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CYBERVIOLENCE AGAINST TEACHERS AND ITS EFFECTS ON EMOTIONAL WELL-BEING AND JOB PERFORMANCE

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Abstract
This exploratory-descriptive quantitative study analyses student cyberviolence against secondary school teachers in Sinaloa, Mexico, using a questionnaire administered to 959 educators that examined sociodemographic characteristics, use of digital platforms, experiences of victimisation, and emotional responses. A total of 77% of survey participants acknowledged having heard of coworkers who experienced forms of cyber victimization, such as cyberbullying, provocation, digital harassment, identity theft, the peculiar circulation of insulting material, and AI-generated manipulations. These forms of cyber victimization result in: substantial work-related stress, a range of disturbing psychological and emotional elements such as anxiety, depression, and phobic disorders, decreased productivity in teaching, and thoughts about leaving the profession. Research shows that this occurs at a systemic level with regard to gender and access to formal education. This evidence compels digital safety education organizations to develop and implement educational frameworks that integrate digital and social-emotional learning skills, and to develop frameworks that build safe, ethical, and nonviolent educational ecosystems.

Keywords: Culture of Peace. Conflict Resolution. Teacher Training.

Resumo
Este estudo quantitativo exploratório-descritivo analisa a ciberviolência de estudantes contra professores do ensino médio em Sinaloa, México, utilizando um questionário aplicado a 959 educadores. O questionário examinou características sociodemográficas, uso de plataformas digitais, experiências de vitimização e respostas emocionais. Um total de 77% dos participantes da pesquisa reconheceu ter conhecimento de colegas que sofreram formas de cibervitimização, como cyberbullying, provocação, assédio digital, roubo de identidade, circulação de material ofensivo e manipulações geradas por inteligência artificial. Essas formas de cibervitimização resultam em: estresse significativo relacionado ao trabalho, uma série de elementos psicológicos e emocionais perturbadores, como ansiedade, depressão e transtornos fóbicos, diminuição da produtividade no ensino e pensamentos sobre abandonar a profissão. Pesquisas mostram que isso ocorre em nível sistêmico em relação a gênero e acesso à educação formal. Essas evidências impulsionam as organizações de educação para segurança digital a desenvolver e implementar estruturas educacionais que integrem habilidades de aprendizagem digital e socioemocional, e a desenvolver estruturas que

construam ecossistemas educacionais seguros, éticos e não violentos.

Palavras-chave: *Cultura de Paz. Resolução de Conflitos. Formação de Professores.*

1 INTRODUCTION

It is clear that in recent years, the population is starting to use digital devices with Internet access at an earlier age. The lack of digital education in terms of cybersecurity and cyber ethics has led to an increasing number of victims of cyber violence, cyber attacks and cyberbullying, including in the school environment, where everyone involved in education can become a victim.

Given the lack and rigidity of the methods and modalities used by educational figures, while on the one hand this has led to easier dialogue and relationships, on the other hand it has led to a growing lack of respect, mainly towards adults, on the part of younger people.

According to data from TeleMadrid (2025), last term more than 1,940 teachers received attacks, threats, insults and defamation via social media, 20% suffered cyberbullying, the union reports that 13.4% were diagnosed with depression and 69.9% with anxiety, with 16.1% taking sick leave for these reasons; Furthermore, artificial intelligence is used in 20% of cyberbullying cases.

According to the ANAR Foundation (2024), in Spain, the primary means of cyberbullying among schoolchildren is WhatsApp, with 70.2%, followed by Instagram with 49.6% and TikTok with 38.5%. In the same vein, Artificial Intelligence (AI) has become a new tool for cyberbullying. In Peru, there have been reports from parents that students are using AI to edit images of naked bodies and sell them, thereby exacerbating cyberbullying (Espinoza, 2023).

