for manipulative narratives (Ștefănel & Allegri, 2025). For instance, during the Covid-19 pandemic, disinformation intertwined health misinformation with economic fears, disseminating false remedies and conspiracy theories that eroded trust in public institutions and vaccination efforts (Caceres et al., 2022). This destabilizing force of disinformation is further amplified by social media algorithms, which accelerate the spread of falsehoods that intersect with real-world anxieties (Eriksson Krutrök & Lindgren, 2022).

Deceptive content not only distorts facts but also targets vulnerable groups with tailored scams or propaganda. Vulnerable demographics, particularly older adults, who are often grappling with limited digital literacy and health anxieties, have become primary targets (Brashier & Schacter, 2020). During the Covid-19 pandemic, this was particularly evident. Manipulated narratives alleging that vaccines were population control mechanisms circulated virally among seniors, eroding adherence to mitigation measures and exacerbating isolation during lockdowns (Caceres et al., 2022).

In response to these deepening threats, scholars have increasingly turned to digital resilience as a proactive framework for safeguarding public discourse and institutional trust. As noted in the United Nations' 2024 *Global Risk Report*, mis/disinformation is ranked among the top threats (Azevedo, 2025). Scholars have recognized the urgent need to shift from mere detection to empowering audiences against these harms (Kont et al., 2025).

Digital resilience, in the context of disinformation, can be broadly conceptualized as the capability to anticipate, withstand, adapt to, and recover from deceptive information in hypermediated environments (Hinduja, 2020; Kont et al., 2025). Drawing from psychological roots, Hinduja (2020) defines digital resilience as “positive attitudes and actions in the face of interpersonal adversity online,” extending beyond media literacy to include emotional regulation and systemic safeguards. Kont et al. (2025) refine this as a dynamic process through a systematic review of 95 studies, identifying 12 factors that influence resilience, such as thinking styles, political ideology, and media use. In addition, Kont et al. (2025) propose an integrated socio-ecological framework that categorizes factors across micro (e.g., cognitive styles), meso (e.g., social networks), and macro (e.g., policy) levels. These frameworks have been extended in meta-analyses, which aggregate intervention effects to demonstrate that digital literacy programs enhance resilience by fostering skepticism and verification habits, with moderating variables like education level influencing outcomes (Lu et al., 2024).

Youth and elderly populations are often the primary targets of disinformation and thus the primary research foci of digital resilience. For young people, digital resilience frameworks emphasize proactive interventions. For instance, digital literacy curricula in schools simulate disinformation scenarios to build cognitive defenses while also equipping students with peer-driven resilience strategies (Ivan, 2025). Conversely, research on older adults has traditionally underscored vulnerabilities tied to cognitive aging and digital divides, advocating supportive frameworks that integrate assistive technologies with interpersonal scaffolds (Shu et al., 2020). However, this deficit-oriented framing has been increasingly challenged. Quan-Haase et al. (2018) demonstrate that older adults are far from a homogeneous group of digitally disengaged users; instead, they exhibit diverse patterns of skills, motivations, and online practices that cannot be captured by a simple divide between “users” and “non-users.” Building on this insight, Moore and Hancock (2022) evaluate a digital media literacy program for older adults, finding that it bolsters resilience to fake news by enhancing source evaluation skills, with pre-and post-tests indicating reduced susceptibility to health disinformation. These frameworks reveal a tension: Youth-oriented models stress autonomy and innovation, while elderly-focused ones emphasize scaffolding and inclusion; yet, both underscore the need for holistic, context-aware strategies to bridge generational divides in digital landscapes.

3. Disinformation, Cyber Fraud, and Vulnerability of Older Adults in China

The rapid digitalization of Chinese society has profoundly changed the lives of its older adults. While platforms such as WeChat, Douyin, and Kuaishou have become integral to daily routines, facilitating information access and social connections, they also expose older adults to disinformation and cyber fraud. This vulnerability became particularly acute during the Covid-19 pandemic, as seniors often suffer from underlying health conditions and heightened anxiety. Thus, seniors are more susceptible to disinformation and misleading content (Hu et al., 2025).

