

Exploring incel discourse through topic modeling: insights from Spanish-speaking contexts on X

Received: 7 March 2025

Accepted: 28 November 2025

Reyes Rodríguez, Aritz Gorostiza-Cerviño, Encarnación Hidalgo-Tenorio, Manuel Moyano & Miguel A. Maldonado

Cite this article as: Rodríguez, R., Gorostiza-Cerviño, A., Hidalgo-Tenorio, E. *et al.* Exploring incel discourse through topic modeling: insights from Spanish-speaking contexts on X. *Humanit Soc Sci Commun* (2025). <https://doi.org/10.1057/s41599-025-06389-0>

We are providing an unedited version of this manuscript to give early access to its findings. Before final publication, the manuscript will undergo further editing. Please note there may be errors present which affect the content, and all legal disclaimers apply.

If this paper is publishing under a Transparent Peer Review model then Peer Review reports will publish with the final article.

Exploring Incel Discourse through Topic Modeling: Insights from Spanish-Speaking Contexts on X

Reyes Rodríguez¹, Aritz Gorostiza-Cerviño², Encarnación Hidalgo-Tenorio³, Manuel Moyano^{1,4}, Miguel A. Maldonado^{1,4}

¹Departamento de Psicología, Universidad de Córdoba, Spain

²Departamento de Comunicación Audiovisual y Publicidad, Universidad de Málaga, Spain

³Departamento de Filologías Inglesa y Alemana, Universidad de Granada, Spain

⁴Instituto Maimónides de Investigación Biomédica de Córdoba (IMIBIC), Hospital Universitario “Reina Sofía”, Córdoba, Spain

Corresponding author: Aritz Gorostiza-Cerviño, olivetti03@uma.es Departamento de Comunicación Audiovisual y Publicidad, Universidad de Málaga, Spain

Abstract

Incels (involuntary celibates) may be understood as a subculture of men frequently associated with misogynistic and racist ideologies, which have been examined from multiple perspectives at the international level. Within this field of inquiry, incel communities have increasingly attracted scholarly attention, particularly in the Anglophone sphere. However, in Spanish-speaking contexts, there is a lack of empirical evidence about this community's discourse. This research addresses that gap by analyzing the online discourse of the Spanish-speaking incel community and comparing it to the Anglo-American context. Specifically, it aims to: (1) analyze the topics present in the discourse of the Spanish-speaking incel community on X; and (2) examine its particularities in comparison with the Anglo-American discourse. For this purpose, a sample of 10,581 posts from opinion leaders of this community was collected, from 26 January 2023 to 10 February 2024. Subsequently, a Topic Modeling Analysis (LDA) was performed using word filtering to extract the main topics from this discourse. The resulting model consists of 24 topics, which were grouped into 9 categories: (1) misogyny, (2) men, (3) immigration, (4) politics, (5) incel community, (6) football, (7) social networks, (8) sex-affective relationships and (9) humorous and metaphorical expressions. The results obtained suggest that the discourse of the Spanish-speaking incel community aligns with previous empirical findings, despite some minor differences in the content of each topic across countries (e.g. “The fall of the West”). The analysis reveals that the main themes in Spanish-speaking incel discourse such as misogyny, gender dynamics and sociopolitical critiques are also prevalent in Anglo-American discourse. However, the Spanish-speaking users incorporate their cultural nuances, such as references to humor and football. These findings underscore the need to develop strategies aimed at mitigating the potential impact of these

narratives on social cohesion, preventing the radicalization of vulnerable individuals, and further investigating the phenomenon within digital environments.

Keywords: Incels, Platform X, Spanish-speaking context, Topic Modeling (LDA), Misogynistic discourse, Digital radicalization

1. Introduction

Incels (involuntary celibates) constitute an online community made up mostly of heterosexual men, characterized by their active participation in virtual spaces where misogynistic and racist ideologies are disseminated. These ideologies, which promote hatred mainly towards women whom they blame for their inability to establish sexual or romantic relationships (Costello et al., 2022; Fontanesi et al., 2022; García-Mingo et al., 2022; Glace et al., 2021; Heritage & Koller, 2020; Lindsay, 2022; Petreca et al., 2024), manifest both through the creation and dissemination of content, as well as through the passive consumption of narratives that reinforce these beliefs.

The term “incel” was introduced in the late 1990s by Alana, a Canadian woman who created the “Alana’s Involuntary Celibacy Project”. This website, started in 1997, aimed to provide support for people of all genders facing romantic and sexual exclusion (Lindsay, 2022). At its inception, the project distanced itself from violent narratives and worked to destigmatize concepts such as virginity. However, in the early 2000s, Alana stopped managing the forum. Over time, the platform drifted from its original purpose, evolving into a predominantly male-dominated space where a misogynistic ideology began to proliferate (Gheorghe & Yuzva Clement, 2023). The misogyny that began on the original platform soon spread to other online spaces such as 4chan, 8chan, Telegram, Discord and Reddit (Ging, 2019) and eventually reached social networks such as X (formerly Twitter) (Demir & Tiryaki, 2024), YouTube (Papadamou et al., 2021) and TikTok (Solea & Sugiura, 2023). This transformation marks a clear departure from Alana’s initial vision, highlighting the evolution of both the term “incel” and the communities associated with it.

Incels interact in the “incelosphere” (common online spaces) to express their misogynistic concerns, and their feelings of frustration, anger, rage, rejection and loneliness; in addition, they share comments related to violence (Lacalle et al., 2023; Speckhard et al., 2021) and discuss their needs and the grievances they suffer. Baele et al. (2023) points out that over the past 6 years, there has been a sustained increase in the use of violent extremist language across different spaces of the incelosphere. In this context, they construct an ideology about the relational dynamics between men and women and generate axioms about how these dynamics function. The lack of access to sexual relations with women (which they see as a basic right) further intensifies their frustration and other negative emotions linked to their “inceldom”, potentially fueling feelings of hatred and misogyny (Daly & Reed, 2022).

Incels are part of the “manosphere”, a network of online groups comprised of men who promote anti-feminist belief systems. These groups assert that men’s rights are being eroded by women, a narrative they use to justify their actions and rhetoric (Banet-Weiser & Miltner, 2016; García-Mingo & Díaz-Fernández, 2023b; Ging, 2019; Lindsay, 2022). The radicalization of incels is often conceptualised through ideological frameworks known as “pills” (a common reference within the groups of the manosphere, concept inspired by the film *The Matrix*), which represent different worldviews adopted by community members. Although these stages are not necessarily linear, they reflect the progression of individuals’ beliefs within the incel subculture (Woodward et al., 2022). While the majority of population take the “blue pill” (they are unaware of or have not yet acknowledged the truth), in the manosphere, opening the “red pill” awakens men to a reality in which they are at a disadvantage compared to women, a situation they attribute to feminist brainwashing and misandry (Ging, 2019; Solea & Sugiura, 2023). This perspective also dismisses claims of female repression as a myth (Woodward et al., 2022). Incels tend to gravitate toward the “black pill” (a nihilistic extension of the red pill, accepting a reality where physical attractiveness determines romantic success), which forms the foundation of their outlook (Woodward et al., 2022). It is important to note, however, that not all incels adopt the black pill ideology or progress through every stage.

Central to blackpill ideology is the belief in “lookism”, the idea that physical traits like height or bone structure solely determine one’s attractiveness and social worth of a man when a woman chooses to have a sexual or intimate relationship with him (Daly & Reed, 2022; Ging, 2019; Lindsay, 2022). This leads to a stratified model (García-Mingo & Díaz-Fernández, 2023b) where “Chads” (men with idealized masculine features) are seen as universally desired by women, while “betas” (average men) are portrayed as disposable or exploited, and incels place themselves at the bottom, claiming to be excluded from all sexual or romantic opportunities due to their appearance. Women are also placed into a similar hierarchy, with “Stacys” at the top and “Beckys” in the middle (Daly & Reed, 2022; Ging, 2019; Menzie, 2020; Maxwell et al., 2020). Crucially, incels argue that no woman is truly excluded from sexual relationships, hence their claim that “femcels” do not exist (Cuthbert, 2023; Farrell et al., 2020; Johanssen & Kay, 2024; Pizzimenti & Penna, 2024). This worldview rests on unfounded beliefs such as the 80/20 rule (that 80% of women desire only the top 20% of men) (Menzie, 2020), and stereotypes portraying women as hypergamous, as they are supposed to seek men who are physically and socioeconomically superior to them (García-Mingo & Díaz-Fernández, 2023b); and hybristophilic, as they are sexually attracted to criminals, murderers and delinquents (Solea & Sugiura, 2023). While incels present these hierarchies as biologically determined, they in fact reflect a deeply misogynistic and essentialist ideology, not an evidence-based view of gender relations. The framework they promote distorts social dynamics by portraying men as systematically disadvantaged, when in reality it reaffirms patriarchal structures and gender inequality. However, the blackpill ideology does not limit itself to the belief that physical attractiveness alone defines access to romantic and sexual relationships. While looks are considered the primary and most valued criterion (especially for men) this worldview also incorporates transactional narratives. These suggest that although

women are believed to prefer physically attractive men, they may “settle” for those of average appearance if these men offer compensatory material or emotional resources. This reinforces the blackpill’s underlying misogynistic assumption that women are inherently opportunistic and that any relationship outside the top tier of attractiveness is driven by self-interest rather than genuine affection (Baele et al., 2021; García-Mingo & Díaz-Fernández, 2023b; Menzie, 2020).

The incel narratives, as disseminated on social networks, reveal several alarming dimensions. Their discourse is notorious for its misogyny, sexism, anti-feminism and racism, often generating content that not only offends women, but also incites hatred and violence. This content focuses on aspects such as physical appearance, sexuality or gender (Jaki et al., 2019). The study of incel discourse and narratives has spanned multiple countries, platforms, perspectives and methodologies. In the Spanish-speaking context, several authors have examined the manosphere as a whole, including incels. However, to our knowledge, there are no studies focusing exclusively on incels. On the one hand, García-Mingo and Díaz-Fernández (2023a) compile information from the last five years of research conducted on the manosphere and antifeminism in the European and Spanish-speaking contexts. On the other hand, Lacalle et al. (2023) analyze the Burbuja.info forum to determine the modalities of identity construction in the selected comments. Likewise, Lacalle (2023) analyzes the attitudes and passions that emerge in the misogynist discourses in Forocoches and Burbuja.info, two reference forums of the Spanish-speaking manosphere. In Lacalle et al. (2024), the animalization of women as a strategy of dehumanization is analyzed, specifically, the use of misogynist zoomorphism in the Burbuja.info forum. García-Mingo et al. (2022) analyse the antifeminist discourse of the misogynist Spanish-speaking manosphere (decisive in shaping the social perception of sexual violence committed against women) through digital ethnography in Internet forums (Hispanchan, Forocoches), websites (Stop Feminazis; Hombres, Género y Debate Crítico), Facebook groups (Men’s Rights Activists, Abused Men of Spain), as well as Telegram, YouTube, and Twitch channels and Instagram and Twitter accounts. Also, Díaz-Fernández and García-Mingo (2024) analyze how the features and dynamics of Forocoches, as part of the Spanish-speaking manosphere, foster a masculinist digital culture based on trolling that reinforces hegemonic masculinity. García-Mingo and Díaz-Fernández (2023b) examine how narratives of male victimhood in the Spanish-speaking manosphere are constructed and deployed as part of an antifeminist strategy to justify misogyny and undermine feminism through multi-platform digital ethnography in forums, websites, imageboards, Facebook groups, as well as Telegram, YouTube and Twitch channels and Instagram and Twitter accounts. Finally, in Caldevilla-Dominguez et al. (2022), Forocoches is studied to better understand what the manosphere is. This study focuses on defining this phenomenon and distinguishing it from the broader machismo present on the Internet, by identifying specific categories. In addition, the authors explore various forms of masculinities and the way these groups operate in digital spaces.

Other research from the international scientific context has examined the specific vocabulary used by the incel community, highlighting their ideology frames white cisgender men as oppressed victims. According to this narrative, these men are perceived as being victimized by both women

and people of color, whom incels hold responsible for their marginalization. Consequently, they believe it is necessary to subjugate these groups (Fowler, 2022). In line with this perspective, incels use dehumanizing and misogynistic language on social networks when referring to women, often comparing them to various categories or domains that reinforce negative and denigrating stereotypes. For instance, women are disparagingly likened to: (1) dangerous or dirty animals (such as pigs, cattle, vipers, insects and pests); (2) food (with terms such as “rape meat” or “roast meat”); (3) body parts (reducing them merely to “holes”); (4) objects (such as commodities, inanimate things or, directly, “cumbuckets”); (5) androids, cyborgs or humanoids, thereby denying them their rights as human beings (Prazmo, 2020).

The vocabulary used by incels is not only deeply misogynistic, but also markedly racist. Within their lexicon, reference to racialized gender identities constitutes a recurring pattern after gender categorizations. Among the most common are the following: (1) Personal names connoting racial stereotypes: Chad (white alpha male), Tyrone (black version of Chad), Tyroneriguez (black and Mexican), Chadriguez (Mexican Chad), Chadpreet (Indian Chad), Chang (East Asian Chad), Chaddam (Arab Chad) and Chadullah (Arab Chad); (2) Food as ethnic metaphor: Ricecels for Chinese or Asians, or currycels for Indians; for women, noodlewhores, currywhores, ricebitch, ricecunt and curry(-)Stacy; (3) References to skin/color: Cumskin is a pejorative term for whites, while shitskin, pooskin or crapskin are used derogatorily to refer to black people; (4) Genetic and animalistic terminology: Terms such as hybrid, mongrel or mutt, the latter referring to mixed-breed dogs, as well as hapas or globin/a (Bogetic, 2023), among others, are used to describe people of mixed ancestry.

These expressions, which carry strong dehumanizing and derogatory connotations, do more than reflect the group’s discriminatory attitudes; they actively construct and reinforce an exclusionary worldview that delegitimizes the humanity of those outside the incel identity.