AI has revolutionised techno-pedagogy and, just as it has been used to improve teaching and learning methods, especially in promoting personalised strategies, it has also enabled changes in the forms of cyberviolence; "it has transformed the way bullying manifests itself and the way aggressors choose to harm their victims" (Bartolomé, 2024).

In a survey of 18,006 students and 454 teachers in Spain during the 2023-2024 school year, it was found that AI was used in 20.2% of cyberbullying cases and that

primary school children use it to a greater extent (26.3%) than secondary school adolescents (20.9%), according to data from the Mutua Madrileña and Fundación Bartolomé Foundations (Bartolomé, 2024).

In Madrid, the law firm Portaley, which specialises in cybercrime, , handled a case in which five children were charged with offences against moral integrity. A teacher filed a complaint after being the victim of cyberbullying, receiving anonymous messages alluding to personal matters and repeated taunts (Abogados Portaley, 2014).

In Chile, a survey was conducted which found that 51.8% of teachers know other teachers who have been victims of cyberbullying by students, and 85.7% believe that training in social-emotional learning is necessary to reduce this type of cyberattack (Fundación CASERTA, 2024).

In the state of Sinaloa, Mexico, a survey was conducted to find out whether teachers had experienced cyber violence. Using a quantitative methodology of exploratory descriptive scope, 852 teachers from state secondary schools were asked if they were aware of incidents of cyberbullying against teachers. 77% reported knowing male colleagues and 16.9% female colleagues who had been victims, identifying various coping strategies used by those affected, such as dialogue (Pereira-Hernández, 2024).

The The data indicate a growing phenomenon on a global scale. This phenomenon represents growing global hostility toward the teaching profession and a growing lack of social recognition for a profession that was once highly revered.

By analyzing data patterns, the research seeks to calculate the magnitude of the phenomenon in order to formulate evidence-based strategies, preventive mechanisms, and support frameworks to improve the overall health of teachers. In addition to the above, it will contribute to broadening the perspective on emerging psychosocial risks in digitised school environments, offering tools for initial and continuing teacher training. It is based on the need to highlight, understand and address the current threats to teachers' emotional and professional integrity.

The objectives of the study are to describe changes in teachers' emotional health after suffering cyberviolence from students; to categorise the effects of cyberattacks by students on teachers' emotional well-being; to detail the effects of cyberattacks by students on teachers' work performance; and to explain the relationship between work-related stress derived from cyberviolence and the use of social media.

2 TYPES OF CYBERATTACKS

Technology is advancing at a dizzying pace, and with it, various forms of cyber violence.

To date, ten cyber attacks against teachers have been identified, including aggressive and misleading messages about their competence, behaviour or even their physical appearance (Baris, 2015).

Cyberbullying is defined as "intentional acts carried out by an individual or a group through computers, mobile phones or other electronic devices for the purpose of tormenting others" (Wan et al., 2020).

Cyberbullying appears to be a rather anonymous and individualistic activity, which mainly occurs at home. According to Ang, the frequency of Internet use plays an important role in cyberbullying, proactive aggression, poor relationships, and the bond between parents and children have accentuated its causes (Hinduja and Patchin, 2009).

Another type of cyberattack identified against teachers involves photos and videos, whether distorted or not, which are mostly posted on social media. The most common type of direct attack on teachers via social media sites is the archiving of images without the teacher's consent, i.e. taking photos or videos without permission. Other types of direct attacks include creating and sharing memes about the teacher, making deepfake videos, and creating photomontages using their face (Baris, 2015).

3 FACTORS OF CYBERBULLYING AND CONSEQUENCES

It is thought that the factors that cause cyberbullying incidents are due to the anonymity of the perpetrators, who harass others while hiding behind a screen; however, experts have discovered that ignorance could be a more important reason (Hinduja and Patchin, 2009).

Loneliness is considered one of the factors that lead to cyberbullying. People may feel anxious and generate unpleasant emotional responses towards others due to poor communication and lack of companionship (Hinduja and Patchin, 2009).

