

Article

Building Teachers' Confidence and Critical Thinking Through Scientific Evidence with Social Impact in Gender Violence Prevention

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Abstract: Scientific literature has provided evidence that teacher education based on scientific evidence is highly beneficial for professional development. However, the impact of receiving training grounded on co-created teaching materials—incorporating the expertise of teachers, trainers, and researchers—remains less explored. In this context, the *TeachXevidence* (2023–2025) project (ref.101096234) conducted nine teacher education seminars in Spain and Portugal, based on co-created scientific evidence with social impact. Following the Communicative Methodology, a total of 180 social impact questionnaires were collected to assess the perceived social impact of the teacher education seminars. The results of these questionnaires indicate that (a) the participant teachers feel more confident and better equipped with arguments to debunk existing hoaxes related to gender violence prevention and (b) they report having stronger arguments to critically evaluate and select the training programs school want to implement on gender violence prevention.

Keywords: teacher education; social impact; gender violence; prevention; scientific evidence



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1. Introduction

Gender-based violence is a global issue of great concern. The United Nations' Sustainable Development Goal 5, which aims to “achieve gender equality and empower all women and girls”, includes a specific target to “eliminate all forms of violence against all women and girls in both public and private settings, including trafficking, sexual exploitation, and other forms of abuse”. The European Strategy for Gender Equality (2020–2025) highlights the critical role of education in addressing and reducing gender-based violence by introducing preventive measures aimed at effectively eliminating this issue.

1.1. Hoaxes in Gender-Based Violence Prevention

Scientific research demonstrates that teacher education based on scientific evidence is highly beneficial for professional development and to overcome school violence (Rodríguez-

Oramas et al., 2021; Olabarria et al., 2024). A study has observed that continuous teacher training based on scientific evidence has helped improve the social inclusion indexes in the participating schools (Roca-Campos et al., 2021). Nevertheless, in the prevention of gender-based violence, many training programs do not consider scientific evidence with social impact (Flecha et al., 2024). Scientific evidence with social impact refers to the evidence published in indexed scientific journals showing progress towards the achievement of democratically set goals, such as sustainable development goals (Aiello et al., 2021; Soler-Gallart & Flecha, 2022). In the particular case of gender-based violence, scientific evidence with social impact includes the actions that contribute to achieving the goal of gender equality by preventing and diminishing the effects of such violence. Thus, by not considering this, we can find training programs that include hoaxes, misinformation, or distorted beliefs (Bonilla-Algovia & Rivas-Rivero, 2021) about gender-based violence prevention.

One example of such misinformation could be the belief that “gender-based violence is only present in stable relationships”. Gender-based violence has been wrongly associated only with stable relationships, but it is also present in sporadic relationships (Kennair et al., 2018; Torras-Gómez et al., 2020; Puigvert et al., 2023). This can be debunked by analyzing gender-based violence that occurs in hookups in the context of nightlife (Duque et al., 2020; López de Aguilera Jaussi et al., 2022).

In addition, another hoax that is widespread in gender-based violence prevention training is the idea that “romantic love is one of the main causes of gender-based violence” (Yuste et al., 2014). Some prevention programs attribute the key cause of gender violence to romantic love (Couture et al., 2023; Lelaurain et al., 2021), damaging the right of individuals to the pleasure of falling in love (Torras-Gómez et al., 2020). A recent study has challenged this view, showing that the characteristics often linked to the “myths of romantic love” are actually the opposite of what romantic love has historically been understood to be (Cañaveras et al., 2024).

To conclude with another example, some training programs spread misinformation by claiming that “all men are potential aggressors”, ignoring all the contributions of many men to gender equality and the fight against gender-based violence, and overlooking men who have been victims themselves (Nazareno et al., 2022). The aforementioned statement does not consider the fundamental role of New Alternative Masculinities (NAM), which are essential for overcoming gender-based violence in all contexts (Flecha et al., 2013; Joanpere & Morlà, 2019).

1.2. Harmful Effects of Hoaxes on Teacher Development

Hoaxes or misinformation can have a negative impact on teacher education, their professional development, and the implementation of strategies in the classroom to prevent gender-based violence (Rios-Gonzalez et al., 2023; Flecha et al., 2024).