Regarding the use of Topic Modeling to analyse incels subculture, we can find some previous research in international context, most of them angloamerican. Ali & Zannettou (2024) conduct a large-scale quantitative analysis in Reddit and in a specific incel forum of how incel communities discuss self-harm compared to general mental health communities, finding significant differences in language, temporal evolution, and associated factors, with negative perceptions of physical appearance playing a central role among incels. Another research conducted by Farrell et al. (2020) identifies and analyzes the jargon of online subcultures, applying it to Reddit’s manosphere to characterise its norms, values, and hostility toward women. Petreca et al. (2024) analyse texts from incel (among other groups), finding both shared narratives of disenfranchisement and aggression and distinct ideological markers. In a similar line, Petreca et al. (2025) conducts a linguistic analysis of 23 manifestos written by violent offenders between 1974 and 2022 (3 of them from incels) to assess their usefulness in forensic linguistics and risk assessment, identifying topics related to ideology, grievances, and direct threats, and demonstrating how these methods reveal semantic patterns and relationships between themes to better understand the motivations behind violence. Baele et al. (2021) map the incel community’s misogynistic worldview linked to Alek

Minassian's van attack in Toronto (2018) and Elliot Rodger's school shooting in Isla Vista (2014), showing how its social categories and causal narratives contribute to supporting and inciting politically motivated violence. Chua and Wilson (2023) analyze posts from the ExtremeBB dataset to explore the ideological links between misogyny and far-right extremism in the manosphere (including incels), finding overlaps in race and gender discourse and similar radicalization mechanisms that may facilitate the adoption of more extreme ideologies. Solopova et al. (2025) examine how members of different ranks within the incel community express sentiments and ideology, finding distinctive linguistic patterns that vary by rank and can predict a user's status, highlighting the community's structured hierarchy and role in spreading misogynistic narratives. Jedolar and Frank (2021) analyse comments from the Incels.co forum, finding that AI can effectively uncover semantic themes and emotional patterns in large volumes of posts, enabling insights into community issues that would be difficult to detect manually. Shi et al. (2024) examine Reddit's incel community (2016–2017) using computational grounded theory, showing that it shifted from self-help to extremist ideology as discussions moved from real-life experiences to simplified group symbols, which amplified deviant beliefs. Finally, Wedel and Coufal (2025) examine how the first COVID-19 lockdown affected the radicalization of the incel community on the incels.is forum, finding that social isolation temporarily reduced mental health complaints but increased participation (especially among veteran members) in extremist-themed threads.

As can be seen, there is hardly any specific research that specifically analyzes only incels in the Spanish-speaking contexts and/or on the X platform through Topic Modeling (LDA). Although their preferred metaphors or terminology have been examined, among other aspects, to our knowledge there are no studies that examine the topics discussed by Spanish-speaking incels. Based upon this, here we intend to answer the research questions posed below:

1. What are the main topics of the discourse of Spanish-speaking incels on X?
2. What similarities and differences exist between the topics used in Spanish-speaking and Anglo-American incel discourse?

Therefore, the present research proposes the following aims:

- (1) Analyze the topics of the discourse of Spanish-speaking incels in X;
- (2) Examine its unique characteristics in comparison with Anglo-American discourse.

The following hypotheses are derived from these objectives:

H1: It is expected that misogyny constitutes the main core component of Spanish-speaking incel discourse on X, consistent with previous findings in Anglo-American contexts.

H2: Although the general topics should be similar, there must be significant differences between Spanish-speaking incel discourse and Anglo-American discourse, especially in the sub themes addressed on each topic.

Analysing the fundamental topics of discourse among Spanish-speaking incels on X can allow us to identify the central narratives around which their interactions are structured. This, in turn, makes it possible to compare them with the better-documented Anglo-American context, highlighting both shared dynamics and potential local specificities. Beyond its empirical contribution, this objective also has social relevance: understanding the key themes within Spanish-speaking incel discourse provides insights into how gender relations, hostility and identity are being constructed in these online spaces, which can inform broader discussions on digital subcultures, extremism, and gender-based violence.

2. Method

The present research uses content analysis techniques to identify and unravel the topics of discourse in the Spanish-speaking community of incels on X, with a particular focus on the opinion leaders of this group. This approach seeks to deepen the understanding of the key narratives that may shape and influence the perspectives and behaviors of this community.

2.1. Sample

The identification of opinion leaders was carried out through an open-source screening of accounts most actively disseminating incel content on X. Following Romero-Rodríguez et al. (2020), four dimensions were operationalised with observable indicators: credibility (consistency of incel-related content), visibility and reach (number of followers and average views per post), influence capacity (engagement in terms of likes, reposts, and replies), and active participation (frequency of posting and involvement in discussions). In this research, the term opinion leader refers specifically to accounts that combined these traits and demonstrated a sustained presence in shaping the discourse of the Spanish-speaking incel community.

Using X's API (X, 2024) and Python (Python Software Foundation, 2022), all posts and responses to user posts between 26 January 2023 and 10 February 2024 were extracted. We analyze this interval because it constitutes the full period for which data are available for both leadership accounts: the older account was created on the start date, which we adopt as a common baseline to align observation windows and mitigate left-censoring; the terminal date corresponds to the close of data collection.

The responses to the posts were used to identify all users interacting directly with incel content posts; this approach made it possible to extract a complete list of unique users and detect the possible presence of opinion leaders not pre-selected by the researchers, provided they met the established criteria. The requirement for selecting such a sample was to have 30,000 followers on X and to have participated in some of the conversations among incels on this platform. A total of 10,581 posts from opinion leaders (Figure 1) and 99,417 posts from responses to opinion leaders' posts (Figure 2) were extracted. We also reviewed 143 (Supplementary Materials, Appendix 1, Table A.2) of the 43,567 unique users of the responses to opinion leaders with more followers than the leaders studied. After conducting the analysis, and based on the previous scientific literature,

none of the analyzed posts met the criteria for inclusion in the study sample, as their content focused on other unrelated topics.

Figure 1

Distribution of posts by incel information disseminators

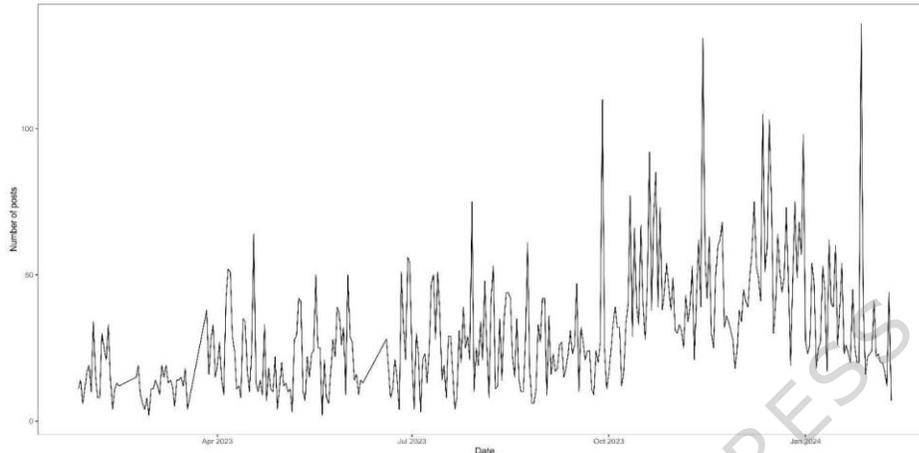
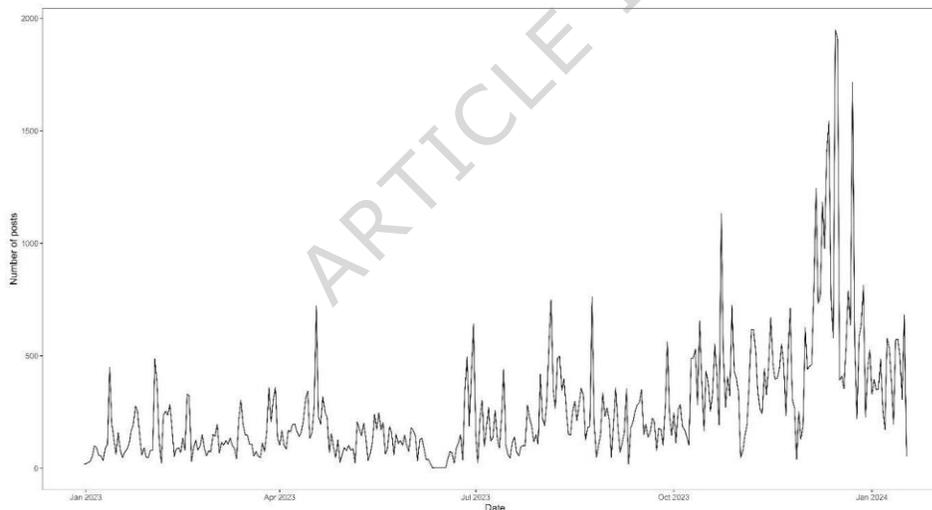


Figure 2

Distribution of posts by respondents to incel information disseminators



2.2. Content Analysis

Content analysis is a systematic and objective method for describing and quantifying communicative phenomena. It allows interpreting textual, visual or auditory data by identifying patterns and recurring themes. It is used in fields such as media, sociology and psychology (Krippendorff, 2018). In the present paper, such analysis was carried out in two phases. In the first stage, the keywords (Baker 2004; Baker et al., 2013; Scott, 1997) used by opinion leaders to disseminate incel discourse were identified. Subsequently, posts containing these characteristics

were filtered, and Topic Modeling was applied. This statistical natural language processing technique uncovers latent topics in large text collections by clustering co-occurring words into meaningful groups. It is widely used in textual data analysis (Blei, 2012). The application of Topic Modeling aimed to identify the core discourse of Spanish-speaking incel opinion leaders in the context of X.

2.3. Topic Modeling (LDA)

The method applied in this research is not traditional discourse analysis but topic modeling. While discourse analysis provides a qualitative and interpretive examination of how language constructs meaning in social and cultural contexts (Fairclough, 1995; Wodak & Meyer, 2009), topic modeling—specifically Latent Dirichlet Allocation (Blei et al., 2003)—is a computational approach that uncovers latent themes by identifying patterns of word co-occurrence in large corpora. This method allows for scalability and replicability but cannot capture context, pragmatic meaning, or discursive strategies, making the resulting topics statistical abstractions that require interpretation. Therefore, topic modeling should be regarded as a complementary tool rather than a substitute for qualitative discourse analysis (DiMaggio et al., 2013).

The LDA model detects the main topics present in the posts and the keywords associated with each topic. This technique operates under the assumption that each document is a mixture of multiple topics, with each topic characterized by a specific distribution of words (Blei et al., 2003; Chen et al., 2023; Grimmer et al., 2022; Maier et al., 2018). Unlike embedding-based clustering approaches such as BERTopic, which infer the number and granularity of topics from clustering parameters, LDA allows explicit control and reporting of the chosen number of topics, an advantage when qualitative oversight is needed for texts with double meanings, metaphors, and community-specific neologisms. While covariate-aware models such as STM are designed to estimate how external variables influence topic prevalence or content, our aim here is descriptive characterization; accordingly, we adopt LDA for the main analysis, prioritizing interpretability, reproducibility, and computational efficiency.

Prior to model selection, special text preprocessing was performed due to the unique characteristics of this type of online communities and the account suspension they face due to X's policies. This results in a discourse that is less accessible, more cryptic, and characterized by frequent use of irony and metaphors. For this reason, many of the concepts used by users were standardized (Supplementary Materials, Appendix 1, Table A.2), while “stemming” and “lemmatization” were avoided to prevent potential loss of information. In addition, “stopwords” as well as other terms deemed irrelevant or likely to generate noise were removed (Supplementary Materials, Appendix 1, Table A.2). Once the data preprocessing was completed, a DTM (Document Term Matrix) was constructed, representing the number of unique words per document; in this case, the number of unique words per post. This document served as the input for applying LDA using the textmineR package (Jones, 2021), with the Gibbs method (Griffiths & Steyvers, 2004).

In the social sciences, several strategies exist for choosing the number of topics (Maier et al., 2018). Given the corpus's complexity, we combined quantitative screening with qualitative validation. We trained a series of LDA models with topic counts from 3 to 30, running 500 iterations per model with a burn-in of 180. We set the document–topic prior to 0.1 and the topic–term prior to 0.05, allowed the document–topic prior to be optimized during training, computed likelihood, topic coherence, and pseudo- R^2 , fixed a random seed (12345), and used four CPU cores. We ranked models by the Cv coherence score (an NPMI-based measure of how semantically consistent the top words of each topic are) (Röder et al., 2015) and retained the four best-scoring models.

Next, we conducted a qualitative validation based on Levy and Franklin (2014), which involved manually analyzing the 100 posts with the highest gamma score (i.e., strongest association) for each topic, along with the 12 most frequent words or bigrams (i.e., common pairs of consecutive words). Two researchers independently assigned a primary theme to every topic using these materials, then compared their annotations to mark agreement or disagreement and resolved discrepancies through discussion. We quantified inter-rater reliability using Cohen's Kappa. This procedure allowed us to evaluate the interpretability of each topic and refine our understanding of the underlying themes. To assist in topic labeling, we also used a function that selects the most representative bigram for each topic, ensuring coherence between the model output and our qualitative insights.

2.4. Data Processing

In order to safeguard the privacy of the subjects studied and comply with the privacy policies of X (2024) and the European regulations concerning the protection of personal data (European Parliament and of the Council, 2016), the Python hashlib library was employed to anonymize sensitive information by using hash functions, specifically the SHA-256 cryptographic hash function (Python Software Foundation, 2022). All data related to this research can be consulted in the project repository (Gorostiza et al., 2025).