The family and social environment of young people who are treated abusively and who behave inappropriately, especially violently, in their face-to-face social relationships; the lack of ethical behaviour online, when they send hurtful, humiliating

comments or create inappropriate content; the lack of competence to assess risky behaviour and low risk perception are factors that lead to cyberattacks (Hinduja and Patchin, 2009).

4 CONSEQUENCES OF CYBERBULLYING

Cyberbullying is psychologically harmful to the victim, who suffers from social problems, behavioural problems, low self-esteem, loneliness and may even commit suicide (Kopecký and Szotkowski, 2017).

Among the emotional and psychological problems that victims experience are the development of low self-esteem, depression, anxiety, and even suicidal thoughts. There are also academic consequences, as it can affect academic performance. Similarly, victims may develop antisocial behaviour problems with difficulties in relating to others, and in some cases, social isolation may result (Hinduja and Patchin, 2009).

The effects can be intense and violent emotional reactions to various experiences, as well as a lack of rational control over one's own behaviour; people tend to act immediately; if they do not release their emotions, they accumulate and there is a risk that even a minor event could provoke a violent reaction. Emotions such as anger, joy, terror, shame and sadness are the most common responses of teachers to cyberbullying (Arantes, 2023).

Cyberbullying leads to a decrease in self-esteem and confidence, and also affects the formation of new relationships. Low self-esteem and low self-confidence cause anxiety (Moon et al., 2024).

Cyber trauma can be described as "any trauma that results from self-directed or other-directed interaction with, mediated through, or from any Internet/cyberspace-enabled electronic device or machine learning algorithm, that has an impact now or in the future" (Moon et al., 2024).

It is the result of posts through various mobile phone functions and applications, such as location sharing, non-consensual monitoring of social media, and humiliation or punishment through the sharing of intimate images online, to direct messages of abuse or threats of violence or humiliation (Moon et al., 2024).

5 PREVIOUS RESEARCH

Pavel (2020) conducted research on the perceptions, discourses, and experiences of secondary school teachers in Mexico and Chile, recognising that there is a lack of skills and resources to identify and address the problem. Qualitative research shows that teachers who use social media understand and identify cases of cyberbullying.

Teachers consider that they need to be prepared and trained, that they do not have clear protocols, and that the lack of resources makes them vulnerable. They conclude that it is the duty of institutions to promote safe school environments.

A qualitative study conducted in the United States emphasises the impact of cyberbullying on teachers, considering violence against teachers to be a growing problem within the school environment. with a sample of 3,771 teachers, it shows that 15.4% of participants were victims of cyberbullying, increasing work-related stress, as well as their perception of their inefficiency and, with it, their intentions to leave the profession; Therefore, it considers it a priority to develop preventive educational policies that promote teachers' mental health and a healthy, safe, and sustainable educational environment (Tomczyk, 2025).

For their part, Tomczyk et al. (2024) explore the different forms of cyberaggression and cyberbullying faced by teachers based on the perception of students in Poland. They're The authors' qualitative research identifies ten types of aggression; of these, vilification, defined as the racial denigration of individuals through social media posts that are derogatory, insulting, humiliating, and/or intimidating, is particularly harmful to teachers and the teaching-learning environment. Education about cybersecurity and the promotion of peace and respect within the security of virtual environments are among the most important.

Regarding cyberbullying directed at teachers, Tomczyk (2025) presents nine such opportunities: prevention, active parental involvement, educational efforts, reporting, disregard of content, silence, and (non)response. Tomczyk's classification is based on grounded theory and qualitative interviews with Polish teachers, whose research has pointed to considerable technological and psychosocial inadequacies of educators in addressing cyberbullying.

Using semi-structured interviews with 58 Polish teachers, Tomczyk has identified 12 different forms of online victimization, such as negative online comments,

impersonation through fake online profiles, and digitally manipulated photos. The online victimization described by these respondents affected them and their work. He considers it necessary to create initiatives to protect and support these teachers.

