Article

Hate Speech and Polarization Around the "Trans Law" in Spain

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Abstract
The approval of the law for the real and effective equality of trans people and for the guarantee of the rights of LGTBI people (the Trans Law) has been one of the most controversial legislative actions in recent years; however, there is very little knowledge about the public's perception of the issue and how they express their opinions in the public sphere. Supporters of the law consider that the free determination of gender is essential to end discrimination against trans people, while critics express hate speech that can be a precursor to violent actions. This work aims to fill a gap, studying the relationship between the perceptions of a controversial and polarizing issue and their public expression through social media. The main objective is to analyze the public's perception, with special attention to age, gender, and political ideology, and compare it with the hate speech posted on Twitter. The methodology presents a survey of citizens and the use of computational methods to analyze Twitter messages with a machine-learning algorithm that classifies them as hate or not hate. The results indicate that the majority (80.1%) support the approval of the law, while those close to left and center political ideologies favor the law more than those who define themselves as right-wing. There are no significant differences according to age. Of the messages analyzed, 9.7% were classified as hate.

1. Introduction

The proposal of the law for the real and effective equality of trans people and for the guarantee of the rights of lesbian, gay, trans, bisexual and intersex people (hereinafter LGTBI; popularly known as the Trans Law) is framed as one of the most controversial legislative actions in recent years due to the public debate it has generated. In Spanish society, progress has been made in the rights and protection of LGBTI people, but achieving real equality is a challenge. Discrimination based on sexual orientation and gender identity or expression continues to be a cause for concern, especially in the workplace, which can lead to verbal attacks, in the form of hate speech and physical violence, which can lead to hate crime (Córdoba, 2021).

With this in mind, we developed the following research questions:

RQ1: Does the public support the processing of the Trans Law, and if so, do the people who show their support for the law also support its main points?

RQ2: Does greater support shown for the proposed Trans Law result in less hate speech on social networks?

In addition, a second research question (RQ2) leads us to consider whether society's support for the processing of the Trans Law may be related to the presence of hate speech on social networks.

There is a wide range of opinions from the different sectors of Spanish society: Supporters of the Trans

Law consider that free gender self-determination is essential to end discrimination against trans people (Rodríguez-Ruiz & Mestre i Mestre, 2021), while critics express anti-trans rights opinions that may be precursors of hate speech and violent actions (Carratalá, 2020).

The main objective of this work is to analyze public opinion on the processing of the Trans Law proposal and its main statements, with special attention to age, gender, and political ideology, and compare it with the presence of hate speech messages regarding gender identity or expression on the social network Twitter. This work aims to fill a gap, studying the relationship between the perception of a controversial and polarizing issue, the approval of the Trans Law, and the public expression of said polarization through social networks.

2. Theoretical Background

The Trans Law is promoted by the Ministry of Equality and aims to protect the rights of LGTBI people and their families. The Council of Ministers approved the law on June 29, 2022, allowing it to go through the legislative process and be approved in December 2022. The proposed law aims to comply with the principle of formal equality, proclaimed in Article 14 of the Spanish Constitution (Cortes Generales, 1978), the principle of real and effective equality (Art. 9.2), and the consideration of the dignity of the person and the free development of the personality as the foundation of the political order and social peace (Art. 10.1).

The Trans Law proposes an establishment of a minimum system of protection against discrimination based on sexual orientation and identity, gender expression, or uniform sexual characteristics throughout the state territory, which protects equality laws; prohibits conversion therapies; allows access to assisted reproduction services for trans people with the ability to gestate; legislates for intersex human rights, avoiding medical-surgical interventions during the first year of life when their reproductive anatomy has characteristics of both sexes (except for health reasons); promotes the employment for trans women; and includes other important subjects for the protection of LGTBI people and their environment. The law also defines other elements aimed at improving the quality of life of LGTBI people, such as requiring that companies with more than 50 workers have action protocols for addressing harassment or violence against LGTBI people. It also includes measures to prevent homelessness among LGTBI people and measures on adoption and foster care. Concerning rural Spain, it includes the term "*sexilio*" (exile for reasons of gender) and indicates that LGTBI people from rural environments must be able to access the same resources under the same conditions as in big cities.