3. Results

Among the four candidate models (14, 15, 24, and 27 topics), the 24 topic model exhibited the highest agreement in topic definition, characterized by conceptual clarity and internal coherence, with inter-rater reliability measured through Cohen's Kappa at 0.87 (Supplementary Materials, Appendix 1, Table A.2). Quantitative diagnostics further supported its selection. First, a positive association was observed between the estimated values of alpha and empirical topic prevalence (Figure 3), indicating that the learned prior was well calibrated to the distribution of topics across documents and did not impose excessive sparsity or uniformity. Second, probabilistic coherence values (Figure 4) ranged between 0.0 and 0.33; nearly half of the topics scored 0.0, lacking a well-defined semantic core and resulting in noisier clusters, while those with coherence values between 0.2 and 0.3 revealed identifiable semantic cores, albeit with overlapping vocabulary.

This pattern reflects the short and informal nature of the posts, where themes frequently intersect and full separation is difficult to achieve. Finally, model likelihood stabilized over successive iterations (Figure 5), consistent with adequate mixing and convergence under the chosen hyperparameters and preprocessing. Taken together, the alignment between prior and prevalence, the presence of moderate yet interpretable coherence, and the stable likelihood indicate that the 24-topic LDA captures meaningful structure in the corpus without overfitting, with residual uncertainty addressed through the qualitative validation described elsewhere.

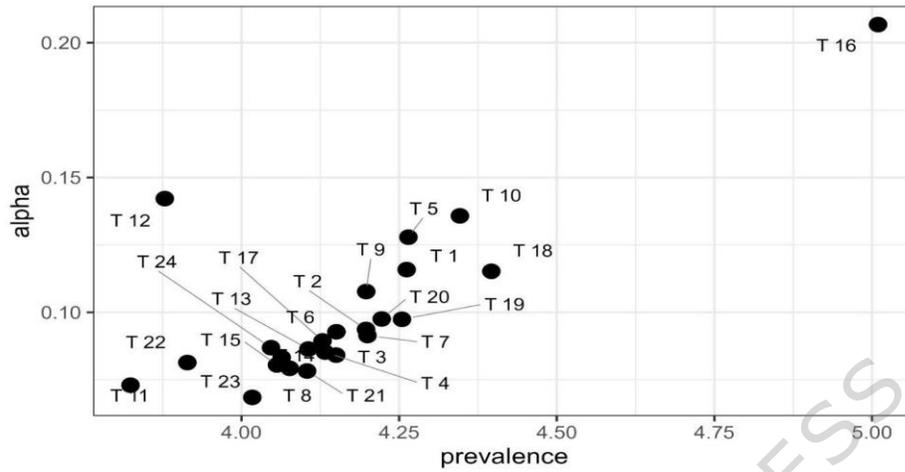
Table 1

Topics, bigrams, coherence, prevalence and the 12 most important top terms associated with each topic

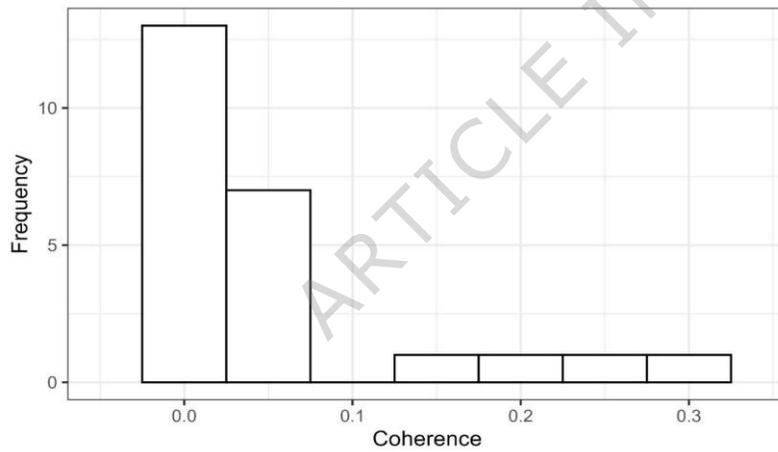
Topic	Label_1	Coherence	Prevalence	Top_terms
t_1	just_entered	0.018	4.262	please, ends, god, I hope, come back, man, body, enter, picture, obviously, I okay
t_2	lia_sikora	0.005	4.198	we live, rest of, talk, face, put, best, leave, man, ways, thousand, option, chic
t_3	red_flag	0.246	4.15	man, flag, net, red, red_flag, picture, west, imminent, fall, night, fall_west, t king
t_4	girlfriend_erasmus	-0.022	4.132	girlfriend, incel, humor, reality, female, surprise, tests, thing, erasmus, meme female
t_5	daily_gym	0.054	4.265	world, people, chick, gym, person, father, like, eating disorder, is coming, d you say
t_6	get_out_of_my_sight	-0.001	4.151	people, squad, woman, world, picture, sight, danger, I mock, public, balls, so
t_7	cry_one's_eyes_out	0.027	4.200	alive, spain, guilt, seeing, insane, normal, memes, completely, son, tear, tear queen
t_8	damn_miss	0.002	4.076	friend, you can, arise, quiet, years, put, encouragement, antuan, thanks, worr moha, consent
t_9	scary	0.046	4.198	fear, picture, people, gets ends, trials, scary, albacete, face, they will celebrat endure trials, tale
t_10	human_nights	0.008	4.346	put, spain, people, persons, easy, vote, home son, media, come on, psoe, maj
t_11	average_woman	-0.005	3.824	woman, picture, father, cheat, average, daughter, average_woman, freak, sor empowerment, I shouted, victim
t_12	average_man	0.051	3.878	man, say it, average, average_man, wine, woman, queen, say it_queen, cats, cats_wine, feminist, soldier
t_13	fertility_display	0.016	4.106	incel, you see, life, hard, friend, years, fertility, schizophrenics, call, knew, d fertility_display
t_14	social_network	0.006	4.064	woman, I feel, father, networks, totally, social, put, you pass, you can, dopar society
t_15	beautiful_friends	-0.013	4.056	years, case, man, believe, responsibility, moha, friends, happened, tipdeinco; enough, gone, thread
t_16	center_field	0.055	5.009	madrid, team, match, hazard, barca, league, league, field, goal_center, europ getafe
t_17	its_over	-0.003	4.129	incel, llados, uploaded, [anonymised], video, profile, captures, you will see, incels, happened, schizophrenics
t_18	fits_duver	0.042	4.396	boyfriend, love, couple, history, relationship, life, idea, incel, you want, slee girlfriend, I want
t_19	crying_laughter	0.143	4.255	crying, laughter, crying_laughter, poor, euros, month, light, followers, being months, schizo, meme
t_20	richard_alpert	0.029	4.222	joke, I say, reason, someone, I understand, thank you, put, understand, costs, personal, cry
t_21	i_apologize	0.000	4.104	seen, I want, picture, sorry, I see, I thought, unique, woman, I pass, like, I as
t_22	give_ideas	0.178	3.914	years, ideas, give, give_ideas, man, tomorrow, father, ferran, ferran_torres, r modus_operandi, operandi
t_23	pedro_sanchez	0.289	4.017	woman, pedro, pedro_sanchez, sanchez, could, century, picture, video, to go tired, stick, misogynios
t_24	I_just_got_dizzy	-0.005	4.047	I just got, seen, art, woman, people, nights, hand, damn, missing, father, man I_just_got_dizzy

Figure 3

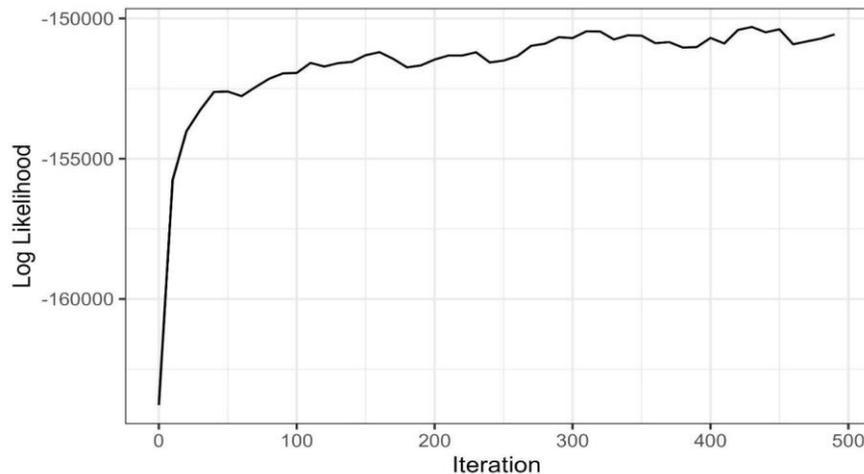
Quantitative values of the quality of the model topics. Relationship between prevalence and alpha

**Figure 4**

Quantitative values of the quality of the model topics. Histogram of probabilistic coherence

**Figure 5**

Quantitative values of the quality of the model topics. Log likelihood plot



Based on the selected model, a detailed analysis of each of the topics was carried out. Table 1 shows the topics, as well as their prevalence, coherence and the 12 most important words associated with each topic.

To achieve the research aims, the content of the topics was grouped into broader categories, with some topics integrated into multiple categories.

Topic 1 “just entered” focuses on the criticism of how women in general and streamers in particular dress, as well as on the desire to make sex taboo, reflecting a longing for a return to past times, when this did not happen.

Topic 2, labeled “lia sikora”, questions women’s decision-making capacity regarding men, criticizing them for offering moral lessons, and for humiliating and rejecting girls with certain characteristics.

Topic 3, known as “redflag”, combines two ideas; on the one hand, it refers to the fall of the West, suggesting that contemporary society is being destroyed by factors such as immigration (the most prominent), feminism, the LGTB community, and evolving relationship dynamics; on the other hand, it highlights redflags, which are the negative signs a person has (usually women) from which we must flee to bond at a relational level, and contrasts this with “greenflags”. Examples of redflags in girls include the absence of a father figure or “daddy issues”, demanding emotional responsibility, having colored hair, a tattoo on the chest, claiming “I’m in my peak”, or having an OnlyFans account, among others.

Topic 4, “erasmus girlfriend”, appeals to infidelity, specifically to the distrust that men must feel when their girlfriend goes on an Erasmus trip; in addition, it also despises female humor ironically and negatively mentions the use of sex toys by girls.

Topic 5, or “daily gym”, issues a negative criticism, aimed primarily at overweight women, who imply that going to the gym every day is synonymous with having an eating disorder.

Unlike the other topics, Topic 6 “get out of my sight”, is a hodgepodge of issues (e.g., fatphobia, fertility age, bodypositive, employers and workers, immigration, streamers, redpill ideology, government, etc.). This result is to be expected due to the low levels of coherence presented by this topic. This thematic fragmentation may also reflect one of the limitations of topic modeling, particularly when applied to short, informal texts such as social media posts. LDA tends to prioritize word co-occurrence over nuance, which can make it difficult to distinguish between subtle or overlapping discursive elements, especially in communities where irony, sarcasm, and coded language are frequent.

Topic 7, “cry one’s eyes out”, focuses on humor and memes on various topics, addressing politics, Spanish nationality and criticism of immigrants, especially Muslims.

In topic 8, “damn miss”, they ironically criticize and question the conventional need for a girl’s consent to receive compliments and the perceived contradictions in certain behaviors that they do.

Topic 9, “scary”, mainly talks about people waking up, making reference to the redpill, the realization of how reality works, calling for community unity in an environment seen as disconnected from mainstream society. It also includes criticism of various issues the speakers find unacceptable, often targeting diverse behaviors among women and occasionally touching on political matters.

Topic 10, “human rights”, alludes to political issues, specifically expressing their opinion and criticism on aspects related to voting and its implications, although criticism of political parties is also mentioned, specifically the PSOE (a social democratic, center-left party) and more specifically on the mass acceptance of migrants.

Topic 11, “average woman”, reflects the derogatory stereotype that incels hold towards women deemed to have little value. It criticizes aspects such as female empowerment, female social media influencers (e.g. tiktokers), bodycount (number of sexual partners), hybristophilia (attraction to criminals), and the sexualization of women online. As a consequence, according to incel ideology, such women will hit “the wall”, a point after which no man will be interested in them due to their extensive sexual history, infidelities, or having passed their “fertility peak” (18-25 years old), thereby condemning them to a life of solitude with cats and wine.

Topic 12, “average man”, criticizes certain men using labels like “soy boys”, “average ally”, “sims”, “provider man” and “deconstructed man”. Incels argue that these men set no boundaries for women, allowing themselves to be exploited economically and otherwise. In addition, mention is made of the “average baboon” and “average degenerate simp”, who supposedly only pursue lewd sexual encounters with women. This critical perception of “average men” is accompanied by references to and criticism of “average women”. This topic interconnects with Topic 11 by also criticizing women who take advantage of such men, reiterating notions like “the wall”, and mentioning derogatory stereotypes linked to immigrant Muslims.

In Topic 13, “fertility display”, the leader self-identifies as the CEO of the incel community, also showing the sense of community, brotherhood and belonging of the members, talking about their vulnerabilities, feelings and the rejections they face from women. On the other hand, it also introduces the concept of fertility display, referring to women who post provocative photos on social media to capture male attention, and reiterates the idea of fertility peak, as the ideal age for female fertility.

Topic 14, “social network”, refers to the validation and approval that women seek from men on social media, either by exposing their bodies, expressing their discomfort, or sharing personal experiences. In addition, the criticism extends to anyone who overshares online, such as couples who display their tastes or hobbies, or individuals posting content that the speakers find unacceptable.

Topic 15, “beautiful friends”, addresses several interrelated topics. On the one hand, they criticize women who avoid taking responsibility for their actions (for example, drinking alcohol, being unfaithful, etc.), alluding to superior reasons such as horoscopes, menstruation, contraceptives, among others. It also discusses false allegations, and critiques women with a high body count, suggesting that such behaviour has negative consequences.

Topic 16, “center field”, alludes to the topic of football.