Research on older adults' perceptions of deceptive content reveals perceptual biases in how seniors view their own and others' susceptibility. For example, based on a survey of 317 older adults, Hao et al. (2024) found the prevalence of third-person perception. Under third-person perception, older adults believe that others are more vulnerable to disinformation on digital platforms than they are themselves. This bias is stronger among those with better fact-checking habits and verification abilities but lower trust in information, aligning with China's cultural emphasis on *mianzi* (face, 面子) and traditional values (e.g., family-forwarded content leveraging phrases such as "forward to those you care about"). As older adults rely heavily on mobile platforms for social communication and information, their low digital literacy leads to over-dependence on unverified networks, increasing exposure to health scams and disinformation. Tian and Mi (2025) add to this by exploring perceptions of self-efficacy. Their findings demonstrate that past failures and fear lower self-perceived competence in using digital platforms, which further entrenches avoidance of new technologies. However, during the pandemic, mandatory digital tools forced passive integration; yet, persistent gaps in digital literacy, skills, and resources heightened exposure to fraud and disinformation.

These studies collectively illustrate the interplay between digital adoption, cultural contexts, and misinformation vulnerabilities in China. While Hao et al. (2024) focus on perceptual biases (third-person perception) among older adults, offering a more nuanced, multi-layered view of their digital experience, significant gaps remain. Research predominantly relies on surveys and policy analysis, with limited qualitative exploration of how elderly citizens encounter, interpret, and respond to specific disinformation types (e.g., deepfakes, cyber fraud) during crises. Moreover, while communal resources like community grid workers are mentioned, their role in building resilience is underexplored.

4. Methodology

To answer the above-mentioned questions, we employ a qualitative research design grounded in a constructivist grounded theory approach (Charmaz, 2006). Constructivist grounded theory emphasizes iterative coding and constant comparison, which provide a systematic analytical structure through open, axial, and selective coding. This approach is particularly suitable for examining how older adults encounter, interpret, and navigate deceptive information within their everyday media practices. The following part of this section outlines the sampling rationale, recruitment strategies, data collection procedures, ethical considerations, analytic framework, as well as measures taken to ensure analytic rigor.

The study adopts a combined purposive and snowball sampling approach to recruit 35 interviewees aged 50 and above, balanced in terms of gender (see Supplementary File). The choice of 50 as the lower age boundary reflects China's demographic and institutional context. Many women retire between the ages of 50 and 55 and subsequently find themselves in a transitional life stage marked by greater temporal flexibility and comparatively stable financial resources. This combination of increased free time and accumulated savings makes them more active on platforms such as Douyin, Kuaishou, and WeChat, and more attractive targets for health, financial, and socially engineered deceptive content. Despite their high level of digital engagement, this group is typically overlooked in studies that adopt a strict 60+ or 65+ definition of older adults. Including individuals aged 50+, therefore, enables a more comprehensive understanding of older adults' digital experiences.

Participants were recruited through three channels. Twelve interviewees were recruited through personal referrals, using the initial interviewees' networks to identify others with relevant experiences, especially those with extensive exposure to disinformation. Thirteen were recruited from community senior activity centers, where older adults gather for social activities. Ten were recruited through neighborhood committees and community grid workers, who facilitated outreach to identify suitable participants. Sampling continued until thematic saturation, defined as "the point at which gathering more data about a theoretical construct reveals no new properties nor yields any further theoretical insights about the emerging grounded theory" (Bryant & Charmaz, 2010, p. 611). All participants primarily lived in Beijing, China's capital city, which has high internet penetration rates among the elderly population. The interviews were conducted online between April and July 2025, in Mandarin Chinese. Each interview lasted 45 to 60 minutes and was recorded and transcribed.

Before the interviews, we first explained the study's purpose, assured confidentiality, and confirmed informed consent. We then asked participants about their daily digital media practices, including which platforms they use, how often, and for what purposes. We particularly focused on notable incidents in which they encountered suspicious or false information. Core questions included: Which digital platforms do you use most frequently? Can you recall a recent example of disinformation or fake news you saw online that attracted your attention? In addition, participants were asked to describe the tactics they employed to identify, interpret, and verify information authenticity. Core questions included: Have you ever seen information online that you later found out was false or misleading? How did you realize that the information was wrong or inaccurate? We also explored participants' subsequent behaviors and attitudes after recognizing disinformation or misleading content. Core questions included: What steps do you usually take to check whether information is true or false? Do you discuss suspicious information with family members, friends, or others before deciding whether to believe or share it? We asked follow-up questions when needed to clarify vague statements, solicit concrete examples, or explore unexpected insights. Core questions included: Are there any organizations, community members, or other groups that help you verify information? This in-depth interview approach helped us understand not just what participants do, but why they make certain decisions when encountering disinformation.