The public receives information about this type of legal procedure that depends to a large extent on the media, public opinion, and the conversation around the issues that make up the current agenda. Citizen participation is challenging in our societies (Naser et al., 2021). Knowing how citizens perceive the proposed law and its content is relevant to understanding the support that should be offered and how it can affect future decisions by government entities (Bayo Fernández et al., 2018). Some previous studies have made advances in analyzing public support for government actions, especially in the case of the health crisis (Chon & Park, 2021; Jørgensen et al., 2021). For this reason, we put forward a first hypothesis:

H1: The higher the level of information declared about the Trans Law, the greater the support shown.

According to data from the Centro de Investigaciones Sociológicas (2021), 93.9% of Spaniards declare themselves to be heterosexual. However, in the younger age group, 18–24 years old, only 82.7% identify as heterosexual, while 16.4% identify with other sexual orientations. The Instituto de la Juventud (2020) also points in a similar direction: 16% of young people (15–29 years old) declare themselves to be non-heterosexual, and around 75% identify with one of the masculine or feminine poles, while 25% identify with non-binary positions. That is why it can be understood that young people are more likely to show support for the Trans Law, so we state the following hypothesis:

H2: The younger the person, the more support they show for the proposed Trans Law.

In the first decade of the 21st century, Spain achieved substantial progress in LGBT rights. The legislation governing family formation, filiation, and marriage included LGBT families, which meant the visibility of non-heterosexual nuclear family structures and new models of parenthood (Imaz, 2017). Calvo and Trujillo (2011) reported that changes in the Civil Code allowed homosexual couples to marry, and full adoption rights were also granted in 2005. Platero-Méndez (2008) indicates that, historically, the center and the left-wing political ideologies have made a greater effort to legislate toward the rights of sexual minorities. The left-wing political groups have included gender identity issues in their politics and have worked to achieve social improvements. We can therefore propose a new hypothesis:

H3: The stronger the leftist ideology that a person has, the greater their support for the proposal of the Trans Law.

By conducting a review of the main points of conflict and controversy in Spanish public opinion, we can check whether, compared to people who do not support the Trans Law, people who do express support for it will show agreement with the approval of these points individually.

Regardless of the important advances with Law 03/2007, the LGTBI+ organizations continued to point

out the limitations to trans people's rights, such as the previous professional diagnosis to the legal gender change and the limitation by age (only in 2019 were minors considered mature enough to change their legal gender). Therefore, the inclusion of gender self-determination in the law represents a substantial improvement in the situation of transgender people in Spain, and it is an old demand of LGTBI people (Esteve-Alguacil & Nonell i Rodríguez, 2021). Despite being one of the most controversial issues in the bill, 14 autonomous communities have already recognized free gender self-determination before the debate on the Trans Law. However, the results of a prior public consultation carried out by the Ministry of Equality between June 26 and July 15, 2020, in which 1,044 contributions from citizens were received, revealed that 58% of the contributions submitted rejected the principle of gender self-determination. That is why it is a point of conflict, and the following hypothesis can be stated:

> H4: Compared to people who do not support the Trans Law, those who support it will be more likely to agree with trans people legally changing their gender without the need for a medical diagnosis (self-determination).

Conservative sectors of Spanish politics have attacked gender self-determination. For example, the president of the extreme-right party VOX, Santiago Abascal, signed an opinion article published in the newspaper *El Mundo* declaring that if the Trans Law were approved, any citizen (rapist or abuser) would be able to choose their legal sex, which would be a threat to the lives of women and children (Abascal, 2021). On the other hand, there is an evident conflict between some radical feminist groups, who consider that free gender self-determination erases women, and trans groups, who consider that pathologization and the bureaucratic process is a stigma (Corral-Díaz, 2021); they tend to disagree with the trans-exclusionary radical feminism (TERF) groups because of their opposition to transsexual theses (Álvarez-Rodríguez, 2022). Within the framework of public discussions about the Trans Law, the use of the hashtag #ContraElBorradoDeLasMujeres has been reaffirmed as the position contrary to the autonomous identity of transsexual people (Ferré-Pavia & Zaldívar, 2022). Since it is another controversial point, we state the following hypothesis:

> H5: Compared to people who do not support the Trans Law, those who support it will agree that feminism, in general, should be inclusive toward trans women.