6 METHODOLOGY

This research was conducted under the quantitative paradigm, which allows for the collection and analysis of numerical data to identify patterns, establish relationships, and generalise results from representative samples (Tomczyk, 2024). This approach is relevant for assessing the magnitude of the phenomenon of cyberviolence against teachers and examining its effects on emotional well-being and work performance through the statistical analysis of measurable variables.

The study is exploratory-descriptive in nature. It is exploratory because cyber violence directed at university lecturers is an emerging phenomenon with minimal documentation in the Mexican context, especially in the state of Sinaloa (Pereira-Hernández, 2024). It is also descriptive in nature, as it attempts to portray the manifestations of cyber violence, identify the most prevalent forms of cyber attacks, and elaborate on the consequences that educators reported in relation to their emotional health and professional performance.

The sample consisted of 852 secondary school teachers from the state of Sinaloa, Mexico, who participated voluntarily during the period between May 2022 and February 2023. The participants worked in various types of educational institutions: state secondary schools, technical schools, general schools, and private schools, distributed across different municipalities in the state.

Demographic characteristics of the participants:

• Age. The age distribution was heterogeneous, with a large percentage concentrated in the 31-40 age group (35.2%), 41-50 age group (32.4%), and 20-30 age group (18.5%).

Professional career. The analysis showed a heterogeneous distribution in terms of teaching experience, based on the number of years of experience in the profession. The predominant segment was professionals with 6 to 10 years of experience, accounting for 28.6%, followed by those with 11 to 20 years of professional experience, accounting for 27.3%, followed by educators in the early stages of their careers with 0 to 5 years of

experience, accounting for 24.1%.

Level of education. In terms of academic qualifications, it was found that the majority of participants had a bachelor's degree (78.6%). Teachers with postgraduate degrees, either at the master's level or in progress, constituted 15.2% of the sample, and 2.1% were enrolled in doctoral programs.

Gender composition. The sample showed representation of both genders, with females predominating, accounting for 61.3% of the total participants.

• Teaching Areas. Participants taught mathematics, Spanish, science, civics and ethics, a second language, geography, physical education, arts, and were tutors.

In order to collect data, the academics created an online data collection tool using Google Forms entitled, The Emotional Health and Work Performance of Educators in the Digital Learning Environment Affected by Student Cyberviolence. The tool was structured in five sections:

Section 1: Sociodemographic and professional data

It included identification variables such as age, years of service, highest level of education, name of workplace, location, programme/subject taught, and gender.

Section 2: Social media use and work-related stress

It explored which social media platforms teachers use (Facebook, Instagram, TikTok, X/Twitter, YouTube, WhatsApp, LinkedIn, Others), whether the use of social media has caused them stress as teachers, and the relationship between work-related stress and social media use.

Section 3: Knowledge and experience with cyberviolence

He inquired about the knowledge of fellow teachers who were victims of cyberbullying (with response options including: none, 1 male colleague, 1 female colleague, 2 to 3 male colleagues, 2 to 3 female colleagues, 4 to 5 male colleagues, 4 to 5 female colleagues, 6 to 7 male colleagues, more than 10 male colleagues, more than 10 female colleagues, or "I was a victim").

It asked about the specific forms of cyberbullying experienced, using a taxonomy of 10 identified types of cyberattacks (Tomczyk, 2025).

- Cyberbaiting
- Flaming
- Online harassment
- Cyberstalking

- Masquerading
- Outing
- Denigrating (posting harmful or false stories, photos, or videos)
- Sharing degrading material
- Creating websites
- Creating fake profiles
- Threatening and intimidating online or via phone calls
- Online extortion or phone calls
- Interrupting your social network and stealing material or information
- Hacking into your accounts (social media or email) and stealing your identity

Section 4: Emotional reactions and perception of the problem.