1.2.1. Hoaxes' Effects on Teacher Training

Firstly, hoaxes influence the way teachers are trained, as it is based on misconceptions about gender-based violence, leading to a distorted understanding of the issue (Bonilla-Algovia & Rivas-Rivero, 2021). This affects the effectiveness of the training, as teachers are not equipped with the correct information and tools to detect gender-based violence or adequately address its prevention, creating a sense of inefficacy in them (Ajduković et al., 2021). A study conducted in England and Türkiye shows that participants improved their understanding of scientific evidence, enhancing their ability to conduct open-ended investigations and ask questions that support claims in socio-scientific issues (Roberts & Sahin-Pekmez, 2011).

Research suggests that evidence-based teaching may not be effectively implemented if educators are not properly prepared (Georgiou et al., 2023) as they still face challenges in translating research findings into teaching practice.

1.2.2. Hoaxes' Effects on the Perception of Gender Violence Prevention

Secondly, the fact that teachers believe in hoaxes or follow personal beliefs related to gender-based violence interventions can lead to questioning the validity of the prevention approaches based on scientific evidence with social impact. Research from the field of psychology explains that confronting teachers' prior beliefs with scientific evidence may lead them to ignore, reinterpret, or devalue the information, perceiving it as a threat to their professional identity (Berweger et al., 2023), although they may adapt their assumptions when it comes to solid evidence (Thomm et al., 2021). In this regard, another study reveals that teachers' prior beliefs on specific topics act as a filter, as they trust more in evidence consistent with their prior beliefs than in evidence that contradicts them, creating a confirmation bias (Schmidt et al., 2022). This results in a lack of commitment to the strategies and a decreased willingness to apply the necessary measures to create a safe and respectful environment for all students.

1.2.3. Hoaxes' Effects on Teacher Motivation

To conclude, hoaxes can undermine teachers' motivation to engage with gender violence preventive actions. When teachers encounter misinformation or hoaxes about gender-based violence prevention, they may begin to question the validity of the resources, strategies, and research available to them. Research has shown that self-efficacy is related over time with teaching enthusiasm (Burić & Moè, 2020). This can result in decreased motivation to apply these practices in the classroom, as teachers may feel less confident in their effectiveness. Research clearly shows that teacher motivation is key to successful and effective teaching (Mahler et al., 2018), as well as to student motivation (Han & Yin, 2016). Moreover, when teachers are exposed to hoaxes, they may experience frustration or confusion, which can lower their intrinsic motivation to continue developing professionally.

To counteract these effects, as mentioned previously, it is crucial that teacher training be based on scientifically validated information (Diery et al., 2021; Rodríguez-Oramas et al., 2021; Reuter & Leuchter, 2023; Olabarria et al., 2024). Additionally, educational programs should be promoted to raise teachers' awareness of the importance of questioning hoaxes, and to provide them with effective strategies and tools to address gender-based violence in the school environment.

2. Materials and Methods

The current research belongs to an initial phase of a European project called *TeachXevidence. Preventing gender-based violence in schools based on scientific evidence with social impact* (2023–2025), in which one of the objectives is to enable teachers to distinguish between educational actions based on opinions or hoaxes and educational actions based on scientific evidence to prevent gender-based violence. To this end, three teacher education seminars were organized in Spain and Portugal. The aim of this research is to provide an exploratory overview of the perceived impact that participating in a training seminar based on scientific evidence with social impact, aimed at preventing gender-based violence, has had on teachers.

2.1. Teacher Education Seminars

Teacher education seminars were developed in May and October (Portugal) and April (Spain) 2024 via Zoom. The seminars consisted of three sessions of 3 h. A total of 368 teachers, both active and in training, participated in these seminars. Of those

participants, 176 were from Spain, while 192 were from Portugal. A total of 83.5% of the participants were women.

The teaching materials used in these seminars were co-created in an earlier phase of the project (Puigvert et al., 2024) considering the diverse voices of researchers, teachers, and teacher educators. The topics addressed in the teacher training based on scientific evidence with social impact for the prevention of gender-based violence can be seen in Table 1.

Table 1. Teacher education seminars' topics.

Session	Topics
1st Session	<ol style="list-style-type: none"> 1. Existing Hoaxes in Gender Violence 2. Open Access Resources 3. Dialogic Learning and Dialogic Gatherings
2nd Session	<ol style="list-style-type: none"> 4. Socialization Processes 5. Masculinity Models 6. Consent
3rd Session	<ol style="list-style-type: none"> 7. Protective Factors 8. Zero Violence Brave Club 9. Isolating Gender Violence 10. Community Involvement. Dialogic Model of Conflict Prevention and Resolution of Conflicts

The sessions included a combination of teaching the key concepts and scientific evidence, supported by official PowerPoint presentations. A dialogical approach was employed with the aim of fostering an environment where participants could ask questions and share their experiences. Additionally, each session featured practical, dialogue-based activities and a teaching guide for ensuring the correct use of the materials. The seminars provided teachers with tools to distinguish between hoaxes and scientific evidence with social impact in the prevention of gender-based violence.