Some LGTBI+ organizations have also criticized the Trans Law, but in this case, despite recognizing that the law presents significant advances for LGBTI rights, such as gender self-determination, they have concerns that certain limitations have yet to be considered. According to prominent organizations such as FELGTBI+, Chrysallis, and Fundación Triángulo (FELGTBI+ et al., 2021), one of these claims would be a third box on the national identity document so that non-binary people can mark it. Similar policies have been adopted in the Catalonia Autonomous Community. In 2019, the Catalan Department of Labor, Social Affairs, and Families announced that official documents in Catalonia would include "non-binary" as a third option. In 2022, Catalonia incorporated the reference to non-binarism, referring to "sense" and family diversity in administrative documents. Based on this point, we establish the following hypothesis:

> H6: Compared to people who do not support Trans Law, those who support it will agree that non-binary people's rights should be included.

The public discussion about the legislation on sexual orientation and gender identity generates such polarized opinions that public demonstrations, in support and rejection of the law, are observed during legislative processing, which open new spaces for extreme discourses and, therefore, for harmful content targetting this historically vulnerable group. Sponholz and Christofoletti (2019) point out that the media system, with strong commercial ties, especially television and the internet, can empower public figures who give speeches that contain violence against minority groups to guarantee their presence and media prominence. It is of great importance on the internet since homogeneous discussion spaces, echo chambers, and intentional misinformation contribute to creating a toxic atmosphere (Cinelli et al., 2021). Torregrosa et al. (2020) conclude that extremist political groups use violent discourse to maintain their relevance in the networks and amplify their opinions following an echo chamber effect.

In addition, it is important to highlight that the Trans Law was proposed in a context of concern about the increase in hate crimes against the LGTBI community. According to the report on the evolution of hate crime in Spain 2021, published by the Ministry of the Interior (López Gutiérrez, Sánchez Jiménez, et al., 2021), the category of sexual orientation and gender identity is the subject of the second largest number of registered hate crimes (466 cases), 25.86% of the total cases. It represents an increase of 68.23% compared to the previous year (277 cases in 2020). On the other hand, the same report indicates that 87.10% of the victims of hate crimes based on sexual orientation/gender identity did not file a complaint, meaning that the real number of hate crimes against the LGBTI population may even be higher than those registered and that the volume of under-reporting is high. On the other hand, data from the European Union Agency for Fundamental Rights (2020) show that transsexual and intersex people suffer the most violence, intolerance, and discrimination in Spain. Forty-one percent of LGTBI people suffered some type of harassment

due to their condition, and 8% of those had suffered some physical or sexual assault in the last five years. However, harassment affects 51% of transgender people and 52% of intersex people in Spain, while physical or sexual assaults affect 15% and 19%, respectively.

Hate speech is any form of expression that spreads, incites, promotes, or justifies any form of hate based on intolerance (Arcila-Calderón et al., 2021). It can be transmitted through many forms of expression, language, and media. Furthermore, in the context of public discussion, hate speech can provoke, attract, and empower people who oppose socially rejected individuals. Beyond the dissemination of discriminatory perspectives, hate speech can also evolve into behaviors that give rise to other types of violent acts (Allport, 1954) and political radicalization (Abuín-Vences et al., 2022; Bilewicz & Soral, 2020; Soral et al., 2018).

We are currently immersed in a context where the creation and dissemination of content in digital media and social networks are growing ever faster. Under this circumstance, hate speech can trigger hate crimes (Arcila-Calderón et al., 2020). Müller and Schwarz (2020) suggest that there is a significant relationship between online hate speech and offline violent attacks. Consistent with this thesis, Regehr (2022) concludes that the internet's echo chamber can contribute to creating a loop that transforms digital hatred into physical violence. In addition, there is evidence that if a group receives great support from society, the level of hate speech online is inversely proportional (Arcila-Calderón et al., 2022). For all these reasons, we pose RQ2.