Ethical approval was granted by the authors' institutional review board. Pseudonyms were assigned (from I1 to I35), and identifying details were removed during transcription. Although data collection occurred in Mandarin, analytic memos and emergent themes were documented in English. To ensure translation accuracy, a two-stage translation validation procedure was used. First, original Mandarin quotations and conceptual summaries were translated into English by one of the authors. Second, the other author independently reviewed the translations for semantic fidelity and cultural nuance. Any inconsistencies were resolved through discussion.

Data analysis followed constructivist grounded theory, guided by the cyclical processes of open, axial, and selective coding (see Table 1). Analysis proceeded in three stages.

1. Open coding: All transcripts were examined line-by-line to generate initial codes that captured participants' actions, perceptions, and reasoning. Codes such as "checks with children," "trusts official accounts," "hesitates to correct relatives," and "recognizes high-return scams" were kept close to participants' language to preserve meaning. At this stage, the goal was descriptive completeness rather than conceptual abstraction.

2. Axial coding: Initial codes were then compared and clustered based on conceptual similarity, shared function, or contextual relevance. For example, codes related to “state media trust,” “official hospital accounts,” and “government verification” were grouped under “institutional trust”; codes related to “peer discussion” and “group verification” were grouped under “collective assessment.” Axial coding enabled the development of mid-level analytic categories.
3. Selective coding: Finally, axial categories were synthesized into three overarching themes that explain how older adults navigate digitally deceptive content: exposure patterns, credibility assessment, and resilience strategies embedded across individual, platform, and community levels.

Table 1. Summary of codebook.

Selective Theme	Axial Codes	Key Open Codes
Exposure patterns	Health deception, Financial fraud, Social inducement	authoritative endorsement, exaggerated efficacy, free gifts, high returns, livestream gurus, QR freebies, impersonation
Credibility assessment	Institutional trust, Experience-based reasoning, Risk filtering	trust in CCTV, distrust of Moments, recall workshops, legal TV references, red flag detection, checks with children, trusts official accounts
Resilience strategies	Individual, Platform, Community, Collective assessment	family verification, group discussion, anti-fraud app, call interception, workshops, recognizes high-return scams
Cultural constraints	<i>Renqing, Mianzi, Guanxi</i>	saving face, reciprocity, obligation to help, concealment of scam, hesitates to correct relatives

To ensure credibility and trustworthiness, the two authors independently coded the first 10 transcripts. Coding discrepancies were discussed and resolved through negotiated consensus, leading to the refinement of the codebook and increased consistency across subsequent coding. We also conducted participant validation. Preliminary findings were shared with six participants to verify whether the identified themes aligned with their lived experiences. Their feedback informed the final refinement of categories.

5. Findings

This section presents the main findings, structured around the three research questions.

5.1. RQ1: Patterns of Exposure to Deceptive Content

Interview data show that all participants have experienced exposure to deceptive content, and 23 participants have experienced financial or social losses. These encounters clustered into three domains: health and wellness, investment and finance, and social inducement. Each domain exhibits distinct characteristics in terms of dissemination channels and content features.

5.1.1. Health and Wellness Content

This category constitutes the most prevalent form of deceptive content. These messages circulated primarily through Douyin, WeChat Moments, and independent social media accounts. They typically employ three deceptive strategies.

1. Authoritative endorsement: Fabricated identities, such as “top-tier hospital experts” or “national health commission researchers,” are used to invoke institutional credibility.
2. Exaggerated efficacy: The messages frequently assert implausible therapeutic effects, claiming that certain products can “cure hypertension and diabetes,” “prevent cancer,” or even “reverse aging.”
3. Free inducement: Scammers exploit the appeal of cost-free offers, such as “free health lectures,” “free medical check-ups,” or “free supplements,” to lure older adults into adding WeChat contacts or participating in offline promotional events. For example, I11 (aged 57) reported a deceptive message that offered a “free health course”: “They said many elderly people had already recovered after taking the course and encouraged me to buy it.”