2.2. Methods

This study, and the whole project, was conducted using the Communicative Methodology approach, which is known for its significant scientific, political, and social impact (Gómez et al., 2019). Involving citizens in various research processes is considered a crucial pathway to enhancing the social impact of research. It emphasizes the co-creation of knowledge through an egalitarian dialogue between participants and researchers (Puigvert et al., 2012). This approach has also gained recognition from the European Commission for its contribution to research within the framework programs based on this methodology (European Commission, 2010). Several important European research projects have been developed within this framework, including INCLUD-ED (6th Framework Programme), IMPACT-EV (7th Framework Programme), and SALEACOM (H2020), achieving notable scientific, political, and social impact.

This methodology is grounded in the idea that research objectives should go beyond merely describing reality and should aim to transform it. Furthermore, it has demonstrated a significant impact on addressing social inequalities and improving the lives of vulnerable populations. Communicative Methodology is highlighted in the expert report from the European Commission: Directorate-General for Research and Innovation et al. (2018), which outlined the guidelines for co-creation and social impact in the Horizon Europe Programme.

This approach has proven valuable in analyzing social impact. For example, it was used to assess the impact of evidence-based training for educators on bystander interven-

tion for the prevention of violence against LGBTI+ youth (Rios-Gonzalez et al., 2023) or to analyze the impact of dialogic teacher training on the creation of more inclusive learning environments (Rodríguez-Oramas et al., 2021). Therefore, Communicative Methodology is an approach that has been found useful on previous research to evaluate teacher education seminars grounded in scientific evidence and aiming to contribute to social change.

Communicative Methodology has two core features:

1. **Focus on Social Impact:** It aims for measurable, sustainable, and transferable improvements in the conditions it seeks to influence. In this context, the goal is to shift teachers' attitudes so that their educational practices are solely based on scientific evidence.
2. **Co-Creation of Knowledge:** Knowledge is developed through an equal dialogue between researchers and end-users, ensuring that all voices contribute to the process.

2.2.1. Social Impact Questionnaires

To assess the perceived social impact of the teacher education seminars, social impact questionnaires were conducted. The social impact questionnaire follows the guidelines of the Expert Report "Monitoring the impact of EU Framework Programmes" (European Commission: Directorate-General for Research & Innovation et al., 2018), which outlines the social impact criteria set by the European Commission. The validation of the questionnaire is embedded within the Monitoring Report itself, as it has been applied in co-creation by the research group.

The questionnaires were designed to be brief and focus on key issues regarding the teacher education seminars. They did not aim to achieve representative results based on quantitative logic but rather provided a descriptive exploration of the impact on teachers' professional lives and their ability to distinguish scientific evidence from hoaxes or opinions. This focus aligns with one of the main objectives of the ANONYMOUS project.

The primary data collection tool used was an online social impact questionnaire, consisting of 35 questions designed to assess the perceived utility of the seminars. A total of 20 of these questions are multiple-choice with "Yes", "No", and "Don't Know" options, such as: "Has training in scientific evidence with social impact in the prevention of gender-based violence helped you to: identify and understand scientific evidence of social impact?"; "Has training in scientific evidence with social impact in the prevention of gender-based violence helped you to: have dialogues with other colleagues from your own school or from other schools?"; and "Has training in scientific evidence with social impact in the prevention of gender-based violence helped you to: have dialogues with people outside the education field and validate the importance of the work you do and can be done in educational centers?", among others. The remaining 15 were open-ended questions, provided with the aim of allowing teachers to offer more specific examples where the social impact of teacher training based on scientific evidence for social impact in the prevention of gender-based violence could be reflected upon.

2.2.2. Participants

The study involved 180 respondents, including 93 teachers from Spain and 87 from Portugal. A total of 49% of the participants in the training seminars completed the questionnaire. Participants were teachers, both active and in training, ranging from preschool to secondary school level. The sampling method for this study was intentional, as all participants were attendees of the teacher education seminars. The sample consisted of participants who voluntarily responded to the social impact questionnaire. No sociodemographic data (e.g., age, gender, or years of experience) were collected to maintain focus on the impact of the seminars themselves. However, a large majority of the teachers who attended these seminars were women, so it is very likely that there is also a higher represen-

tation of women in the questionnaire responses. Regarding age, the range was from 18 to 60 years, and the majority of the teachers who participated in the seminars were within the 31–50 year age range.