3. Methods

The methodology presents a public opinion survey among citizens, which will serve to answer RQ1. The methodology uses computational methods and content analysis to analyze Twitter messages with an automatic learning algorithm that classifies them as hate or non-hate, and that will answer RQ2.

3.1. Public Opinion Survey

A telephone survey was carried out on November 12, 2021. An anonymous questionnaire survey was carried out by a trained team and applied to Spanish citizens between 16 and 89 years old, according to the seventh article of the organic law on personal data protection and guarantee of digital rights (Jefatura del Estado, 2018). People under 16 or who did not live in Spanish territory were not considered for the interview. The data was collected from a sample of participants using Diet Random Diary (a prefix 6xx and adding five random numbers). The total sample was n = 181. Regarding the gender of the participants, 52.5% were women, and 45.9% were men. The most represented autonomous communities in the study case are Andalusia, with 21% of the respondents; Madrid, with 18.8%; and Catalonia, with 17.7%.

The research is not representative. The total sample was n = 181. A power analysis indicated that the sample size was adequate. Specifically, the a priori analysis using G*Power 3.1.9.7 (Faul et al., 2009) determined that a medium effect size of 0.3 (Cohen, 1988) can be detected with at least 67 individuals (assuming $1 - B$ = 0.80 and alpha level α = 0.05), which means that our sample was satisfactory. Regarding the gender of the participants, 52.5% were women and 45.9% were men.

The survey was divided into two sections. The first included the following sociodemographic categories:

- Gender (*male*, *female*, *non-binary*);
- Age (in years);
- Region of residence in Spain;
- Political ideology (measured on a scale from 1 = *extreme left* to 10 = *extreme right*);
- Level of information declared about the Trans Law and its content (measured on a scale from 1 = *little information* to 5 = *much information*).

In the second section, the following variables and measures were used:

- Support for the Trans Law: Do you agree with the approval of the law for the real and effective equality of trans people and for the guarantee of the rights of LGTBI people, known as the Trans Law? *Yes*, *No*, *I prefer not to answer*.
- Support for transgender people to legally change their gender without the need for a medical diagnosis: Do you agree that transgender people can legally change their gender without the need for a medical diagnosis (self-determination)? *Yes*, *No*, *I prefer not to answer*.
- Feminism should include trans women: Do you agree that feminism, in general, includes trans women? *Yes*, *No*, *I prefer not to answer*.
- Support for the incorporation of non-binary people into the Trans Law: Do you agree that non-binary people are included in the Trans Law? *Yes*, *No*, *I prefer not to answer*.

The responses obtained were anonymized. Data were analyzed using the IBM SPSS program, performing an exploratory and descriptive analysis, including cross tables and correlation for independent variables. A hypothesis contrast of relationships between two variables was performed, using chi-square tests.

3.2. Computational Methods and Content Analysis

In the second stage, hate speech detection was carried out on Twitter. The work was divided into two main phases, one to create a training corpus and another to generate predictive models. The creation of a specific corpus for the study allows us to overcome the limitations of previously developed prototypes that

used dictionaries or general databases (Arcila-Calderón et al., 2020).

To create the training corpus, data collection was carried out between July 1 and November 30, 2021, dates selected as they were closest to the publication of the Trans Law. The download of the messages from the social network Twitter was carried out in the integrated environment Pycharm, connected to the application programming interface. The downloaded messages were filtered by the Spanish language and the keywords: #NoLeyTrans, #NoALaNiñezTrans, #Transfobia, #Homofobia, #LaLeyTransEsMisoginia, #NOalaLeyTrans, #TERF, #Transodio, #20Nov, #LeyTransAlCongreso, #LeyTrans, #LGTBI, #Feminismo. The database was cleaned, and all tweets that used the keywords in another context or language, those that contained incomplete messages, or did not directly refer to the topic were manually deleted. Although a large number of messages were downloaded, the final sample consisted of 5,000 tweets, which were then manually sorted by a team of trained coders.