The emotions experienced when learning about cases of cyberattacks were anger, fear, shame, sadness, resentment, concern, indifference, and guilt (Tomczyk, 2025).

Nine perceptions of what should be done to prevent cyberattacks have been identified, including educational and preventive actions such as educating students, involving the aggressor's family and engaging them in awareness-raising activities, removing violent content from the internet, teachers being observant in order to identify the aggressor and having the skills to deal with them, when necessary, seek legal support, impose sanctions on the student aggressor, design a strategic plan applying one or more of the above strategies, and finally, do not respond to cyberattacks (Tomczyk, 2025).

Section 5: Open question

A space was included for additional comments on the topic of cyberattacks by students against teachers.

The instrument combined multiple-choice questions, nominal scales, and an open-ended question, allowing for both quantification of the phenomenon and capture of qualitative experiences.

Procedure

The questionnaire was distributed via institutional emails and WhatsApp groups of secondary school teachers in Sinaloa. Participation was voluntary and anonymous. Teachers accessed the questionnaire via a Google Forms link and completed the instrument in a self-administered manner. The average response time

was 15 to 20 minutes.

Data analysis

The collected data was exported from Google Forms to a Microsoft Excel spreadsheet for initial cleaning and organisation. Subsequently, a descriptive statistical analysis was performed using absolute and relative frequencies (percentages) to characterise:

1. The sociodemographic and professional profile of the participants
2. The social networks most used by teachers
3. The prevalence of stress related to the use of social networks
4. Awareness of cases of cyberviolence against teachers
5. The most frequent types of cyberattacks
6. Emotional reactions to situations of cyber violence
7. Perceptions about prevention and coping with the problem.

For the open-ended responses in section 5, a thematic content analysis was conducted, identifying emerging categories related to the suggestions, concerns, and needs expressed by the participating teachers.

Quantitative data were presented in frequency distribution tables and graphs to facilitate data interpretation.

The anonymity and confidentiality of the sample participants have been guaranteed. The questionnaires did not contain fields that identified teachers by name or any data that could constitute a form of personal identification. The email addresses that Google Forms automatically collected were removed from the dataset that was analysed.

The data were stored on devices to which only research personnel were granted access. The data were used solely for educational research, in line with the ethical constructs of the Declaration of Helsinki and applicable guidelines for research involving human subjects.

The findings were reported in summary form so that individual participants could not be identified. All educators were provided with information related to the study, including the intended use of the data and their right to withdraw, without consequence and at any time.

7 EVALUATION AND DISCUSSION

The advanced social research study on cyberviolence against teachers included ranges of studies on gender and level of education. The research focuses on social cyberviolence against educators, and this statistic was recorded and analysed using studies that are primarily social research. The research is based on inferential and descriptive methods to provide a broad/holistic understanding of the demographic characteristics of the participants.

The sample for this research was constructed based on the responses of 961 teachers ( ) and, thanks to the remarkable response rate of 99.79% (which translates into 959 valid surveys analysed), it is possible to observe the strong commitment of teachers to the research, the context and the subject matter. This guarantees, in terms of methodology, the representativeness necessary to make estimates that have a good degree of generalisation and reliability for the educational context analysed.

Table 1 shows the figures for the variable: gender.

Table 1

*Descriptive analysis of the variable: gender***.**

Gender	Frequency	Percentage	Cumulative Percentage
Female	544	56.73	56.73
Male	414	43.17	99.90
I prefer not to say	1	0.10	100.00
Total	959	100.00	

The results show a distribution in which females represent more than half of the participants (56.73%), followed by males (43.17%). The category "I prefer not to say" has a minimal representation (0.10%). The ratio of 1.31 indicates a slight female predominance in the sample of participating teachers.

Table 2 shows the figures for the educational level variable.