5.1.2. Finance Fraud and Scam Content

A second major exposure domain involved high-return investment schemes. Fourteen participants described being approached through personal contacts, livestream hosts, and targeted advertisements. Many respondents framed this deceptive content as appealing partly because the 50+ age group often has more savings and discretionary time, making them attractive targets. Investment and financial deceit are often constructed within the frame of “high-return promises.” It is often disguised as P2P investments, cryptocurrency schemes, or retirement wealth management projects. I7 (aged 53) shared her experience: “I invested 20,000 yuan in a P2P project that was introduced by my close friend. I never told my family members, because it is a shame to let others know that you have been cheated.” I31 (aged 57) was also introduced by her friends to a high-rebate P2P investment project: “My friend told me that investing 100,000 yuan could earn 20,000 yuan in a month. At first, I didn’t believe her. Later, she came to my home and showed screenshots of her six months of profits.” Furthermore, investment and financial deceit often leverage trust within social networks, such as friends and neighbors, to create the illusion that “people around them have already made profits” (I31, aged 57).

5.1.3. Socially Engineered Deceptive Content

Participants also described frequent encounters with deceptive invitations embedded in daily digital interactions, such as “scan a QR code to receive free eggs” (I2, aged 64) or “share a post on WeChat Moments to get free oil” (I32, aged 70). For instance, I4 (aged 58) joined a WeChat group after scanning a “free eggs” QR code: “The group kept posting cheap product links and later asked us to pay deposits to ‘reserve goods.’ After we paid, the group was dissolved.” Another tactic is impersonation fraud, which tricks older adults into clicking malicious links or filling in personal information to steal ID numbers or bank card details. I17 (aged 81) received an SMS from someone impersonating a community committee manager, which said that “they could help me apply for a pension subsidy and asked for my bank card number.”

5.2. RQ2: How Credibility Is Assessed in a Hypermediated Environment

Through prolonged engagement with hypermediated environments, older adults in China have developed a triadic evaluation process combining institutional cues, personal experience, and interest-based filtering. This approach is characterized by institutional authority as the foundation, experiential reasoning as the core, and interest-driven evaluation as the protective mechanism.

5.2.1. Institutional Cues: Hierarchical Credibility Assessment of Information Sources

Older adults have developed a stratified “trust hierarchy” when evaluating information credibility. Many placed strong trust in officially verified sources, such as state media (including CCTV, *People’s Daily*, and official government websites). Twenty-nine participants indicated that they “exclusively trust information disseminated by CCTV or *People’s Daily*, while maintaining skepticism toward alternative platforms” (I18, aged 65). Verified institutional accounts (such as official hospital public accounts or authenticated banking applications) constitute the intermediate tier. Conversely, independent social media accounts and unsolicited messages were treated with caution. Twenty-six participants reported being reluctant to “readily accept health articles circulated through Moments” (I33, aged 56) or “engage with hyperlinks from unfamiliar public accounts” (I15, aged 68).

5.2.2. Experience and Case-Based Reasoning

Participants drew heavily on accumulated experience from anti-fraud education workshops, legal TV programs, and stories shared by acquaintances. These experiences offered recognizable templates that supported rapid evaluation. Eighteen participants indicated that they evaluate credibility by contextualizing suspicious information against deceptive cases experienced by acquaintances or family members. Similarly, I8 (aged 63) applies identification skills acquired from the television program *Legal Report*: “The program documented numerous investment fraud cases that mirror the stock recommendation messages I receive, which makes me skeptical of such content.”

5.2.3. Interest-Based Risk Filtering

Participants also selectively scrutinized content based on personal stakes. Content perceived as irrelevant was often ignored. Evaluation was less about general literacy and more about situated risk assessment. For instance, information about health and finance elicited deeper evaluation, often involving consulting relatives or searching for corroboration. I26 (aged 72) explained that “I will ask family members to confirm if a message asks me to fill in personal details.” I19 (aged 68) also noted that “this mismatch shows they mean to cheat you if it is advertised as ‘curing all ailments.’”

5.3. RQ3: Multilevel Practices of Navigating Deceptive Content

Interview findings reveal that older adults’ resilience to deceptive content is structured through multilevel practices across individual, platform, and community.