The definition of hate speech used for coding was based on the three levels of cyberhate included in the taxonomy proposed by Miró-Llinares (2016) and included all types of hate based on gender and sexual orientation that could constitute a crime. The description and classification procedures for hate speech developed by Arcila-Calderón et al. (2021) were followed.

All tweets were manually classified into subsamples of 500 tweets by two human coders, indicating whether they contained *hate* (1) or *no hate* (0) in a binary way and discarding all those that did not meet the established requirements. To check the reliability of the intercoders, only the classifications with total agreement were accepted; the rest were discarded.

From the initial sample of 5,000 tweets, 3,756 (75.12%) were validated, while 1,244 messages (24.88%) did not meet the validation parameter and were discarded. Of the validated messages used to create the training corpus, 3,394 tweets were classified as non-hate (90.36%), and 362 were classified as hate (9.64%; Table 1).

The generated corpus was then used to train the predictive model with machine learning algorithms based on the prototype for the automatic detection of hate speech on Twitter in Spanish specifically motivated by gender and sexual orientation from Arcila-Calderón et al. (2021). The machine learning algorithm was used to detect hate speech on Twitter based on a stance for or against trans laws. Examples were provided to the model (70% training, 30% test), and eight predictive models were validated; six of them were generated by using surface learning algorithms (original Naïve Bayes, Naïve Bayes for multinomial models, Naïve Bayes for Bernoulli's multivariate models, logistic regression, linear classifiers with stochastic gradient descent training, and support vector machines), another model was generated from feedback from previous models, and a final model was generated using deep learning. For the evaluation of the predictive model, evaluation metrics for supervised machine learning were applied. This validation returned acceptable quality evaluation metrics for the hate class, with the following results: accuracy = 0.8510, precision = 0.7124, recall = 0.6979, and F1 score = 0.7051. To provide a metric calculated from precision and recall, we use the ROC-AUC score = 0.8688, which defines the threshold classification model function (0.70) and a loss of 0.4066.

4. Results

4.1. Public Opinion Survey

In this section, we will address the first research question (RQ1), which asked whether the public support the processing of the Trans Law and, if so, whether its supporters also support the Law's main points. In addition, in a second research question (RQ2), we will review the level of social support for the Trans Law and address all the established hypotheses.

Taking the total sample, the results indicate that 80.1% of those surveyed agreed with the approval of the Trans Law (of which 42.1% were women, 55.9% were men, and 2.1% did not declare their gender), 14.4% disagreed, and 5.5% preferred not to declare. As for the level of support for the issues related to the law that have been the subject of discussion, we can see that it is lower than the general support for the law, but they are mostly supported by more than half of those surveyed: 61.9% agreed with gender self-determination, 58% agreed with the inclusion of non-binary people in the law, and 67.4% agreed with trans-inclusive feminism (Table 2).

Regarding the level of information, on a scale from 1 (*little information*) to 5 (*much information*), 48.6% of the participants stated that they had "little information" on the subject; 19.3%, "neither much nor very little information"; 14.4%, "some information"; 11.6%, "enough information"; and 6.1%, "a lot of information."

Table 1. Sample of tweets.

Total sample of tweets	Discarded	Validated sample	
5,000	1,244	3,756	
		No hate	*Hate*
		3,394	362

Table 2. Public opinion survey general results.

Question	Yes	No	Did not answer
Do you agree with the approval of the law for the real and effective equality of trans people and for the guarantee of the rights of LGTBI people, known as the "Trans Law"?	80.1%	14.4%	5.5%
Do you agree that transgender people should be able to make a legal gender change without the need for a medical diagnosis (self-determination)?	61.9%	30.9%	7.2%
Do you agree that feminism, in general, should include trans women?	67.4%	13.3%	19.3%
Do you agree that non-binary people should be included in Trans Law?	58%	19.9%	22.1%