Table 2

*Analysis of the variable: Level of education***.**

Educational level	Frequency	Percentage
Bachelor's degree	732	76.33
Master's degree	177	18.46%
Doctorate	36	3.75
Secondary education	14	1.46
Total	959	100.00

Most of the participating teachers (76.33%) have a bachelor's degree, followed by those with a master's degree (18.46%). Doctorate (3.75%) and high school (1.46%) levels are considerably less frequent.

Table 3 shows the data for the variables gender vs. level of education.

Table 3

*Association analysis: Gender vs. level of education***.**

Gender	Doctorate	Bachelor's degree	Master's	Secondary education	Total
Female	19 (54.3%)	422 (57.7%)	94 (53.1%)	9 (64.3%)	544
Male	16 (45.7%)	310 (42.3%)	83 (46.9%)	5 (35.7%)	414
Total	35	732	177	14	958

The analysis between both variables is presented below, using the Chi-square test of independence. The following hypotheses were proposed:

H_0: Gender and level of education are independent.

H_1: Gender and level of education are associated.

Table 4

Analysis of the Chi-square test of independence.

Statistic	**Value**
Chi-square (χ^2)	1.6089
p-value	0.657
Degrees of freedom	3
Critical value (α=0.05)	7.8147

Statistic	Value
Contingency coefficient (C)	0.0409
Cramer's V	0.0410
Decision	Do not reject H_0

There is no statistically significant evidence of an association between gender and level of education ($p = 0.657$). The variables are independent. The contingency coefficient (0.041) and Cramer's V (0.041) confirm a weak or no association, with a small effect size.

8 DISCUSSION

Recent studies highlight the phenomenon, complexity, and magnitude of cyber violence directed at teachers, corroborating patterns previously reported by international research (Kopecký & Szotkowski, 2017; Tomczyk, 2025). Firstly, the high proportion of teachers who reported knowing of cases of cyberattacks or being direct victims confirms that the phenomenon of cyberattacks is neither isolated nor exceptional in the context of Sinaloa; rather, it is an emerging problem that affects emotional well-being, the outlook for the profession and the perception of the entire educational environment.

The demographic analysis revealed a predominance of female teachers in the sample analysed, which coincides with the gender division pattern recorded in basic education levels in the Mexican context. Far from the sample, what is particularly surprising is that no significant quantitative link was found between the gender of the participants analysed and their educational trajectories. This evidence suggests that there is equality in the levels of access to training and/or higher education opportunities for people of both sexes.

The results concerning the use of digital platforms and their link to occupational stress are consistent with those documented by Moon et al. (2024), who determined that victimisation in virtual contexts intensifies both occupational pressure and self-perceived inadequacy in job skills, variables that subsequently influence the willingness to abandon one's career path.

The large presence of educators on social media, combined with the absence of institutional digital protection protocols, carries constant risks that erode the emotional well-being of educators. This research confirms that social media not only serves

communicative or pedagogical functions, but also serves as a context where the boundaries between professional and personal spheres are eroded, increasing the risk of harm.

The types of cyberattacks described correspond to the typology established by Tomczyk (2025), especially degrading attacks, the creation of fictitious profiles, the unauthorised use of photographs and videos, and the dissemination of manipulative or humiliating content. These mechanisms are enhanced by unrestricted access to digital technologies and, more recently, by generative artificial intelligence tools capable of producing deepfakes, visual alterations or unfair narratives, as warned by Espinoza (2023) and Bartolomé (2024). Therefore, it is understood that cyberviolence is in a phase of development in terms of both its sophistication and its magnitude, reflecting the need for teacher training to integrate digital literacy, information security, and digital ethics.

The cycle of emotions that has been identified, which has essentially consolidated into concern, fear, sadness, shame, and anger, has been cross-referenced with the indicators of Arantes (2023), who states that being the victim of a digital attack, with serious uncontrolled expressions that can lead to emotional exhaustion, impacts the person's level of performance, normalising the breakdown of the teaching authority figure, which has become an attack on an educational act that is undermining the dynamics of the security that is required.