Topic 17, “its over”, focuses on topics such as feminism, equality, consent (with a reference to Jenni Hermoso, who is a footballer of the Spanish women’s national soccer team, of which she is its all-time leading scorer, who received an unwanted public kiss upon winning the World Cup from the President of the Royal Spanish Football Federation and Vice-President of the Union of European Football Federations), and criticizes women who use filters on their social media photos. The expression “its over” is used to comment on various aspects about the incels themselves and certain behaviors attributed to women.

Topic 18, “fits duvet”, revolves around relationships, discussing what is considered acceptable behavior in couples. It posits that women (often specifically Latinas) seek a “financially present boyfriend”, a man with the means to support them. It also touches upon issues of infidelity and relationships based on convenience.

Topic 19, “crying laughter”, talks about various aspects of social media interactions, employing irony by describing women as beings of light, while using the expression crying with laughter to comment on various topics.

Topic 20, “Richard Alpert”, references the character Richard Alpert, and also expresses personal opinions on several topics, expressing how they would act in certain situations.

Topic 21, “I apologize”, they use this sarcastic expression for different aspects but in general they criticize certain attitudes exhibited by women.

Topic 22, “give ideas”, focuses on the use of this expression to dissuade particular actions, as well as on the expression “modus operandi”, which refers to a systematic and concrete way of acting. Both expressions are applied in different contexts (especially misogynist criticism and football), adapting to the communicative intent and discursive environment.

Topic 23, “Pedro Sánchez” (current Prime Minister of the Spanish government) predominantly criticizes Pedro Sánchez and his political party in a negative and humorous way, while also talking about politics in general.

Topic 24, “I just got dizzy”, uses this expression to refer to different aspects, especially football and immigration in a humorous tone.

From these results (Figure 6 and Figure 7), this information can be classified into nine main themes: (1) misogyny, (2) men, (3) migration, (4) politics, (5) incel community, (6) football, (7) social networks, (8) sex-affective relationships, and (9) humorous and metaphorical expressions.

Figure 6

Proportion of tweets by dominant topic (Gamma values)

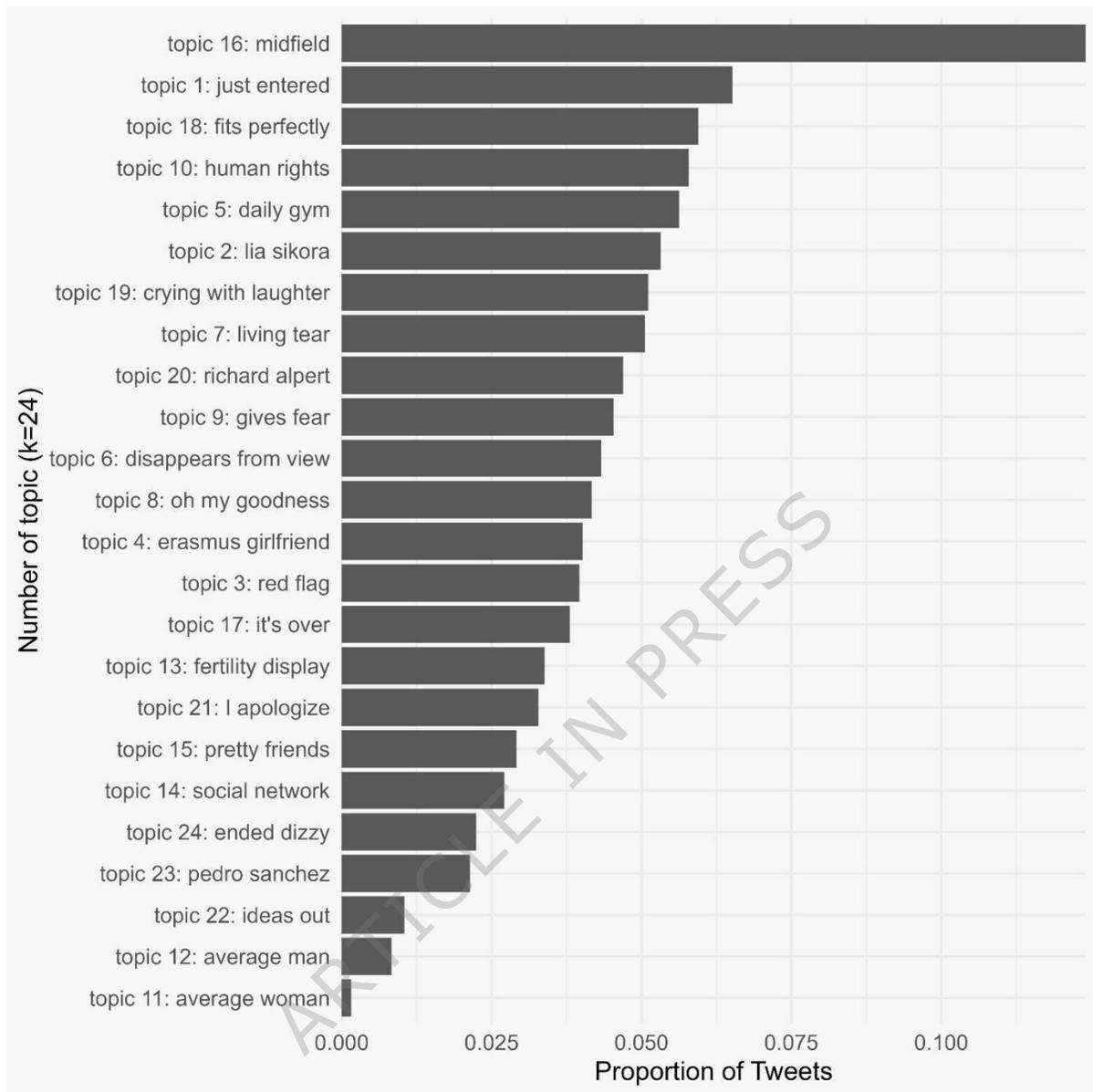
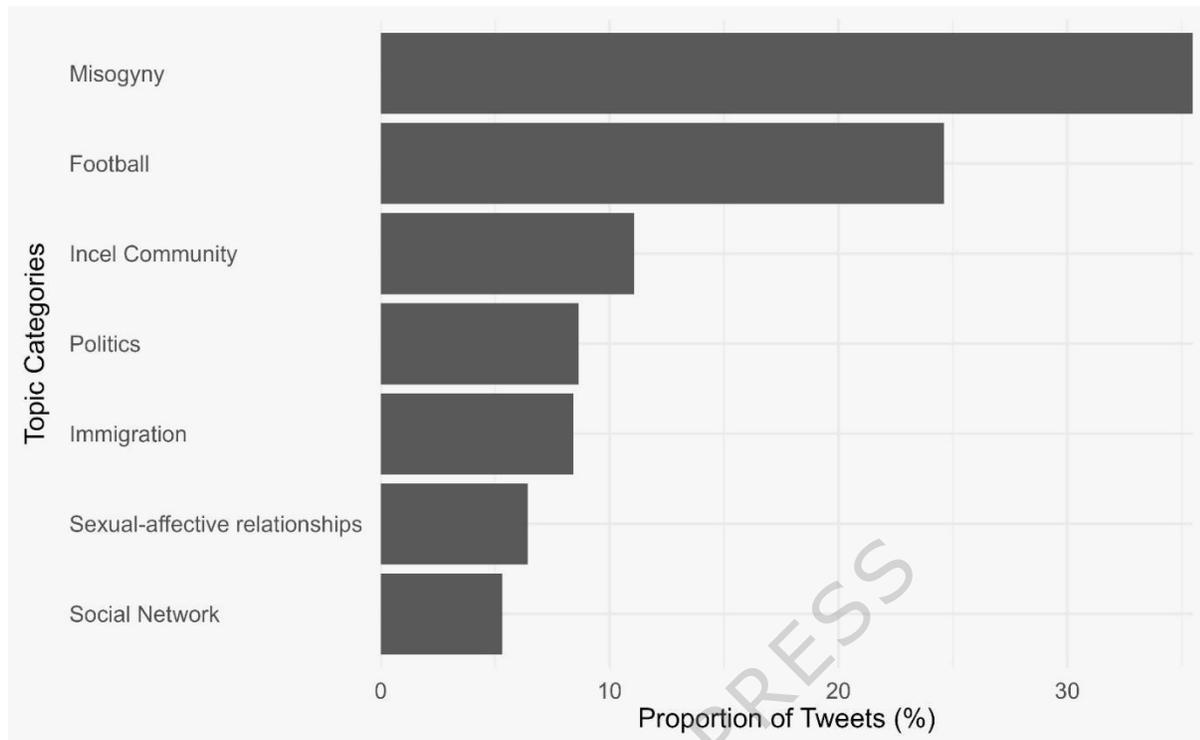


Figure 7

Proportion of tweets by researcher-created topic categories



Based on this classification, the different topics have been included within each main theme (see Table A.1 in Appendix 1, Supplementary Materials).

4. Discussion

The aim of the present research was to analyze the topics of Spanish-speaking incel discourse on the X platform and compare them with the characteristics of English-speaking discourse as documented in existing literature.

Notably, the discourse originating from the Anglo-American world has largely permeated the Spanish-speaking context, although certain differences are evident. Although there are no studies that specifically analyze the topics of Anglo-American incel discourse on X, comparisons can be made using other evidence that performed topic modeling in other forums such as Reddit (Ali & Zannettou, 2024; Farrell et al., 2020; Shi et al., 2024), ExtremeBB (Chua & Wilson, 2023), specific incel forums like, for example, incels.is, among others (Ali & Zannettou, 2024; Baele et al., 2021; Jedolar & Frank, 2021; Solopova et al., 2025; Wedel & Coufal, 2025) and original incel texts such manifestos (Petreca et al., 2024; Petreca et al., 2025). Also we can make comparisons with evidence that used different methodological analysis of data from other social networks such as TikTok (Solea & Sugiura, 2023), on forums such as Reddit (Helm et al., 2022), and existing research on their discourse in general.

As Hypothesis 1 posits, the analysis has confirmed that misogyny is the main ideological axis in Spanish-speaking incel discourse. This coincides with findings in the literature on Anglo-

American incel discourse (Daly & Reed, 2022; Jaki et al., 2019; Petreca et al., 2024; Prazmo, 2022). In the Spanish-speaking context, this misogyny is expressed through multiple subthemes, such as the rejection of women for their physical appearance (fertility display, Topic 13) and their decisions (lia sikora, Topic 2), as well as narratives related to infidelity (erasmus girlfriend, Topic 4) and validation in social networks (social network, Topic 14). These findings reinforce Hypothesis 1, by evidencing that misogyny is a central element of the incel discourse analyzed.

In relation to Hypothesis 2, the results show that, although the Spanish-speaking incel discourse shares ideological principles with the Anglo-American discourse, it also exhibits specific cultural characteristics. For example, within the Spanish-speaking context, subthemes such as bodycount, the fertility peak, and “the wall” are notably prominent, in contrast to their lesser presence in the English-speaking discourses documented in the literature (Solea & Sugiura, 2023; Glace et al., 2021). In addition, narratives specific to the Spanish-speaking context include themes such as hatred of Latinas for supposedly “taking advantage” of men (topics 7 and 18) and a strong perception of cultural threat associated with immigration, as seen in emotionally charged expressions like redflag (Topic 3), get out of my sight (Topic 6), and cry one’s eyes out (Topic 7). These themes are particularly significant because they reflect a localized articulation of resentment, in which incel discourse intersects with racialized and xenophobic anxieties common in broader right-wing populist narratives. Such framings suggest that gender-based grievances are being refracted through national and cultural lenses, turning the figure of the undesirable or “dangerous” woman into not only a sexual but also a cultural and ethnic threat.

At the same time, concepts rooted in Anglo-American incel discourse (such as the “80/20 rule” or archetypes like “Stacy” and “Becky”) are noticeably less frequent in the Spanish-language corpus. However, their ideological logic (based on hierarchies of beauty, hypergamy, and sexual value) remains present, albeit through different metaphors and references, which is in line with previous evidence, such as García-Mingo & Díaz-Fernández, (2023b)’s research about Spanish-speaking incels in online communities. This supports Hypothesis 2 by demonstrating that while incel discourse retains a core ideological structure across languages, it adapts to reflect local socio-cultural dynamics. These findings underscore the importance of examining how online misogyny operates not just as a global phenomenon, but also as one deeply shaped by national contexts, histories of racialization, and regional notions of gender and power.

In summary, the analysis reveals that the Spanish-speaking incel discourse is structured around the same ideological topics as its Anglo-American counterpart, such as misogyny, while also incorporating cultural elements specific to the Spanish-speaking contexts

Specifically, as mentioned, the main theme of both discourses is misogyny (Daly & Reed, 2022; Jaki et al., 2019; Prazmo, 2022), due to the high number of subthemes referring to it (see Table A.1 in the Appendix 1 of the Supplementary Materials). However, differences are identified in the subtopics addressed, some of which are particularly idiosyncratic to the Spanish-speaking context. For example, Topic 3 highlights red flags such as the absence of a father figure or the so-called

“daddy issues”, certain physical characteristics (such as colored hair or specific tattoos), or behaviors such as having an OnlyFans account, among others. In Topic 4, it is mentioned, for example, the concern about your girlfriend going on an Erasmus trip. On the other hand, in Topic 11, the concept of “average woman” is addressed, revealing points of convergence with English-speaking discourse, such as hybristophilia, hypergamy (García-Mingo & Díaz-Fernández, 2023b; Solea & Sugiura, 2023), as well as feminism and female empowerment (Blake & Brooks, 2023; Sparks et al., 2023). However, other elements differ and are more characteristic of the Spanish-speaking context, such as the bodycount, “the wall”, the fertility peak (Topic 13). This is evident in the multiple references to “roasties” (Kolano, 2022; Meier & Sharp, 2024; Menzie, 2020; Scotto di Carlo, 2023). The term serves as an analogy, suggesting that the outer lips of the female genitalia distend and deform with each sexual encounter becoming reminiscent of roasted meat (Kolano, 2022; Menzie, 2020). This metaphor is employed to label women who are perceived to have engaged in excessive sexual activity, implying that such encounters alter a woman’s genitalia in a way that signals promiscuity and consequently diminishes her attractiveness (Menzie, 2020). Additionally, the expression “they ride the cock carousel” (Kolano, 2022) is used in a similar derogatory context. Related with topic 5 “daily gym”, we found that in the incel community forum analyzed by Ali & Zannettou (2024), an important topic was Health and Fitness. This was about working out and eating healthy to attain a better physique; however, here incels focused and referred to themselves, therefore, men. Aligned with that is the analysis of Petreca et al. (2024), as incels expressed difficulties in the gym. This evidence differs from our data, as incels criticized women who complain about people doing too much sport suggesting they suffer an eating disorder. Both discourses rest on the belief that social structures unfairly favor women in the sexual marketplace, resulting in unjust outcomes for certain men (Halpin, 2022, Petreca et al., 2024). This perception is often accompanied by resentment toward women, who are blamed for incels’ lack of sexual and romantic success (Broyd et al., 2023; Petreca et al., 2024).