The mean is 2.12, which shows a low level of information about the law. We can verify the level of support for the law in each group of respondents with different levels of information. Regarding the participants who stated that they had "little information" on the subject, 72.7% agreed with the approval of the law and 17% disagreed. As for those surveyed who claimed to have "neither much nor little information," 85.7% agreed with the law's approval, while 11.4% disagreed. Considering the respondents who said they had "some information," 92.3% agreed with the approval of the law and 7.7% disagreed. Regarding the respondents who stated that they had "enough information," 90.5% of them agreed and 9.5% disagreed. Of the respondents who stated that they had "a lot of information," 72.7% agreed and 27.3% disagreed. Responding to H1, the higher the level of information declared about the Trans Law, the greater the support shown for the law; there is no statistically significant relationship between the support for the Trans Law and the level of information declared about the law and its content (χ^2[1, N = 171] = 4.095; p > 0.05).

Considering age, the mean of those surveyed was 54 years (M = 54.01, SD = 17.44). The age variable was recoded as an ordinal variable in order to make group comparisons, grouping the observations into three age groups made up of a group of young people and young adults from 16 to 46 years old (30.4% of the participants); another group of adults, from 47 to 60 years old (30.4% of the participants); and a third group made up of older adults, from 60 to 89 years old (39.2% of the participants). The group made up of young people and young adults (16 to 46 years old) had the least favorable opinion: The results show that 74.5% of this group agreed with the approval of the Trans Law, 18.2% disagreed, and 7.3% preferred not to answer. In the next group (47 to 60 years old), 81.8% of adults agreed, 12.7% disagreed, and 5.5% preferred not to answer. The group of older people had the most favorable opinion: 83.1% agreed, 12.7% disagreed, and 4.2% preferred not to answer. This data shows that the youngest age group is the one that disagreed the most with the approval of the law. There is no statistically significant relationship between support for the approval of the Trans Law and age (χ^2[1, N = 171] = 56.374; p > 0.05). Therefore, H2, stating that the younger the person, the greater the support they show for the Trans Law proposal, can be

rejected. In addition, regarding other issues (legal recognition of gender by self-determination, the inclusion of non-binary people in the Trans Law, and the inclusion of trans women in feminism), we observed that these groups of different ages also behaved similarly. The differences observed when comparing the opinions expressed by the three age groups regarding the approval of the law do not present statistically significant results.

Paying attention now to the declared political ideology, the average of those surveyed is 4.54 (SD = 2.10), which implies a slight tendency to the left. The political ideology variable was recoded as an ordinal variable, in order to make group comparisons, extracting three groups by ideology with the following distributions: 38.1% left (from 1 to 4), 35.4% from the center (5 and 6), and 12.2% from the right (from 7 to 10). However, a considerable group of people (14.4%) did not answer the question. The leftist group had the most favorable opinion towards the Trans Law. Of the left-wing participants, 88.4% agreed with the approval of the law, 8.7% disagreed, and 2.9% preferred not to answer. Of the centrist participants, 79.7% agreed, 14.1% disagreed, and 6.3% preferred not to answer. The group least favorable to the Trans Law was the right: 63.6% agreed, 31.8% disagreed, and 4.5% preferred not to answer. This trend extends to the rest of the themes (see Table 3). To respond to H3, which stated that the more of a leftist ideology an individual has, the greater their support for the Trans Law proposal, we observed a statistically significant relationship (p < 0.05) between support for the Trans Law and political ideology. The relationship is weakly positive (r = 0.171); that is, the greater their support for the Trans Law, the greater the probability that an individual will identify as left-wing (χ^2[1, N = 148] = 20,100; p < 0.05). Therefore, we can accept our second hypothesis.

We next review H4, which stated that compared to people who do not support the Trans Law, people who express their support for the Trans Law will be more likely to agree with trans people legally changing their gender without the need for a doctor's diagnosis (self-determination). Although self-determination has generated much controversy and has been criticized by civil society groups, 61.9% of all respondents agreed with transgender people legally changing their gender without the need for a medical diagnosis. Considering only the group that supports the Trans Law, 71% supported

Table 3. Support to the Trans Law topics (divided by ideology groups).