2.2.3. Data Collection

The training seminars were held over three weeks, with one seminar per week. The online questionnaire was distributed via email to all seminar participants after finishing the last training session, with a link to an online questionnaire platform. A reminder email was sent to encourage a high response rate. Participants were assured that their responses would remain confidential, and that the data would be used exclusively for the purposes of this study.

2.2.4. Data Analysis

The open-ended responses were analyzed qualitatively through thematic analysis to identify recurring themes and insights related to the participants' experiences and the social impact of the training. The responses were exported to an Excel file, where two of the authors, collaboratively and dialogically, read and analyzed them on several occasions. Similar responses were grouped in order to generate categories and common themes were manually identified. The research team refined the themes, and after reaching a consensus on their relevance, the main themes were identified: trust and safety on one hand, and critical thinking on the other.

2.2.5. Ethics

The current research is part of the project: *TeachXevidence. Preventing gender-based violence in schools based on scientific evidence with social impact (2023–2025)*. The entire project development has ensured compliance with ethical requirements, following the ethical principles of the Universal Declaration of Human Rights and the EU's Charter of Fundamental Rights (CFREU) in order to ensure the safety and freedom of participation of every participant. The project has an Advisory Board that ensures ethically the project in terms of quality, sensitivity, and respect towards all stakeholders. The data collection process respected the privacy and confidentiality of the participants as no sociodemographic questions were asked, the responses were anonymous, and intrusive or overly personal questions were not asked. Participants provided informed consent, which included key information about the project's objectives and expected outcomes. Furthermore, the study received approval from the Ethics Committee of CREA (Community of Researchers on Excellence for All), under approval code [20250120].

3. Results

The following section analyzes the results obtained through the social impact questionnaires on the teacher education seminars conducted in Spain and Portugal. The main findings are included in Table 2.

Table 2. Main results summary.

Number	Results
1	Participant teachers perceive greater security and confidence in debunking existing hoaxes in gender-based violence prevention.
2	Participant teachers believe they have stronger arguments for the critical evaluation and selection of gender-based violence prevention programs in their schools.

3.1. Security and Confidence to Debunk Existing Hoaxes in Gender-Based Violence Prevention

Training based on scientific evidence with social impact has been helpful in empowering teachers to address gender-based violence prevention and debunk existing hoaxes in this area.

A beneficial aspect of the training has been the ability to identify and dismantle misconceptions that hinder efforts to prevent gender-based violence. For teachers, as they mention in their responses, having access to resources grounded in scientific evidence has been “liberating”, in order to confront harmful hoaxes that are not helpful to prevent gender-based violence. A total of 96% of the teachers who participated in this training mentioned that the seminars helped them identify and understand scientific evidence with social impact. Similarly, a participant teacher noted: “It gives me a lot of arguments, and, in part, it has freed me to realize that many beliefs I doubted were actually hoaxes”. This ability to recognize and counter false information has strengthened teachers to face daily challenges in the educational field.

Participants perceived that this training has improved their capacity to intervene more effectively in educational and social environments. A total of 71% of the teachers who participated in the training affirmed the usefulness of these seminars for having dialogues with people outside the education sector and validating the importance of the work they do and can do from educational institutions. One of the most notable effects has been the increased perception of security and confidence teachers feel when tackling complex topics related to gender-based violence. As one participant explained:

Once we delved deeper into these topics, listened to other perspectives—especially from the trainer who has been researching this subject—and engaged with scientific evidence, our discourse became more secure and confident because we could present scientific evidence to back it up.

This strengthened discourse has allowed teachers not only to dismantle existing hoaxes but also to promote greater trust in education’s role in preventing gender-based violence. Several participants noted the following:

Education is always said to contribute to preventing gender-based violence, but thanks to the training, these pillars have been reinforced with scientific rigor—not just from a place of goodwill.

I never stopped trusting in this, but scientific evidence has supported my confidence with proven arguments.

The training has also had a direct impact on teachers’ work environments. Many participants highlighted that the training spurred debates within school staff meetings and the organization of dialogic gatherings on the topics discussed. Specifically, 84% of the teachers who participated in the seminars stated that the training has helped them hold debates within the educational institution and/or with colleagues. These spaces for dialogue have enabled the analysis and demystification of false beliefs related to gender-based violence and interpersonal relationships. According to the teachers’ feedback, the concept of romantic love has been one of the most debated topics. Participants appreciated that the training provided them with arguments and confidence to counter existing myths, such as “love kills”, and instead advocate for healthy and positive relationships free from violence. Furthermore, this approach has encouraged teachers to reflect on their role as change agents within the educational system, promoting a culture of respect and equity in relationships.