Another theme characteristic of the Spanish-speaking incel discourse is the disdain towards Latinas who are portrayed as seeking “economically present” boyfriends. These concepts are more prevalent in this context (topics 7 and 18), than in the English-speaking discourse, where similar ideas are applied more broadly to women perceived as taking economic advantage of men (Glance et al., 2021; Meier & Sharp, 2024; Woodward et al., 2022). This subtopic is also intertwined with issues related to immigration. The issue of consent is also discussed in Topic 8, with Solea and Sugiura (2023) noting that the predominant consensus in the discourse is that reports of sexual assault or harassment made by women are seen as subjective. This theme also emerges in Topic 15, where false allegations are discussed, reinforcing a recurring narrative in these spaces. In addition, they argue that Chads are not required to give the same consent as other men for sexual relations. This perception can be compared to the narrative of Spanish-speaking incels, who criticize feminists for allegedly defending the reinsertion of immigrants who commit abuse or rape, while advocating for the incarceration of national citizens in similar situations. On the other hand, as manifested in topic, we can observe in both cultures the idea of returning to past times because they were better, referring to the golden age of patriarchy, with traditional values and gender roles

(Baele et al., 2021; García-Mingo & Díaz-Fernández, 2023b; Tomkinson et al., 2020; Woodward et al., 2022). In this sense, both discourses coincide in the preference for monogamy (Baele et al., 2021; Ging, 2019; Hoffman et al., 2020; Perliger et al., 2023; Sparks et al., 2023; Woodward et al., 2022), as well as an extreme hatred of infidelity (Glance et al., 2021; Lacalle et al., 2023; Sparks et al., 2023; Woodward et al., 2022).

Another major theme that emerges in both corpora is racism, which intersects with misogyny in distinct but structurally comparable ways (Jaki et al., 2019). In the Spanish-speaking context, a particularly salient concept is the so-called “fall of the West” (Topic 3), which reflects a narrative of civilizational decline. This narrative centers on the idea that Europe (and, by extension, Western cultural identity) is being eroded through Islamization, immigration, and the spread of liberal social values. These ideas are part of the “Great Replacement Theory” (Anti-Defamation League, 2018; Ekman, 2022; Jesús & Pierre, 2020; Petreca et al., 2024; Wilson, 2022), but Spanish-speaking incels rename it as “fall of the West”. Women are portrayed as complicit in this decline, especially when they engage in relationships with criminalized immigrants. A striking example is the figure of the “Moha” (a term derived from Mohammed), which refers to women attracted to Muslim or North African men, often associated with the concept of hybristophilia. This theme reflects a fusion of racist, xenophobic, and misogynistic discourses, in which racialized men are constructed as dangerous and hypersexual, and women as traitors to the imagined cultural in-group.

In contrast, the Anglo-American discourse displays a different configuration of racial anxiety. While it also reflects hierarchical and exclusionary logics, it does so through the racialization of beauty prototypes within the incel taxonomy itself. Terms such as Tyrone, Chang, and Chadpreet are used to assign racial identities to the figure of the “Chad”, thereby reinforcing a hierarchy in which white masculinity remains the ideal. Additionally, incels often define themselves using racialized labels such as blackcel, currycel, ricecel, or muslimcel, emphasizing a perceived intersection between racial identity and sexual exclusion (Bogetić, 2023; Woodward et al., 2022). These categorizations highlight the internalization of racial hierarchies and essentialist beliefs, as well as the way incel discourse globalizes by adapting racial frames to different contexts. Petreca et al. (2024) found that the intersection between white supremacist and incel rhetoric had thematic crossovers on binary racial views (especially concerning black and white races). This topic also appears in Jedolar and Frank (2021)’s research, where they obtained that a portion of incel discussions focuses on racial hate issues related to skin color and ethnic background. They frequently use key terms such as “Black”, “Whites”, “ethnic”, “women”, “Asian” and “curry”.

In terms of the beliefs and identity aspects of the incel community, significant differences are observed between the Anglo-American and Spanish-speaking contexts. English-speaking incels make constant references to the concept of blackpill as the core of their ideology (Kelly et al., 2024; Lindsay, 2022; Rousis et al., 2024; Solea & Sugiura, 2023), while Spanish-speaking incels make limited mention of the term redpill (more frequent in the English-speaking manosphere in general). However, Spanish-speaking incels analysed explain or use the concept of redpill in a more descriptive way, whilst the term blackpill is practically absent in their discourse (Topics 6

and 13). In addition, in both contexts the term *Matrix* (in reference to the movie) occasionally appears, used as a metaphor to describe the perception of reality (Aiolfi et al., 2024; Kelly et al., 2024; Lindsay, 2022, Speckhard et al., 2021). In Topic 13 reference is made to the leader of the Spanish-speaking incel community, along with aspects related to incel identity, such as their perceived grievances, vulnerabilities, feelings, and the rejection that, according to them, they experience from girls and society in general. This approach largely coincides with Anglo-American discourse (Daly & Reed, 2022; Speckhard et al., 2021).

Commonalities also emerge in other central themes. For instance, incels often perceive their celibacy as a consequence of not conforming to heteronormativity standards of physical attractiveness and masculinity (Daly & Reed, 2022). They also believe that women are attracted to men who possess a certain level of physical attractiveness, aesthetics, power, and status, with an emphasis on the establishment of beauty hierarchies (Daly & Reed, 2022; García-Mingo & Díaz-Fernández, 2023b). Although terms such as *Stacy* or *Becky* are not used, they resort to concepts such as *Chad* and *beta* (Baele et al., 2021; Blake & Brooks, 2023; Woodward et al., 2022). In this context, the concept of “average man” appears in Topic 12, associated with figures such as the “soy boys”, the “simp” or the “beta”, the last two terms being more common in Anglo-American discourse (Fowler et al., 2023; Furl, 2022; Ging, 2019; Thorburn, 2023). This “average man” is presented as a provider who permits women considerable leeway in order to maintain sex-affective relationships with them.

Regarding sex-affective relationships, evidence suggests that English-speaking incels often express a sense of entitlement to sex, attention from *Beckys*, and sexual relationships with women more generally. This belief stems from the notion that *Beckys* are willing to date men who are not *Chads*, as they are considered less attractive than *Stacys* (Dupré et al., 2024; Renström, 2023; Thorburn et al., 2023; Woodward et al., 2022). Notably, such perspectives are absent from the Spanish-speaking discourse. In this context, there is no evidence of the explicit use of concepts such as the “80/20 rule” (Menzie, 2020; Sparks et al., 2023) or “lookism” (Lounela & Murphy, 2023; Woodward et al., 2022). However, these ideas do appear implicitly, through explanations and references to their meaning. While much of the vocabulary is shared across both contexts, certain terms are used differently, with some expressions specific to the Spanish-speaking context and others unique to the anglophone discourse.

Regarding dehumanizing language towards women (Prazmo, 2020), some of the elements they use coincide, such as: dangerous or dirty animals, food, body parts, objects and humanoids (used to a lesser extent). Interestingly, in the Spanish-speaking context, we do not see the use of the same metaphors or racist lexicon as in the Anglo-American context (Bogetic, 2023).

Shi et al. (2024)’s research showed that incels talked about aspects related to love and emotions, highlighting the challenges involved in forming romantic relationships and coping with unrequited feelings; as well as sex and partnerships, that is, the difficulties perceived by incels in finding sexual or romantic partners. This is similar to our category, but in our corpus we found more advice

or ideas about how should be a good relationship with a good woman and about women's infidelity. Another research whose results are aligned with ours is performed by Jedolar and Frank (2021). They obtained the topics "relationships and romance issues" and "relationship and human sexuality". In relation with the first one, it is said that romance and relationship issues are among the prominent topics in incel discussions. However, many incels express a strong desire for romantic relationships, and most of them experience difficulties maintaining healthy partnerships, issues expressed also in our data. About the second, one of the main issues for incels who cannot find sex or a girlfriend and obtain sexual activity, is often regarded as a secondary concern compared to the core problems faced by incels. This is partly aligned with our results, as the data shows they have this problem but they blame women and the sexual market for that. We can say they see it as their main problem.

In relation to politics, this topic is very idiosyncratic, since the Spanish-speaking incel users under analysis tend to focus their criticism on Spanish politicians such as Prime Minister Pedro Sánchez of the Socialist Party (PSOE), as well as on other left-wing parties including Sumar and Podemos. (Topics 6, 7, 10 and 23). At the ideological level, both Spanish-speaking and Anglo incels align with right-wing or far-right ideas (Barcellona, 2022; Gentry, 2022; Woodward et al., 2022). This reflects a broader tendency observed on social media, where more conservative positions, closely connected to misogynist and racist ideologies, are seen to characterize this group.

Since our focus is on the core narratives of incel discourse, here we do not examine other recurrent topics in user content, such as football and humorous or metaphorical expressions, as these represent distinct aspects of incel communication. Additionally, we observed that users share content about football and streamers as a strategy to attract wider public attention.

In Jedolar and Frank (2021)'s research, they obtained the category "curse words". Although we do not have specifically that one in ours, we can see that it is used across most of them but with different intensity. As these authors say, based on the topics, there appeared to be a relationship between gender and the use of profanity within the incel community. The swear words are directed at others in a direct manner with the intent to insult or offend (girls/women). This is alienated with our results, where most of the insults are targeted to women.

Some research before about topic modeling on incels has noted other different topics that did not appear in our data explicitly or in a very obvious way. For example, Ali & Zannettou (2024) found that in Reddit and incels forums they talked about self-loathing, perception of negative physical appearance, physical appearance in general, hobbies and parental-loathing, depression related with romantic relationships and education, addiction problems, suicidal ideation and gaming, among others.

Shi et al. (2024) reported somewhat different results. Their category of "symbols and metaphors" encompassed central aspects of incel ideology, including terms such as "Chads" "Stacys" and "normies", as well as references to "pilling" and shared incel experiences. This partially overlaps with our category of incel community and elements of misogyny (e.g., discussions of women and

hypergamy, or men as “average normies”), although the connection is not direct. Another category highlighted the incels’ strong emphasis on physical characteristics (e.g., facial features, height, body weight and genitalia) as determinants of social and romantic success. While our corpus shows incels blaming women for their partner choices, Shi et al. observed more detailed self-focused discussions of physical traits. A further difference lies in their “challenges in daily life” category, which included accounts of mental health difficulties (e.g., depression, anxiety, isolation), social exclusion and efforts at self-improvement. These narratives often combined frustration and monotony with moments of encouragement and positivity.

Finally, in Jedolar and Frank (2021)’s research that lacks in our data are the financial issues related to money, employment, and payments that appear frequently, with many incels engaging in discussions that adopt a negative tone regarding job loss or payment problems, which can be a source of concern when they share their experiences on online forums.

In contrast to what has been documented in some Anglo-American incel forums, particularly on platforms such as r/incels, our analysis of the Spanish-speaking corpus did not reveal explicit endorsements of rape culture. This information is contrary to García-Mingo et al. (2022)’s research on Spanish-speaking manosphere, where incels showed a victim status which legitimizes sexual violence, as they consider it reasonable for men who are denied access to sex to somehow take it by force. This is also supported by Lacalle et al. (2023), showing that incels trivialize sexual violence by claiming that women actually desire it, even going so far as to attribute their own sexual fantasies to them.

In the Anglo-American context, previous research has some contradictory or different results also. Some studies identified discourse that frames rape as a form of power and control, often accompanied by justifications rooted in the belief that women “deserve it” or even “enjoy it” whether by men in general (Chua & Wilson, 2023) or by dominant men like the archetypal “Chad”. Such narratives reflect underlying attitudes that blame women for provoking or deserving sexual violence, particularly when it involves physically attractive or socially dominant men. While expressing contempt and envy toward these men (and toward their dominant sexuality), incels also tend to celebrate and glorify their acts of physical or sexual violence against women, as they perceive such acts as an indirect form of revenge toward women (Solea & Sugiura, 2023; Tranchese & Sugiura, 2021). Other research, such as Solopova et al. (2025), showed that incels expressed anger and disgust when discussing rape. Some expressed frustration that it was not a feasible course of action, whereas others openly and sincerely denounced the phenomenon in its entirety.

However, according to our data within Spanish-speaking discourse, abuse is not justified even in cases when, according to them, women bear some responsibility, such as instances involving alcohol consumption. Most of the comments of the Spanish-speaking incels analyzed express an anti-rape stance. Furthermore, in the Spanish-speaking context, there is no reference to the exploitation of Asian sex workers, a recurring theme in English-speaking incel forums, where sex

tourism to Asian countries is promoted under the belief that women from that region would be more desirable (Woodward et al., 2022). Likewise, in English-speaking forums a small group of incels advocate for child sexual exploitation and call for lowering the age of consent; they argue that modern society has raised this limit, making it more difficult for men to access women during what they consider to be their most sexually attractive period (Woodward et al., 2022).