Subject	Left-wing (support in %)	Centrist (support in %)	Right-wing (support in %)
Approval of the Trans Law	88.4%	79.7%	63.6%
Gender self-determination (no medical requirements)	73.9%	62.5%	45.5%
Inclusion of non-binary people in the Trans Law	63.8%	65.6%	36.4%
Inclusion of trans women in feminism	81.3%	68.8%	45.5%

self-determination, 23.4% did not support it, and 5.5% did not answer. There is a statistically significant relationship ($p < 0.01$) between support for the Trans Law and support for gender change without a medical diagnosis. The relationship is positive on average ($r = 0.433$); that is, the greater the support for the Trans Law, the greater the probability of support for gender change without a medical diagnosis ($\chi^2[1, N = 163] = 30,600; p < 0.01$) which allows us to accept this hypothesis.

Most of the people who supported the law also agreed with the inclusion of trans women by feminism at levels even higher than the general population: 67.4% of all the participants said they agreed. Considering only the group that supported the Trans Law, 76.6% supported the inclusion of trans women within feminism, compared to 7.6% who disagreed, and 15.9% who preferred not to answer. Responding to what was stated in H5, that, compared to people who do not support the Trans Law, those who support it will agree that feminism, in general, should incorporate and be inclusive of trans women, there is a statistically significant relationship ($p < 0.01$) between support for the Trans Law and support for feminism to be inclusive of trans women. The relationship is positive on average ($r = 0.500$); that is, the greater the support for the Trans Law, the greater the probability of support for the inclusion of trans women by feminism ($\chi^2[1, N = 141] = 35,301; p < 0.01$).

To revise our last hypothesis (H6, compared to people who do not support Trans Law, people who express support for Trans Law will show agreement with the incorporation of non-binary people's rights in the law), considering only the group that supports the law, 65.5% also agreed with the inclusion of non-binary people in this legislation, compared to 15.9% who disagreed and 18.6% who did not answer. There is a statistically significant relationship ($p < 0.01$) between support for the Trans Law and support for the inclusion of non-binary people in the law. The relationship is weakly positive ($r = 0.366$); that is, the higher the support for the Trans Law, the greater the probability of support for non-binary people to be included in the law ($\chi^2(1, N = 136) = 18.186; p < 0.01$).

4.2. Computational Methods and Content Analysis

Finally, to answer RQ2, on whether greater support shown for the proposed Trans Law results in less hate speech on social networks, we analyzed the messages collected on Twitter. Of the messages obtained in the first process, 75.12% met the validation criteria. Considering the results obtained, added to the review of the qualitative analysis, we observe that most of the tweets collected in the sample have a favorable tone regarding the recently approved law for real and effective equality of trans people and for the guarantee of rights of LGBTI people. Of the validated messages, 90.36% were identified as not hateful and 9.64% as hateful. The percentage of hate messages found in the sample is still high. If we compare it with the general support for the Trans Law that declares citizenship, we can see that there is still work to be done. Although the level of support found is high, the presence of hate speech on the social network Twitter continues to be important. It is convenient to continue preparing new analyses and to analyze a direct relationship between the variables of support and the presence of hate speech.

However, we have identified that of the hateful messages, the majority were directed at trans women, where they were classified as "disguised men" or accused of being dangerous to cisgender women or even of wishing to mutilate and give hormones to underage children. Below are some examples translated into English as accurately as possible:

> Men are NOT women, not even disguised as cabaret dancers nor wearing women underwear....It is imposible that men feel like women.

> About the minors whose hormones and mutilation you are going to legalize with your abject law.

> Only women can gestate. Woman is the human female. Sex is immutable.

> Boys and girls: Eating chocolate and chopped pork sandwich—NO, BAD, INSANE. Boys and girls: Hormones and mutilations from the age of 10 to calm your parents' #homophobia and #lesbophobia—VERY GOOD, HEALTHY. Alberto Garzón and Irene Montero are a plague for #Childhood.