Thus, the training has also provided an opportunity for teachers to reassess their own practices and those of their colleagues and schools. By clarifying concepts based on scientific evidence with social impact, many teachers have adjusted both their approaches

to these issues and the responses they provide in their daily work. They also acknowledge the resistance and challenges involved due to their colleagues' demotivation, which hinders the implementation of these types of initiatives: "It's not easy to change deeply ingrained beliefs, but we must always try". Despite these difficulties, teachers value the positive impact of dialogue based on scientific evidence, as reflected in one teacher's words:

The importance of dialogue grounded in scientific evidence is always emphasized so that colleagues can learn about other perspectives, supported by data proven by the scientific community, to encourage reflection.

The introduction of data and figures from scientific studies was very important in reinforcing this change, as explained in one testimony: "Addressing these topics using statistics from the studies presented by the trainers always helps to substantiate discussions".

Another significant outcome is how this training based on scientific evidence with social impact has helped overcome skepticism from individuals outside the educational field. For instance, one participant shared:

I've had conversations with others, and I have to say they initially looked at me with some skepticism, saying we're always talking about these topics but never see visible results. However, they later started showing a lot of interest, giving examples they knew and even making some suggestions.

This was also reflected in personal interactions, as another teacher explained:

I had the opportunity to talk about this topic with some friends who initially dismissed it, saying they were tired of these conversations. But after I presented a new perspective and referred to scientific evidence, they became more reflective, which I believe is a good thing.

The capacity to present arguments backed by scientific research has been a valuable resource in these debates, as it has provided teachers with the confidence and security to counter existing hoaxes in gender violence prevention.

3.2. Stronger Arguments for the Critical Evaluation and Selection of Gender-Based Violence Prevention Programs

Beyond the confidence and security to address existing hoaxes in the prevention of gender-based violence, training based on scientific evidence with social impact has also provided teachers with tools and strong arguments to critically evaluate and select appropriate prevention training programs for their schools. Through this training, teachers have developed a greater critical capacity to review and question both their own practices and external training proposals on gender-based violence prevention that are not grounded in scientific research. In fact, 83% of the participant teachers mentioned that it has helped them review the educational actions they were carrying out, both individually and at the institutional level. One participant stated:

In my school, there are workshops on femininity and masculinity. Most students don't want to attend. I'm not sure if those delivering the workshops are adequately trained. I think we should replace those 'ideas' with scientific evidence.

This testimony reflects a significant shift in teachers' ability to question and challenge programs that are presented without scientific justification. As teachers gain stronger arguments to select programs grounded in scientific evidence with social impact, they also feel better prepared to discuss and propose alternatives grounded in scientific evidence:

I believe it's important to act and base our actions on science. The teaching world is heavily influenced by social media, bombarding us with videos and proposals that are not based on any scientific foundation.

The training provided by the administration is not very motivating and is not based on scientific evidence. We need to go one step further, act, and base our teaching practices on scientific evidence.

The teachers emphasized that, thanks to the strong arguments provided by the training, they feel more equipped to reject training or approaches that are not based on scientific evidence, thus promoting a more rigorous approach to gender-based violence prevention.

One of the most significant changes from the training is the increased awareness among the teachers of the harmful effects of spreading hoaxes and unfounded beliefs about gender violence prevention in education. Many teachers mentioned how this training has allowed them to question and compare their own practices with principles grounded in scientific evidence, as noted by one participant:

In my teaching practice, being able to verify whether what I was doing was based on a solid principle or merely a social belief has been crucial. I've started looking for studies or journals on the subject to see whether I'm implementing new ideas or simply repeating possible mistakes.

This process of critical review applies not only to their teaching methods but also to the selection of materials and educational activities, enabling them to make better-informed decisions based on scientific evidence with social impact. In this way, the training helps build a more solid and reliable pedagogy regarding gender-based violence. Teachers now have stronger arguments to critically evaluate, through scientific evidence, various gender-based violence prevention programs and to select those actions that are achieving the most effective results in this mission.

Teachers acknowledge the need to use scientific evidence with social impact to counteract misinformation and false beliefs circulating in society and within schools. In this regard, one teacher commented:

I believe that using scientific evidence is essential to stop hoaxes, and when defending a position, it's not enough to defend it on 'principle' just because it's fair, but because there's scientific support. The only way to dismantle 'fake news's is with scientific evidence.