5.3.1. Network Resistance: Individual and Familial Strategies

Network resistance is a common practice for evaluating misleading or questionable content. Consulting adult children and grandchildren was a common practice. For those living in intergenerational households, older adults often ask their grandchildren for help: “My grandson is better at using the phone. He often checks information by searching what sounds like *du niang* [度娘, *du niang* means Baidu]” (I35, aged 74). Beyond family, peer groups also played a role in rapid information checking. Many participants referred to WeChat friends’ groups (e.g., square-dancing groups) as spaces for rapid cross-checking and information

deliberation: “We have a square-dancing group; many people verify messages with friends in the group” (I33, aged 56). While such groups rarely provide authoritative confirmation, collective discussion raises awareness of the need for caution. When uncertainty persists, group members often suggest checking with the community grid workers or community police officers, whose “contact details are on the community notice board” (I32, aged 70).

5.3.2. Platform-Level Mechanisms: Call Interception and the National Anti-Fraud Center App

Platform-based interventions serve as an essential external digital safeguard. Many participants reported the usefulness of telecommunication warnings (e.g., numbers marked as fraudulent) and the National Anti-Fraud Center app (see Figure 1). Many participants used these tools primarily when uncertainty had already been triggered by personal judgment. For instance, telecommunication platforms now integrate user-generated labeling systems that allow individuals to tag suspected scam numbers. When others receive calls from these numbers, warnings are displayed, indicating how many users have flagged the number as fraudulent. As I19 (aged 68) explained, upon receiving a call from an alleged “police officer” who was investigating a supposed financial crime, his phone interface immediately displayed a warning that “53 users have marked this number as fraudulent,” allowing him to recognize and avoid the scam in time.



Figure 1. Screenshot of the National Anti-Fraud Center app.

The second tactic entails the use of specialized anti-fraud applications, exemplified by the National Anti-Fraud Center app developed by the Chinese government. This application not only provides rich educational materials and real-world fraud cases but also offers practical functionalities, such as scanning suspicious software and identifying potential phishing or scam applications on a mobile phone. One interviewee (I8, aged 63) recounted:

A friend told me about an app that could check whether I had committed any traffic violations while driving. I downloaded the app and entered my personal information, including my license plate number. Then, a chat window in the app asked me to add the person on WeChat, claiming that they would help me check my driving record. I added them and sent over my driver's license information. Later, I felt something was wrong, so I scanned the app using the National Anti-Fraud Center app, and it showed that the app I had downloaded was a scam app.

5.3.3. Community Support: Public Service Infrastructure and Collective Engagement

Community support services play an especially important role for empty-nest (single-living) older adults. Community support encompasses two primary components: anti-fraud education and digital literacy training. Anti-fraud education employs multiple forms, such as information posters, WeChat group broadcasts, and household visits. Anti-fraud education disseminates essential knowledge about common scam patterns and preventive awareness. I11 (aged 57) explains:

There's a notice board inside the elevator of our building displaying anti-fraud warnings and the contact information of the community police officer. Every time I take the elevator, I see it. It serves as a constant reminder to remain alert and cautious about potential scams.

As for digital literacy training programs, community grid workers organize different workshops, including sessions on mobile phone safety and tutorials on the use of anti-fraud applications. For instance, I10 (aged 51), a community grid worker, reported: "We invite community police officers to teach residents how to use the National Anti-Fraud Center app and share firsthand experiences." These workshops thereby transform abstract warnings into tangible, emotionally resonant lessons. Furthermore, these community-based interactions facilitate peer learning and social reinforcement. Notably, 18 participants affirmed that exchanging anti-fraud experiences with peers enabled them to develop more practical and context-sensitive prevention strategies. I12 (aged 69) shared the following experience:

After being scammed, I initially didn't dare to tell my friends because I felt so embarrassed. But during a community-organized event, everyone was actively sharing their own experiences, so I gathered the courage to talk about mine as well. Through that sharing, I learned a lot, and now I know to stay alert when I encounter similar situations in the future.

After the Covid-19 pandemic, most communities have hired several community grid workers. They actively intervene in the daily lives of older adults (He et al., 2024; Xu & He, 2022). Community support interventions represent a socially embedded and participatory approach to disinformation resistance.