Similarly, in Ali & Zannettou (2024), incels talked about prostitution as a means to indulge in sexual pleasure for them, a phenomenon that in their culture is known as “escortcelling”. Nevertheless, we did not find this idea in our corpus since they would not have sex with a prostitute. It is important to note, however, that the absence of this rhetoric in the Spanish-language data we examined does not imply its inexistence across all Spanish-speaking incel communities or platforms. Rather, our findings suggest that, within this specific dataset, such discourse does not appear as prominently or explicitly. This observation highlights possible differences in discursive norms, platform moderation, or cultural frames, and underscores the need for further comparative research that takes into account regional variation and platform-specific dynamics.

However, although at a general level incel discourse is inherently violent, in the Spanish-speaking case, there is not a very extreme expression of violence similar to the Anglo-American case in the data analysed. This may be due to the banning or restriction of accounts that has been given to other users for violating the rules of the X community. Therefore, this does not imply that such violence does not exist or does not occur, just like the process of radicalization, which happens mainly online. Lacalle et al. (2023) analysed the manosphere in a Spanish-speaking forum, obtaining that incels display a violent response to rejection by women, paradoxically accusing them of being both frigid and promiscuous. An aggressive tone and vulgarity characterize much of the posts related to the incel subculture, which even tend to justify the use of violence. On the one hand, they justify physical violence against women as a form of punishment, as well as sexual violence, as mentioned above. According to scientific evidence, most incels are not violent (Moskalenko, González, Kates & Morton, 2022a; Moskalenko, Kates, González & Bloom, 2022b; Speckhard et al., 2021), however in the Anglo-American context there are allusions to “saints”, referring to those incels who committed terrorist attacks in various areas of the USA, Canada and the UK, among others (Baele et al., 2021; Isla-Joulain, 2020; Woodward et al., 2022) and mentioning strategies for organizing violent acts (Petreca et al., 2024). This constitutes a major difference with respect to Spanish-speaking discourse, in which no direct reference to this type of acts has been found. Moreover, nor is there any direct and public allusion to suicide, as is the case in English-speaking online incels forums (Daly & Laskovtsov, 2022; Woodward et al., 2022).

4.1. Limitations and future lines of research

We acknowledge that our research has certain limitations. The results presented in this study should be interpreted within the specific context of the data and analysis conducted. They are not intended to be absolute; therefore, it is recommended that they be complemented and corroborated by future studies to refine, expand, or validate the findings. Firstly, our analysis focused only on

two X users. While this choice was practically justified because both are the primary disseminators of incel discourse in the Spanish-speaking context, in the future it would be valuable to examine a broader sample of users to better assess the permeability of the message. Another limitation concerns the impossibility of determining users' geographical origin with certainty. Although some indications may occasionally be inferred from the content, this cannot be verified or assured. For this reason, the analyses rely exclusively on the language of the content rather than on any specific national context. Furthermore, the type of language and content they use on X is constrained; when community rules are violated, this can lead to negative consequences such as account suspension or restrictions. Another limitation arises from the brevity of the texts, which makes the application of LDA particularly complex. In addition, the overlap of themes often hinders their separation into clearly differentiated topics. This was observed, for instance, in Topic 3, which combines two distinct thematic strands, whereas Topic 6 lacks sufficient clarity. The challenge is further compounded by the discursive style characteristic of incel communities, which frequently relies on irony, sarcasm and the pervasive use of emoticons, all of which complicate automated interpretation. More generally, LDA entails inherent constraints due to its quantitative orientation and may fail to capture subtle, context-dependent, or nuanced aspects of meaning. For future research, it is recommended to complement computational approaches with qualitative discourse analysis in order to manually identify these finer-grained elements and to reduce the risk of subtopic conflation within single topics. Expanding the scope of data sources would also be beneficial, for example by incorporating surveys or interviews with incel users, as well as material from other platforms or private chats where the rules governing interaction impose fewer constraints on the articulation and circulation of discourse.

5. Conclusions

This research examines posts by Spanish-speaking incel users through topic modeling, identifying 24 main themes. Our findings expand the scope of incel research by incorporating the Spanish-speaking context, which to our knowledge has received comparatively less attention in the literature, and, until now, has mainly been investigated in a limited way within the broader manosphere alongside other related movements. The analysis reveals both universal elements of incel discourse (e.g., humorous and metaphorical expressions), consistent with findings from the Anglo-American context, and context-specific themes (such as football) that recur frequently but are not part of incel ideology per se. These results deepen our understanding of the phenomenon by showing that, although certain core ideas are shared across contexts, local cultural and linguistic factors shape how the discourse is articulated, underscoring that it is not a uniform phenomenon. The implications of these findings are twofold. From a research perspective, they underscore the importance of developing comparative and culturally sensitive studies of incel communities. From a practical and policy perspective, they highlight the need for culturally informed strategies to reduce the spread and normalisation of incel narratives in digital spaces. This includes promoting media literacy campaigns and gender education programs that not only address the roots of misogyny and the emotional vulnerabilities exploited by these communities, but also actively

challenge traditional patriarchal ideas of masculinity and encourage more equitable gender roles (Conde & Exner-Cortens, 2022), which may be particularly effective with this group.

In the context of platform governance, it is crucial for social media companies to strengthen content moderation, particularly with regard to coded hate speech and gender-based harassment. The Digital Services Act (Regulation (EU) 2022/2065) establishes clear obligations for platforms to address these issues, requiring them to implement proactive measures to assess and mitigate risks, as well as to set up effective mechanisms for reporting and removing illegal content (European Commission, 2022). Complementing this, the revised Code of Conduct on Countering Illegal Hate Speech online encourages collaboration between platforms and specialised entities to improve detection and enforcement.

At the national level, Spain has established a working group with major tech companies such as Meta, X, and TikTok to enhance the detection and removal of online hate speech, coordinated by the Ministry of Inclusion, Social Security, and Migration (2025). Comparable initiatives exist elsewhere. For example, under the revised Code of Conduct and the DSA, platforms including Meta, Google, TikTok, X, Instagram, and YouTube have committed to greater transparency, closer cooperation with specialised bodies, and more timely removal of illegal content. Similarly, in Germany, the Network Enforcement Act (NetzDG) obliges platforms to delete illegal content, including hate speech, within strict deadlines and to provide effective complaint mechanisms. In Latin America, some countries have also introduced measures in this field. In Brazil, for instance, a 2025 Supreme Court ruling held platforms such as Meta, Google, and X legally responsible for user-generated hate speech, obliging them to remove such content even without prior judicial orders (AP News, 2025). Venezuela's 2017 Anti-Hate Law for Peaceful Coexistence and Tolerance likewise requires platforms to delete hate-related content within six hours of publication, under penalty of fines or blocking (Tech Policy Press, 2022).

Early intervention strategies could focus on identifying emotionally vulnerable users and their risk factors (such as psychological symptoms) for becoming incels (Maryn et al., 2024). In addition, fostering social skills and support networks, particularly among young men (Lavenne-Collot et al., 2022; Wolfowicz et al., 2021), and providing access to mental health services or early prevention programmes that offer alternative narratives and a sense of belonging outside radicalised spaces (especially for those experiencing rejection or isolation) may significantly reduce adherence to radical discourse (Jugl et al., 2021).

Finally, it is also important to highlight the need for intervention in men who have already internalized incel ideology, through various therapeutic approaches that may be useful, such as cognitive behavioral therapy, among others (Van Brunt et al., 2021).

Understanding the ideological justification of this subculture, characterized by a prejudiced, discriminatory and violent discourse, can be key to designing more effective prevention policies. In particular, this knowledge can provide valuable evidence to manage the evolution of the

phenomenon, trying to mitigate its negative impact on social coexistence and prevent the alienation of vulnerable people, susceptible to being influenced by hate speech directed against women.

Data availability

All data analyzed in this study are available within this article, its supplementary material, and the Zenodo repository (<https://zenodo.org/records/14241977>).

6. References

- Aiolfi, I., Palena, N., Ó Ciardha, C., & Caso, L. (2024). The incel phenomenon: A systematic scoping review. *Current Psychology*, 43(32), 26264-26278. <https://doi.org/10.1007/s12144-024-06236-6>
- Ali, M., & Zannettou, S. (2024, May). From Isolation to Desolation: Investigating Self-Harm Discussions in Incel Communities. In *Proceedings of the International AAAI Conference on Web and Social Media* (Vol. 18, pp. 43-56). <https://doi.org/10.1609/icwsm.v18i1.31296>
- Anti-Defamation League's Center on Extremism. (2018). *The intersection of misogyny and white supremacy*. <https://www.adl.org/media/16587/download>
- AP News. (2025, June 21). Brazil's top court rules platforms can be held liable for user content in hate speech cases. Associated Press. Retrieved from <https://apnews.com/article/324b9d79caa9f9e063da8a4993e382e1>
- Baele, S. J., Brace, L., & Coan, T. G. (2021). From "Incel" to "Saint": Analyzing the violent worldview behind the 2018 Toronto attack. *Terrorism and Political Violence*, 33(8), 1667–1691. <https://doi.org/10.1080/09546553.2019.1638256>
- Baele, S., Brace, L., & Ging, D. (2023). A diachronic cross-platforms analysis of violent extremist language in the Incel online ecosystem. *Terrorism and Political Violence*, 1-24. <https://doi.org/10.1080/09546553.2022.2161373>
- Baker, P. (2004). Querying keywords: Questions of difference, frequency, and sense in keywords analysis. *Journal of English Linguistics*, 32(4), 346–359. <https://doi.org/10.1177/0075424204269894>
- Baker, P., Gabrielatos, C., & McEnery, T. (2013). *Discourse Analysis and Media Attitudes: The Representation of Islam in the British Press*. Cambridge University Press.
- Banet-Weiser, S., & Miltner, K. M. (2016). #MasculinitySoFragile: Culture, structure, and networked misogyny. *Feminist media studies*, 16(1), 171-174. <https://doi.org/10.1080/14680777.2016.1120490>

- Barcellona, M. (2022). Incel violence as a new terrorism threat: A brief investigation between Alt-Right and Manosphere dimensions. *Sortuz: Oñati Journal of Emergent Socio-Legal Studies*, 11(2), 170–186. Retrieved from <https://opo.iisj.net/index.php/sortuz/article/view/1471>
- Blake, K. R., & Brooks, R. C. (2023). Societies should not ignore their incel problem. *Trends in cognitive sciences*, 27(2), 111-113. <https://doi.org/10.1016/j.tics.2022.11.007>
- Blei, D. M. (2012). Probabilistic topic models. *Communications of the ACM*, 55(4), 77-84. <https://doi.org/10.1145/2133806.2133826>
- Blei, D. M., Ng, A. Y., & Jordan, M. I. (2003). Latent dirichlet allocation. *Journal of Machine Learning Research*, 3(1), 993-1022. <https://doi.org/10.1145/1015330.1015439>
- Bogetić, K. (2023). Race and the language of incels: Figurative neologisms in an emerging English cryptoelect. *English Today*, 39(2), 89-99. <https://doi.org/10.1017/S0266078422000153>
- Broyd, J., Boniface, L., Parsons, D., Murphy, D., & Hafferty, J. D. (2023). Incels, violence and mental disorder: A narrative review with recommendations for best practice in risk assessment and clinical intervention. *BJPsych Advances*, 29(4), 254–264. <https://doi.org/10.1192/bja.2022.15>
- Caldevilla-Domínguez, D., Barrientos-Báez, A., García-Manso, A., & Matarín-Rodríguez-Peral, E. (2022). Neurocomunicación y Manosferas: estudio de caso Forocoches. *Historia y comunicación social*, 27(2). <https://doi.org/10.5209/hics.84402>
- Chen, Y., Peng, Z., Kim, S.-H., Choi, C. W., Chen, Y., Peng, Z., Kim, S.-H., & Choi, C. W. (2023). What we can do and cannot do with topic modeling: A systematic review. *Communication Methods and Measures*, 17(2), 111-130 <https://doi.org/10.1080/19312458.2023.2167965>
- Chua, Y. T., & Wilson, L. (2023). Beyond black and white: The intersection of ideologies in online extremist communities. *European Journal on Criminal Policy and Research*, 29(3), 337-354. <https://doi.org/10.1007/s10610-023-09555-9>
- Conde, C. F., & Exner-Cortens, D. D. (2022). *Gender-transformative interventions: Research summary*. PREVNet. <https://youthdatingviolence.prevnet.ca/wp-content/uploads/2022/03/Gender-Transformative-Interventions.pdf>
- Costello, W., Rolon, V., Thomas, A. G., & Schmitt, D. (2022). Levels of well-being among men who are incel (Involuntarily Celibate). *Evolutionary Psychological Science*, 8(4), 375-390. <https://doi.org/10.1007/s40806-022-00336-x>

- Cuthbert, K. (2023, November). Neither ‘incel’ nor ‘volcel’: Relational accounts of UK women's sexual abstinence. In *Women's Studies International Forum* (Vol. 101, p. 102835). Pergamon. <https://doi.org/10.1016/j.wsif.2023.102835>
- Daly, S. E., & Laskovtsov, A. (2022). “Goodbye, my friendcels”: An analysis of incel suicide posts. *Journal of Qualitative Criminal Justice & Criminology*, 11(1), 1-37. <https://dc.swosu.edu/vol11/iss1/1>
- Daly, S. E., & Reed, S. M. (2022). “I think most of society hates us”: A qualitative thematic analysis of interviews with incels. *Sex Roles*, 86(1-2), 14-33. <https://doi.org/10.1007/s11199-021-01250-5>
- Demir, Y., & Tiryaki, S. (2024). “We Are Enemies of Law and Women”: The Manosphere and Victimized Masculinity on Twitter (Now X). *The Journal of Men's Studies*, 33(2), 231-251. <https://doi.org/10.1177/10608265241279841>
- Díaz-Fernández, S., & García-Mingo, E. (2024). The bar of Forocoches as a masculine online place: Affordances, masculinist digital practices and trolling. *New Media & Society*, 26(9), 5336-5358. <https://doi.org/10.1177/14614448221135631>
- DiMaggio, P., Nag, M., & Blei, D. (2013). Exploiting affinities between topic modeling and the sociological perspective on culture: Application to newspaper coverage of U.S. government arts funding. *Poetics*, 41(6), 570–606. <https://doi.org/10.1016/j.poetic.2013.08.004>
- Dupré, J. K., Tastenhoye, C. A., Ross, N. E., Bodnar, T. V., & Hatters Friedman, S. (2024). From Reddit to manifestos: Forensic evaluation of incel online activity. *Behavioral Sciences & the Law*, 42(2), 115-129. <https://doi.org/10.1002/bsl.2648>
- Ekman, M. (2022). The great replacement: Strategic mainstreaming of far-right conspiracy claims. *Convergence: The International Journal of Research Into New Media Technologies*, 28(4), 1127– 1143. <https://doi.org/10.1177/13548565221091983>
- European Commission. (2022). *Regulation (EU) 2022/2065 of the European Parliament and of the Council on Digital Services*. Official Journal of the European Union. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX%3A32022R2065>
- European Commission. (2022). *Revised Code of Conduct on illegal hate speech online*. European Commission. https://ec.europa.eu/info/policies/justice-and-fundamental-rights/combating-discrimination/hate-speech_en
- Fairclough, N. (1995). *Critical discourse analysis: The critical study of language*. London: Longman.