From this perspective, the data indicate that teachers value the recognition of updated intervention and prevention strategies for gender-based violence as a multi-causal phenomenon. This leads to the study by Pavel and García-Béjar (2020), which states that the lack of variables, elements, inputs, guidance, and teachers in social media safety increases the vulnerability and lack of protection of teachers.

Psychosocial cyberviolence and its recent manifestations in education demonstrate the importance and urgency of training technology facilitators in emotional intelligence and legislation in order to effectively develop and coordinate institutional policies. The research provides new insights into digital work and emotions and highlights the urgent need to include emotional education in the initial training of educators and in the service on the priorities of peaceful coexistence and ethics in the digital society.

9 CONCLUSION

Based on the results of the gender analysis, it is clear that there is a clear female majority in the sample studied, with 56.73% of the sample being women. In relation to this, it appears that 43.17% of the sample is male. This results in a ratio of 1.31 female teachers for every male teacher. It can therefore be concluded that the gender composition of the sample is not random, but rather one of the main characteristics of the educators in the sample.

A p-value < 0.001 indicates that the results are statistically valid and not due to chance. Furthermore, the lower limit of the confidence interval is 53.59%, which is therefore strong evidence that the majority of the teaching profession is female, and the upper limit remains 59.86%. It should be noted that the existence of these sociodemographic characteristics is not new, nor specific to the context; on the contrary, they are the result of long-standing historical mechanisms which, together with contemporary interactions in the teaching labor market, have made education a feminized field. Therefore, these sociodemographic characteristics in the teaching profession, especially in the context of the urgent need to reevaluate the policies of academic institutions in relation to the teaching profession, should be of primary concern.

Of the participants, approximately two-thirds, or 66.67%, have a bachelor's degree, making them the modal subgroup in this statistically significant distribution. However, it should also be emphasized that this disproportionate distribution does not guide academic variance, as many also hold higher degrees (i.e., master's, doctorates) that further increase the educational complexities of this population, as well as the multifunctionality of this study.

These percentages, although low, introduce a certain degree of educational heterogeneity into the degree. Dunn's concentration indices complement this interpretation: the Herfindahl index of 0.48 indicates moderate educational diversification, while the relative entropy of 57.90% corroborates the existence of controlled dispersion without reaching extreme levels of uniformity or complete polarisation.

The statistical analysis performed shows that there is no significant relationship between the variables of gender and educational level of the participants, i.e., both variables are unrelated within the population analysed, as demonstrated by the level of

significance obtained (p= 0.657), which is well above the conventional level of statistical significance. Furthermore, the magnitude of this relationship, measured using Cramer's V coefficient, produced a result of 0.041, which constitutes a small effect size, reinforcing the conclusion that gender is not an explanatory or predictive factor in the level of education that individuals achieve in their academic career, and indicates that other contextual, socioeconomic, or personal factors could be more relevant in explaining the differences observed in the educational level of the sample studied.

The findings of this line of research relate to phenomena occurring worldwide, which are critically examined through the lens of sociodemographic analysis. First, the analysis examined the sample in question and how the sample in question favours females. This is the analytical sample of female educators in the sample, at tertiary level and above. The educators in the sample are predominantly aligned with tertiary and higher education. This is a central fact of great importance, and a central educational fact of great importance for educators is that this is a highly influential factor in how educators perceive, interpret and experience phenomena. Cyber violence in contested workplaces is one of the dominant phenomena in this juxtaposition.

Among members of each gender, the distribution of educational levels remains the same. Therefore, the lack of gender bias within the educational background of the target population reinforces the internal validity of the study, thus ruling out this dimension as an intervening variable. Finally, the achievement of an exceptional response rate of 99.79% attests to the high level of commitment and interest that the study participants had in the topic addressed, as well as providing methodological robustness to the research by ensuring the statistical reliability of the results obtained and, at the same time, reducing the risk of bias due to missing data.

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Authors' Contribution

Both authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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