5.4. The “Human Sentiment Barrier”: Social Ties as Both Protection and Vulnerability

A recurring pattern across interviews was the tension between relational expectations and the need to be cautious. Close social networks become both protective and vulnerable. This tension stems from structural dynamics embedded in *guanxi* (social relationships, 关系; Chen et al., 2013) and *renqing* (interpersonal sentiment, 人情). *Guanxi* and *renqing* are deeply ingrained cultural norms, emphasizing emotional reciprocity, social harmony, and trust (C. L. Wang et al., 2008). On the one hand, around 30 participants regarded information from their networks as more reliable. On the other hand, this interpersonal trust became a critical conduit for the circulation of deceptive content. For instance, many respondents reported that they frequently received “bargain-cutting” (砍一刀, *kanyidao*) invitations from family members or friends on platforms such as Pinduoduo (拼多多, an e-commerce company in China). This feature enables users to reduce the price of a product through collective participation, transforming private consumption into a form of networked social engagement. Each person who clicks the link and “helps cut” contributes a small discount to the total price (Zhao et al., 2019). However, this model introduces privacy and security concerns, especially for older adults. Many participants reported that “it is our social obligation to help family members” (I23, aged 64). Consequently, deceptive content intentionally leverages relational trust, creating new forms of digital vulnerability under the guise of social participation.

This pattern reflects what sociological scholarship identifies as the downside of strong-tie social capital (Portes & Landolt, 1996; Villalonga-Olives & Kawachi, 2017). Strong ties provide emotional security, but they can also inhibit critical questioning and facilitate the diffusion of deceptive content within trusted networks. Participants’ accounts illustrate how these relational norms, what we term the “human sentiment barrier,” shape both susceptibility and response: They reduce the willingness to challenge misleading messages and increase reluctance to seek help after being deceived. I1 (aged 56) shared her experience of keeping a fraudulent incident as a secret: “We promised not to tell anyone, not even our husbands.” Furthermore, to avoid causing others to lose *mianzi*, some older adults prioritize preserving harmony over correcting falsehoods. I3 (aged 64) reported an interesting case in which a relative enthusiastically recommended an herbal product, claiming it was highly beneficial for health. Although she recognized that it was misleading, she still purchased the product. She framed the act as a form of social reciprocity rather than gullibility: “I spent a little money to make her happy; after all, you never know when you might need her help” (I3, aged 64).

6. Discussion

By drawing on 35 in-depth interviews, this study extends existing knowledge of digital resilience through a non-Western, culturally grounded lens. Our findings demonstrate that resilience among older adults operates not only through cognitive skills but through intertwined socio-cultural networks that shape both vulnerability and resistance. This section situates these findings within broader theoretical debates, highlighting three key contributions: First, it argues that digital resilience to deceptive content is socially embedded. Second, it examines the paradox of relational trust. Third, it addresses digital resilience in authoritarian contexts.

6.1. Rethinking Digital Resilience as Socially Embedded: Beyond Individual Competence

While existing research often emphasizes individual cognitive skills or treats social support as a secondary factor in navigating deceptive content (Humprecht et al., 2020), our findings suggest that resilience among older adults in China is better understood as a multi-layered verification process embedded within familial, community, and institutional contexts. Rather than functioning as an isolated individual capacity, resilience unfolds through the interaction of individual judgment, technological features such as platform warnings, and locally accessible support structures. This dynamic aligns with socio-ecological models of resilience (Kont et al., 2025), which conceptualize protective processes across micro, meso, and macro levels. Our data indicate that these layers do not operate independently: Platform signals often gain meaning through community discussion, and community education initiatives are strengthened when they are supported by technological tools.

This socially embedded form of resilience has important theoretical and practical implications. It suggests that interventions focusing solely on improving individual digital literacy may be insufficient, not because of cultural predispositions, but because information evaluation is relational and contextual for many older adults. Deceptive content frequently leverages existing trust networks, and participants consistently described peer discussions and family consultations as more impactful than formal instructional programs. In this sense, digital resilience emerges not simply as an individual skill set but as a relational capacity cultivated through ongoing participation in verification practices distributed across social networks and community infrastructures.

These findings call for a shift from asking “How digitally literate is this individual?” toward asking “How robust and accessible are the social and institutional supports that shape this individual’s digital decision-making?” Such a reframing allows for more targeted interventions that acknowledge the collective and infrastructural dimensions of navigating digital environments in later life.