- Farrell, T., Araque, O., Fernandez, M., & Alani, H. (2020, July). On the use of Jargon and Word Embeddings to Explore Subculture within the Reddit's Manosphere. In *Proceedings of the 12th ACM conference on web science* (pp. 221-230). <https://doi.org/10.1145/3394231.3397912>
- Federal Republic of Germany. (2017). Act to Improve Enforcement of the Law in Social Networks (Network Enforcement Act – NetzDG). Federal Law Gazette I, p. 3352. Available at: <https://www.gesetze-im-internet.de/netzdg/NetzDG.pdf>
- Fontanesi, L., Cosi, G., Di Crosta, A., Verrocchio, M. C., Jannini, E. A., & Ciocca, G. (2022). Involuntary Celibate (Incel): validation of the Incel Trait Scale (ITS) in the Italian male population. *Journal of Psychopathology*, 28(3). <https://doi.org/10.36148/2284-0249-468>
- Fowler, K. (2022). From chads to blackpills, a discursive analysis of the incel's gendered spectrum of political agency. *Deviant Behavior*, 43(11), 1406-1419. <https://doi.org/10.1080/01639625.2021.1985387>
- Fowler, K., Green, R., & Palombi, A. (2023). "From Stacys to Foids, a Discursive Analysis of the Incel's Gendered Spectrum of Political Agency." *Deviant Behavior*, 44(12), 1775–1791. <https://doi.org/10.1080/01639625.2023.2233668>
- Furl, K. (2022). Denigrating Women, Venerating "Chad": Ingroup and Outgroup Evaluations among Male Supremacists on Reddit. *Social Psychology Quarterly*, 85(3), 279-299. <https://doi.org/10.1177/01902725221090907>
- García Mingo, E., & Díaz Fernández, S. (2023b). Wounded men of feminism: Exploring regimes of male victimhood in the Spanish manosphere. *European Journal of Cultural Studies*, 26(6), 897-915. <https://doi.org/10.1177/13675494221140586>
- García-Mingo, E., & Díaz-Fernández, S. (2023a). Mapping Research on Online Misogyny and Manosphere in Spain: The Way Ahead. *Journal on Masculinities & Social Change/Masculinidades y Cambio Social*, 12(3). <http://dx.doi.org/10.17583/mcs.11882>
- García-Mingo, E., Fernández-Díaz, S., & Tomás-Forte, S. (2022). (Re) configurando el imaginario sobre la violencia sexual desde el antifeminismo: el trabajo ideológico de la manófera española. *Política y sociedad*, 59(1). <https://doi.org/10.5209/poso.80369>
- Gentry, C. E. (2022). Misogynistic terrorism: it has always been here. *Critical Studies on Terrorism*, 15(1), 209–224. <https://doi.org/10.1080/17539153.2022.2031131>
- Gheorghe, R. M., & Yuzva Clement, D. (2023). "It's time to put the copes down and get to work": A qualitative study of incel exit strategies on r/IncelExit. *Behavioral Sciences of Terrorism and Political Aggression*, 1–21. <https://doi.org/10.1080/19434472.2023.2276485>

- Ging, D. (2019). Alphas, Betas, and Incels: Theorizing the Masculinities of the Manosphere. *Men and Masculinities*, 22(4), 638-657. <https://doi.org/10.1177/1097184X17706401>
- Glance, A. M., Dover, T. L., & Zatzkin, J. G. (2021). Taking the black pill: An empirical analysis of the “Incel”. *Psychology of Men & Masculinities*, 22(2), 288. <https://doi.org/10.1037/men0000328>
- Gorostiza, A., Rodríguez, R., Maldonado, M. A., Moyano, M., & Hidalgo Tenorio, E. (2025). Spanish-Language Incel Corpus on X. <https://doi.org/10.5281/zenodo.14241977>
- Griffiths, T. L., & Steyvers, M. (2004). Finding scientific topics. *Proceedings of the National Academy of Sciences of the United States of America*, 101(Suppl. 1), 5228–5235. <https://doi.org/10.1073/pnas.0307752101>
- Grimmer, J., Roberts, M. E., & Stewart, B. M. (2022). *Text as data: A new framework for machine learning and the social sciences*. Princeton University Press.
- Halpin, M. (2022). Weaponized subordination: How incels discredit themselves to degrade women. *Gender & Society*, 36(6), 813–837. <https://doi.org/10.1177/08912432221128545>
- Helm, B., Scrivens, R., Holt, T. J., Chermak, S., & Frank, R. (2022). Examining incel subculture on reddit. *Journal of crime and justice*, 1-19. <https://doi.org/10.1080/0735648X.2022.2074867>
- Heritage, F., & Koller, V. (2020). Incels, in-groups, and ideologies: The representation of gendered social actors in a sexuality-based online community. *Journal of Language and Sexuality*, 9(2), 152-178. <https://doi.org/10.1075/jls.19014.her>
- Hoffman, B., Ware, J., & Shapiro, E. (2020). Assessing the threat of incel violence. *Studies in Conflict & Terrorism*, 43(7), 565–587. <https://doi.org/10.1080/1057610X.2020.1751459>
- Isla-Joulain, G. L. (2020). Célibes involuntarios: ¿Terroristas?. Análisis cualitativo del fenómeno “InCel” y discusión conceptual sobre el “terrorismo”. *Revista De Derecho Penal Y Criminología*, (24), 193–244. <https://doi.org/10.5944/rdpc.24.2020.28400>
- Jaki, S., De Smedt, T., Gwózdź, M., Panchal, R., Rossa, A., & De Pauw, G. (2019). Online hatred of women in the Incels.me forum: Linguistic analysis and automatic detection. *Journal of Language Aggression and Conflict*, 7(2), 240-268. <https://doi.org/10.1075/jlac.00026.ja>
- Jelodar, H., & Frank, R. (2021). Semantic knowledge discovery and discussion mining of incel online community: Topic modeling. *arXiv preprint arXiv:2104.09586*. <https://doi.org/10.48550/arXiv.2104.09586>

- Jesús, A. M., & Pierre, J. (2020). Special section: Anthropology of white supremacy. *American Anthropologist*, 122(1), 65–75. <https://doi.org/10.1111/aman.13351>
- Johanssen, J., & Kay, J. B. (2024). From femcels to ‘femcelcore’: Women’s involuntary celibacy and the rise of heteronihilism. *European Journal of Cultural Studies*, 28(4), 981-999. <https://doi.org/10.1177/13675494241293731>
- Jones, T (2021). `textmineR`: Functions for Text Mining and Topic Modeling_. R package version 3.0.5, <<https://CRAN.R-project.org/package=textmineR>>.
- Jugl, I., Lösel, F., Bender, D., & King, S. (2021). Psychological prevention programs against radicalization and extremism, a meta-analysis of outcome evaluations. *The European Journal of Psychology Applied to Legal Context*, 13(1), 37-46. <https://doi.org/10.5093/ejpalc2021a6>
- Kelly, M., Rothermel, A. K., & Sugiura, L. (2024). Victim, violent, vulnerable: a feminist response to the incel radicalisation scale. *Perspectives on Terrorism*, 18(1), 91-119. <https://pt.icct.nl/article/victim-violent-vulnerable-feminist-response-incel-radicalisation-scale>
- Kolano, M. (2022). The Pleasure of Misogyny – Incels, Castration, and Sexual Difference. *Psychoanalytic Inquiry*, 42(7), 544–556. <https://doi.org/10.1080/07351690.2022.2121142>
- Krippendorff, K. (2018). *Content analysis: An introduction to its methodology* (4th ed.). SAGE Publications.
- Lacalle, C. (2023). The otherless other: las pasiones misóginas de la Manosfera española. *Signa: Revista de la Asociación Española de Semiótica*, (32), 41-53. <https://doi.org/10.5944/signa.vol32.2023.36111>
- Lacalle, C., Gómez-Morales, B., & Vicent-Ibáñez, M. (2023). Misogyny and the construction of toxic masculinity in the Spanish Manosphere (Burbuja. info). *Profesional de la información*, 32 (2). <https://doi.org/10.3145/epi.2023.mar.15>
- Lacalle, C., Gómez-Morales, B., Vicent-Ibáñez, M., & Narvaiza, S. (2024). ‘Seals’, ‘bitches’, ‘vixens’, and other zoomorphic insults: the animalisation of women as an expression of misogyny in the Spanish Manosphere. *Cogent Arts & Humanities*, 11(1), 2298056. <https://doi.org/10.1080/23311983.2023.229805>
- Lavenne-Collot, N., Dissaux, N., Campelo, N., Villalon, C., Bronsard, G., Botbol, M., & Cohen, D. (2022): Sympathy-Empathy and the Radicalization of Young People. *Children*, 9(12), 1889. <https://doi.org/10.3390/children9121889>

- Levy, K. E. C., & Franklin, M. (2014). Driving Regulation: Using Topic Models to Examine Political Contention in the U.S. Trucking Industry. *Social Science Computer Review*, 32(2), 182-194. <https://doi.org/10.1177/0894439313506847>
- Lindsay, A. (2022). Swallowing the black pill: Involuntary celibates'(Incels) anti-feminism within digital society. *International Journal for Crime, Justice and Social Democracy*, 11(1), 210-224. <https://doi.org/10.5204/ijcjsd.213>
- Lounela, E., & Murphy, S. (2023). Incel Violence and Victimhood: Negotiating Inceldom in Online Discussions of the Plymouth Shooting. *Terrorism and Political Violence*, 36(3), 344–365. <https://doi.org/10.1080/09546553.2022.2157267>
- Maier, D., Waldherr, A., Miltner, P., Wiedemann, G., Niekler, A., Keinert, A., Pfetsch, B., Heyer, G., Reber, U., Häussler, T., Schmid-Petri, H., & Adam, S. (2018). Applying LDA Topic Modeling in Communication Research: Toward a Valid and Reliable Methodology. *Communication Methods and Measures*, 12(2-3), 93-118. <https://doi.org/10.1080/19312458.2018.1430754>
- Maryn, A., Keough, J., McConnell, C., & Exner-Cortens, D. (2024). Identifying pathways to the incel community and where to intervene: A qualitative study with former incels. *Sex Roles*, 90(7), 910-922. <https://doi.org/10.1007/s11199-024-01478-x>
- Maxwell, D., Robinson, S. R., Williams, J. R., & Keaton, C. (2020). “A short story of a lonely guy”: A qualitative thematic analysis of involuntary celibacy using Reddit. *Sexuality & Culture*, 24(6), 1852-1874. <https://doi.org/10.1007/s12119-020-09724-6>
- Meier, M. L., & Sharp, K. (2024). Death to Chad and Stacy: Incels and anti-fandom as group identity. *International Journal of Cultural Studies*, 27(3), 349-367.
- Menzie, L. (2020). Stacys, Beckys, and Chads: the construction of femininity and hegemonic masculinity within incel rhetoric. *Psychology & Sexuality*, 13(1), 69-85. <https://doi.org/10.1080/19419899.2020.1806915>
- Ministry of Inclusion, Social Security and Migration. (2025, July 30). *The government creates a permanent monitoring group with major platforms to analyze hate speech on social media*. Retrieved from <https://www.inclusion.gob.es/w/el-gobierno-crea-un-grupo-de-seguimiento-permanente-con-las-grandes-plataformas-para-analizar-los-discursos-de-odio-en-redes-sociales>
- Moskalenko, S., González, J. F. G., Kates, N., & Morton, J. (2022a). Incel ideology, radicalization and mental health: A survey study. *The Journal of Intelligence, Conflict, and Warfare*, 4(3), 1-29. <https://doi.org/10.21810/jicw.v4i3.3817>