5. Conclusions, Limitations, and Future Studies

Comparing the data obtained by the public opinion survey and the classification of Twitter messages, both

methodologies pointed to a high level of support for the Trans Law; 80% of the respondents agreed with the law's approval and 90% of the messages collected were classified as non-hate. These numbers are consistent with other data regarding the Spanish population's perception of the LGBTI community in general. According to the special report *Discrimination in the European Union* (Eurobarometer, 2019), Spain is considered the third most tolerant European country towards LGBT rights: 91% of its population agrees that homosexual or bisexual people should have the same rights as heterosexual people. The high acceptance rate places the country in third place at the European level, behind Sweden (98%) and the Netherlands (97%).

In general, data from Spain are more LGBTI-friendly than the rest of Europe. Also, according to Eurobarometer (2019), we can see that the Spanish population supports other topics that dialogue with the Trans Law. Such as that, school lessons and material should include information about diversity in terms of sexual orientation (84%), being transgender (81%), and being intersex (80%). In addition, most of the Spanish population is favorable to non-binary people's rights: 63% of Spanish people believe that official documents should have a third option besides male and female. This data is close to that obtained by our public opinion survey, in which 58% of the participants stated that non-binary people should be included in the Trans Law. The rights of the non-binary population are supported by around 60% of the sample.

Although the Spanish population seems tolerant, our study and official data evidence that LGBT phobia is still a problem. Regarding crimes committed against the LGBTI population through the internet and social networks, although our data analysis indicates that 9.7% of the messages analyzed were classified as hate, official data suggests that this subject has increased significantly. In 2019, there were 17 cases of cybercrime motivated by a victim's sexual orientation or gender identity; by 2020, that number rose to 32 cases; by 2021, it had risen to 60 cases (López Gutiérrez, Sánchez Jiménez, et al., 2021), an 87.50% increase. Hate speech on social networks has affected a large part of the Spanish population, over half of whom have received offensive, discriminatory messages or threats on social networks or the internet in the last five years, and almost 60% perceive that this type of crime has increased (López Gutiérrez, Fernández Villazala, et al., 2021).

Our work also points to the need to discuss subjects related to the law in addition to its approval. For example, gender self-determination, pointed out as a highly relevant issue by LGTBI+ organizations, appears in many of the hate comments we studied. Notably, the level of support for the issues raised (gender self-determination, trans-inclusive feminism, and the rights of non-binaries) is lower than the declared support for the law itself. Lower levels of support for specific issues may reflect a lack of information regarding the law. More than half

of the responses (67.9%) stated having "little information" or "neither too much nor too little information" about the bill, which may mean that although the subject is on the media agenda, it may be being discussed in a very superficial manner, without delving into the substantive points.

This study had some limitations that are important to highlight. The use of social media in scientific research has certain obstacles, including the type of sampling used. In this study, considering the composition of the social network Twitter, certain sociodemographic groups are not represented. So, using this methodology, we can identify hateful speech, but we cannot study the characteristics of its producers nor compare them to the respondents to identify how the recoded social groups behave on social networks. Meanwhile, the fact that Spain's equality minister Irene Montero (member of the left-wing political party Podemos) was mentioned in some hateful messages steps up the historical trend also verified by our survey results that sexual minorities' rights are traditionally associated with the left and center political ideologies. Considering the difficulty of getting the answers and the high average age, we question the telephone interview as a tool for this specific topic. It is pertinent to use other methodologies to continue exploring public opinion perception, such as a virtual questionnaire, which would allow access to a greater number of people from all autonomous communities and all age ranges.

Finally, the proportion of hateful tweets detected is less than those belonging to the regular class—in our study case, less than 10% of the messages analyzed were hateful content—but its potential harm should not be underestimated. Having compared this data with the official data, we found some new possible hypotheses that deserve further investigation in future research. The first is that this percentage can grow if this methodology is replicated in a year since online hate crimes against the LGBTI population are known to be a growing trend. The second is that the public perceives that hateful content on social networks is even higher. That is why it is interesting to develop new qualitative and quantitative methods to effectively compare the perceptions of the population with the official data and the debate carried out on social networks.

Acknowledgments

Conflict of Interests

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