6.2. Cultural Mediation and the Paradox of Relational Trust

Another contribution of this study is the identification of the “paradox of relational trust,” a phenomenon whereby the same social networks serve both as protective resources and as vectors of vulnerability. Our findings reveal that many older adults regard information from familiar networks as more trustworthy than content from strangers. However, these same networks become conduits for disinformation transmission. Furthermore, cases in which participants such as I3 (aged 64) purchased fraudulent health products to avoid causing a relative to “lose face” demonstrate that resilience to deceptive content is not purely rational but is deeply embedded in cultural norms (Y. Wang et al., 2025).

This paradox is deeply rooted in Chinese cultural norms of *guanxi*, *renqing*, and *mianzi* (Chen et al., 2013; C. L. Wang et al., 2008). Older adults’ reluctance to challenge falsehoods or disclose experiences of deception reflects a deep moral economy centered on relational harmony. This phenomenon redefines digital vulnerability not as a lack of rationality but as a culturally normative prioritization of social cohesion over epistemic accuracy.

In Western frameworks of digital resilience, social networks are often regarded as protective factors. However, trust within networks can simultaneously disable critical evaluation. Our finding of the “human

sentiment barrier” captures this dual nature. While affective social networks enable digital resilience and emotional support, they also create moral obligations that override risk assessment. When older adults described helping family members and friends as a “social obligation” (I23, aged 64), they illustrated a decision-making logic in which relational maintenance supersedes information credibility. Following such a logic, malicious actors increasingly exploit not only cognitive deficits but cultural strengths, weaponizing trust, reciprocity, and social obligation.

6.3. Digital Resilience in an Authoritarian Context: State Infrastructure as a Constitutive Force

Authoritarian governance enables state interventions, such as the National Anti-Fraud Center app, call interception systems, and community grid workers, which play an important role in building digital resilience. However, despite the merits of state interventions, these interventions raise issues regarding the relationship between state capacity, surveillance infrastructure, and protective mechanisms. The theoretical implication is that digital resilience cannot be understood without considering political economy and governance structures. Previous frameworks in Western literature often implicitly assume that resilience emerges from multiple stakeholders, such as civil society organizations, independent media, and individual literacy. Our findings highlight an alternative model in which the state actively constructs resilient infrastructure. In this sense, we argue that resilience frameworks must account for regime type as a moderating variable that shapes not only vulnerability patterns but also the very mechanisms through which protection is organized.

7. Conclusion

This study advances a culturally grounded understanding of disinformation resilience among older adults in China. It reveals that resilience is not merely an individual cognitive skill but a relational and infrastructural capacity embedded in social trust, cultural values, and institutional design. Overall, the Chinese experience offers valuable lessons, underscoring that building resilience requires not only smarter users but stronger, more caring systems.

Despite its contributions, this study also has several limitations. The sample is drawn primarily from urban Beijing and was recruited largely through community institutions such as neighborhood committees and grid workers. As a result, participants may be more connected to local institutional structures and more exposed to formal workshops or anti-fraud initiatives than older adults in general. This sampling frame limits the transferability of the findings to rural, migrant, or lower-income older populations, whose access to institutional support, digital infrastructure, and social networks may differ substantially. The study should therefore be understood as an exploratory case study of urban Beijing, offering insights into how older adults in a highly resourced urban environment navigate deceptive content. Additionally, reliance on self-reported data introduces risks of recall bias and social desirability effects (Bergen & Labonté, 2020; Kvale, 1996), particularly when discussing sensitive topics such as financial loss or embarrassment. Future research incorporating rural or multi-site comparative samples could more fully examine how relational norms, institutional trust, and digital infrastructure shape resilience across diverse global contexts.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The interview data are not publicly available due to privacy concerns.

LLMs Disclosure

Interview data were initially translated from Chinese into English using GPT-4o, after which the translations were manually checked and calibrated by the authors to ensure accuracy and cultural nuance.

Supplementary Material

Supplementary material for this article is available online in the format provided by the authors (unedited).

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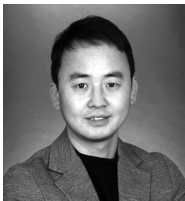
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