- Moskalenko, S., Kates, N., González, J. F. G., & Bloom, M. (2022b). Predictors of radical intentions among Incels: a survey of 54 self-identified Incels. *Journal of Online Trust and Safety*, 1(3). <https://doi.org/10.54501/jots.v1i3.57>
- Papadamou, K., Zannettou, S., Blackburn, J., De Cristofaro, E., Stringhini, G., & Sirivianos, M. (2021). “How over is it?” Understanding the Incel Community on YouTube. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW2), 1-25. <https://doi.org/10.1145/3479556>
- Parlamento Europeo y del Consejo. (2016). *Reglamento (UE) 2016/679 del Parlamento Europeo y del Consejo, de 27 de abril de 2016, relativo a la protección de las personas físicas en lo que respecta al tratamiento de datos personales y a la libre circulación de estos datos y por el que se deroga la Directiva 95/46/CE (Reglamento general de protección de datos) (Texto pertinente a efectos del EEE)*. <https://www.boe.es/buscar/doc.php?id=DOUE-L-2016-80807>
- Perliger, A., Stevens, C., & Leidig, E. (2023). *Mapping the ideological landscape of extreme misogyny*. ICCT / Asser Institute. <https://doi.org/10.19165/2023.1.02>
- Petrecu, V. G., Burgess, A. A., Barros, J. T., Wise, J., & Burgess, A. W. (2024). Analyzing violent attacker texts: examining ideologies through machine learning-assisted topic modeling. *Behavioral Sciences of Terrorism and Political Aggression*, 1-18. <https://doi.org/10.1080/19434472.2024.2415359>
- Petrecu, V. G., Burgess, A. A., Wise, J., & Burgess, A. W. (2025). Using machine learning and topic modeling to examine manifestos of violent attackers. *Journal of Threat Assessment and Management*, 12(2), 132–148. <https://doi.org/10.1037/tam0000232>
- Pizzimenti, D. M., & Penna, A. (2024). Excluded. A Digital Ethnographic Investigation on the Femcel Community. *Italian Sociological Review*, 14(10S), 765–786. <https://doi.org/10.13136/isr.v14i10S.729>
- Pražmo, E. (2020). Foids are worse than animals. A cognitive linguistics analysis of dehumanizing metaphors in online discourse. *Topics in Linguistics*, 21(2). <https://doi.org/10.2478/topling-2020-0007>
- Pražmo, E. (2022). In dialogue with non-humans or how women are silenced in incels’ discourse. *Language and Dialogue*, 12(3), 383-406. <https://doi.org/10.1075/ld.00119.pra>
- Python Software Foundation. (2022). hashlib - Secure hashes and message digests. Python 3.11.9 documentation. <https://docs.python.org/3/library/hashlib.html>
- Renström, E. A. (2023). Exploring the role of entitlement, Social Dominance Orientation, Right-Wing authoritarianism, and the moderating role of being single on misogynistic attitudes. *Nordic Psychology*, 76(2), 250–266. <https://doi.org/10.1080/19012276.2023.2186816>

- Röder, M., Both, A., & Hinneburg, A. (2015). Exploring the Space of Topic Coherence Measures. *Proceedings of the Eighth ACM International Conference on Web Search and Data Mining*, 399-408. <https://doi.org/10.1145/2684822.2685324>
- Romero-Rodríguez, M. E., Rodríguez-Donate, M. C., Hernández-García, M. C., & Rodríguez-Brito, M. G. (2020). Influence of opinion leadership identification criteria: The purchase of smartphones. *Journal of Retailing and Consumer Services*, 56, 102155. <https://doi.org/10.1016/j.jretconser.2020.102155>
- Rousis, G. J., Martel, F. A., Bosson, J. K., & Swann, W. B. (2024). Behind the Blackpill: Self-Verification and Identity Fusion Predict Endorsement of Violence Against Women Among Self-Identified Incels. *Personality and Social Psychology Bulletin*, 50(11), 1531-1545. <https://doi.org/10.1177/01461672231166481>
- Scott, M. (1997). PC analysis of key words—and key key words. *System*, 25(2), 233-245. [https://doi.org/10.1016/S0346-251X\(97\)00011-0](https://doi.org/10.1016/S0346-251X(97)00011-0)
- Scotto di Carlo, G. (2023). An analysis of self-other representations in the incelosphere: Between online misogyny and self-contempt. *Discourse & Society*, 34(1), 3-21. <https://doi.org/10.1177/09579265221099380>
- Shi, Y., Kiley, K., & DiPietro, S. M. (2024). To the Extreme: Exploring the Rise of a Deviant Culture in a Misogynist Digital Community. *Socius*, 10, 23780231241272681. <https://doi.org/10.1177/23780231241272681>
- Solea, A. I., & Sugiura, L. (2023). Mainstreaming the Blackpill: Understanding the Incel Community on TikTok. *European Journal on Criminal Policy and Research*, 1-26. <https://doi.org/10.1007/s10610-023-09559-5>
- Solopova, V., Popa-Wyatt, M., & Berškytė, J. (2025). Exploring incel group dynamics: a computational study of hierarchy and group-boundary policing. *Journal of Computational Social Science*, 8(2), 1-25. <https://doi.org/10.1007/s42001-024-00357-5>
- Sparks, B., Zidenberg, A. M., & Olver, M. E. (2023). An Exploratory Study of Incels' Dating App Experiences, Mental Health, and Relational Well-Being. *The Journal of Sex Research*, 61(7), 1001–1012. <https://doi.org/10.1080/00224499.2023.2249775>
- Speckhard, A., Ellenberg, M., Morton, J., & Ash, A. (2021). Involuntary celibates' experiences of and grievance over sexual exclusion and the potential threat of violence among those active in an online incel forum. *Journal of Strategic Security*, 14(2), 89-121. <https://doi.org/10.5038/1944-0472.14.2.1910>
- Tech Policy Press. (2022, November 10). We need to talk about hate speech and freedom of expression in Latin America. Retrieved from <https://techpolicy.press/we-need-to-talk-about-hate-speech-and-freedom-of-expression-in-latin-america>

- Thorburn, J. (2023). Exiting the Manosphere. A Gendered Analysis of Radicalization, Diversion and Deradicalization Narratives from *r/IncelExit* and *r/ExRedPill*. *Studies in Conflict & Terrorism*, 1–25. <https://doi.org/10.1080/1057610X.2023.2244192>
- Thorburn, J., Powell, A., & Chambers, P. (2023). A world alone: Masculinities, humiliation and aggrieved entitlement on an incel forum. *The British Journal of Criminology*, 63(1), 238-254. <https://doi.org/10.1093/bjc/azac020>
- Tomkinson, S., Harper, T., & Attwell, K. (2020). Confronting Incel: exploring possible policy responses to misogynistic violent extremism. *Australian Journal of Political Science*, 55(2), 152–169. <https://doi.org/10.1080/10361146.2020.1747393>
- Tranchese, A., & Sugiura, L. (2021). “I Don’t Hate All Women, Just Those Stuck-Up Bitches”: How Incels and Mainstream Pornography Speak the Same Extreme Language of Misogyny. *Violence Against Women*, 27(14), 2709-2734. <https://doi.org/10.1177/1077801221996453>
- Twitter. (2024). Twitter Developer Platform. Recuperado de: <https://developer.twitter.com/>
- Van Brunt, B. J., Van Brunt, B. S., Taylor, C., Morgan, N., & Solomon, J. (2021). The rise of the incel mission-oriented attacker. *Violence and Gender*, 8(4), 163-174. <https://doi.org/10.1089/vio.2020.0099>
- Wedel, L., & Coufal, L. (2025). Radicalization or relief: divergent impacts of the COVID-19 lockdown on incels by seniority. *New Media & Society*, 0(0) . <https://doi.org/10.1177/14614448251336432>
- Wilson, C. (2022). Nostalgia, entitlement and victimhood: The synergy of white genocide and misogyny. *Terrorism and Political Violence*, 34(8), 1810-1825. <https://doi.org/10.1080/09546553.2020.1839428>
- Wodak, R., & Meyer, M. (Eds.). (2009). *Methods of critical discourse analysis* (2nd ed.). London: SAGE.
- Wolfowicz, M., Litmanovitz, Y., Weisburd, D., & Hasisi, B. (2021). Cognitive and behavioral radicalization: A systematic review of the putative risk and protective factors. *Campbell Systematic Reviews*, 17(3), 1174. <https://doi.org/10.1002/cl2.1174>
- Woodward, A., Gironda, M., Silverberg, R., Vargas, C., & Wozniak, C. (2022). Incels: Inside the world of involuntary celibates. <http://hdl.handle.net/2451/63962>

Authors’ Contributions

[Reyes Rodríguez]: Conceptualization, Methodology, Formal analysis, Validation, Investigation, Writing - Original Draft, Writing - Review & Editing.

[Aritz Gorostiza-Cerviño]: Conceptualization, Methodology, Data Curation, Formal analysis, Software, Resources, Validation, Visualization, Writing - Original Draft.

[Encarnación Hidalgo-Tenorio]: Conceptualization, Formal analysis, Methodology, Supervision, Validation, Writing - Original Draft, Writing - Review & Editing.

[Manuel Moyano]: Supervision, Project administration, Funding acquisition, Writing - Review & Editing.

[Miguel A. Maldonado]: Formal analysis, Investigation, Validation, Supervision, Project administration, Writing - Original Draft, Writing - Review & Editing.

Funding

The first author has received financial support through the contract obtained in the Call of the Submodality 2.2. Predoctoral Contracts UCO of the Plan Propio de Investigación Enrique Aguilar Benítez de Lugo of the UCO 2023 (SUBMODALIDAD 2.2_PP2023_RODRIGUEZ).

The second author is funded by the Ministry of Universities through the University Teacher Training Program (FPU2022-01863), within the framework of the project “Lobbying and Communication in the European Union” (reference PID2020-118584RB-100), which is funded by the Ministry of Science, Innovation and Universities.

The third author carried out her work in the context of the project “Fake News on Social Media: Three Case Studies” (reference PID2021-125788OB-I00), funded by the Spanish Ministry of Science and Innovation, and also received support from a Cambridge Digital Humanities fellowship and a Trinity College Cambridge fellowship.

In addition, part of this work has been carried out under the “Project DigiPatch”, supported by NCN Poland, FORTE Sweden, DLR-PT Germany, AEI Spain, UKRI Economy and Social Research Council and UKRI Art and Humanities Research Council UK, under CHANSE ERA-NET Co-fund programme, which has received funding from the European Union’s Horizon 2020 Research and Innovation Programme, under Grant Agreement no 101004509.

Competing interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval

Ethical approval was not required for this study, as it did not involve direct interaction with human participants and relied exclusively on publicly available data from X accounts. The research was conducted in accordance with the principles outlined in the Declaration of Helsinki. All data were processed and reported anonymously to ensure privacy and confidentiality.

Informed consent

This study did not involve human participants; therefore, informed consent was not applicable. All information was obtained exclusively from publicly available X accounts and was processed anonymously to ensure privacy and confidentiality.

Additional information

Correspondence and requests for materials should be addressed to Aritz Gorostiza-Cerviño.

Reprints and permission information is available at <http://www.nature.com/reprints>

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Topic	Label_1	Coherence	Prevalence	Top_terms
t_1	just_entered	0.018	4.262	please, ends, god, I hope, come back, man, body, enter, picture, obviously, I need, okay
t_2	lia_sikora	0.005	4.198	we live, rest of, talk, face, put, best, leave, man, ways, thousand, option, chicks
t_3	red_flag	0.246	4,15	man, flag, net, red, red_flag, picture, west, imminent, fall, night, fall_west, thanks, king
t_4	girlfriend_erasmus	-0.022	4.132	girlfriend, incel, humor, reality, female, surprise, tests, thing, erasmus, meme, doubts, female

t_5	daily_gym	0.054	4.265	world, people, chick, gym, person, father, like, eating disorder, is coming, daily, I say, you say
t_6	get_out_of_my_sight	-0.001	4,151	people, squad, woman, world, picture, sight, danger, I mock, public, balls, son, friend
t_7	cry_one's_eyes_out	0.027	4.200	alive, spain, guilt, seeing, insane, normal, memes, completely, son, tear, tear, alive, queen
t_8	damn_miss	0.002	4.076	friend, you can, arise, quiet, years, put, encouragement, antuan, thanks, woman, moha, consent
t_9	scary	0.046	4.198	fear, picture, people, gets ends, trials, scary, albacete, face, they will celebrate, will endure trials, tale
t_10	human_rights	0.008	4.346	put, spain, people, persons, easy, vote, home son, media, come on, psoc, majority
t_11	average_woman	-0.005	3.824	woman, picture, father, cheat, average, daughter, average_woman, freak, son, empowerment, I shouted, victim
t_12	average_man	0.051	3.878	man, say it, average, average_man, wine, woman, queen, say it_queen, cats, cats_wine, feminist, soldier
t_13	fertility_display	0.016	4.106	incel, you see, life, hard, friend, years, fertility, schizophrenics, call, knew, display, fertility_display
t_14	social_network	0.006	4.064	woman, I feel, father, networks, totally, social, put, you pass, you can, dopamine, life, society
t_15	beautiful_friends	-0.013	4.056	years, case, man, believe, responsibility, moha, friends, happened, tipdeincogni, enough, gone, thread
t_16	center_field	0.055	5.009	madrid, team, match, hazard, barca, league, league, field, goal_center, europe, foul, getafe
t_17	its_over	-0.003	4.129	incel, llados, uploaded, [anonymized], video, profile, captures, you will see, filter, incels, happened, schizophrenics
t_18	fits_duver	0.042	4.396	boyfriend, love, couple, history, relationship, life, idea, incel, you want, sleep, girlfriend, I want
t_19	crying_laughter	0.143	4,255	crying, laughter, crying_laughter, poor, euros, month, light, followers, beings, months, schizo, meme
t_20	richard_alpert	0.029	4.222	joke, I say, reason, someone, I understand, thank you, put, understand, costs, problem, personal, cry
t_21	i_apologize	0.000	4.104	seen, I want, picture, sorry, I see, I thought, unique, woman, I pass, like, I ask, moha
t_22	give_ideas	0.178	3.914	years, ideas, give, give_ideas, man, tomorrow, father, ferran, ferran_torres, modus, modus_operandi, operandi
t_23	pedro_sanchez	0.289	4,017	woman, pedro, pedro_sanchez, sanchez, could, century, picture, video, to go out, tired, stick, misogynos
t_24	got_dizzy	-0.005	4.047	I just got, seen, art, woman, people, rights, hand, damn, missing, father, man, got_dizzy

ARTICLE IN PRESS