This extends to rejecting methodologies or educational projects presented as innovative but lacking scientific backing. Teachers are often pressured to implement pedagogical proposals without a solid evidence base. As one participant noted: "Above all, it has been very helpful to understand that these aspects are well-researched and that there's no need to invent or 'innovate' unnecessarily".

4. Discussion

Teachers who participated in the seminars perceived that this teacher education had an impact on their school daily life. These sessions provide teachers with tools, knowledge, and a sense of confidence and security, making them believe that, from now on, they will be able to address gender-based violence more effectively. By equipping them with solid arguments and fostering critical thinking, training grounded in scientific evidence with social impact empowers teachers to initiate meaningful debates and reflect on their practices.

One of the most significant outcomes of such training is the ability to challenge and dismantle harmful hoaxes in gender-based violence prevention, such as the belief that "romantic love kills". According to the participant teachers, this was one of the topics that generated the most debate. However, through scientific evidence from the training, they were able to show that there was no evidence that romantic relationships lead to gender violence (Yuste et al., 2014; Torras-Gómez et al., 2020; Puigvert et al., 2023; Cañaveras et al., 2024).

Additionally, the seminars helped educators overcome skepticism in their professional and personal environments. As observed in the results, participant teachers reported feeling more confident in presenting their arguments to colleagues and the community, as their positions are backed by scientific research. This increased security and confidence has also helped them overcome the existing resistance toward scientific evidence (Schmidt et al., 2022) or those situations in which teachers' previous beliefs contradicted the results of educational research (Thomm et al., 2021; Berweger et al., 2023).

As explained by participant teachers and shown in previous research, the prevalence of misinformation in society, particularly concerning gender-based violence and related issues, poses a significant challenge to educators (Bonilla-Algovia & Rivas-Rivero, 2021; Rios-Gonzalez et al., 2023; Flecha et al., 2024). Teachers often find themselves in a position where they must counteract false narratives while promoting accurate information. Through these training seminars, educators gain the skills and knowledge necessary to identify and refute hoaxes effectively. Therefore, they overcome the previously identified challenges of interpreting and applying scientific evidence (Roberts & Sahin-Pekmez, 2011; Georgiou et al., 2023). In fact, the participating teachers positively valued the ability to choose between training based on scientifically validated information or training based on personal beliefs. As reflected in the scientific literature, this capability is essential for ensuring that gender-based violence prevention efforts are grounded in reliable, scientifically validated information and not personal beliefs (Diery et al., 2021; Rodríguez-Oramas et al., 2021; Reuter & Leuchter, 2023; Olabarria et al., 2024). By strengthening their arguments and refining their ability to critically evaluate and select programs, teachers can be more effective in giving support to their students and communities. This shift not only strengthens their credibility but also fosters a culture of trust and collaboration within schools and beyond.

However, the success of these initiatives depends heavily on the motivation of the teaching staff. The participant teachers acknowledged the resistance posed by their colleagues' lack of motivation. Many educators reported feeling overwhelmed and disheartened by the lack of visible results in their efforts to implement programs and address these critical issues. This demotivation is often linked, as shown by the scientific literature, with the perception that their hard work does not yield tangible improvements or did not achieve the expected results (Han & Yin, 2016; Burić & Moè, 2020). In many cases, this stems from the application of interventions that are not grounded in scientific evidence, leading to ineffective outcomes that fail to inspire confidence or self-efficacy (Schaufeli & Salanova, 2007). When teachers do not see the results of their efforts, it can lead to skepticism and resistance, both within schools and in the wider community. As mentioned by the participants, this skepticism is particularly pronounced in discussions with people outside the educational sphere, where the absence of clear, evidence-based outcomes can undermine the credibility of initiatives to prevent gender-based violence.

Furthermore, the problem of demotivation is exacerbated by the constant implementation of so-called "innovations" or changes in teacher training programs, as mentioned by the participant teachers. These initiatives often require substantial effort from teachers but fail to produce meaningful improvements in the best-case scenario. In worse cases, they may even exacerbate existing problems (Flecha et al., 2024). This cycle of ineffective actions has left many educators feeling disillusioned and hesitant to embrace new approaches.

The implementation of gender-based violence prevention initiatives in schools faces significant challenges, including teacher demotivation and skepticism toward ineffective actions. However, training grounded in scientific evidence with social impact offers a transformative solution by equipping educators with the tools, knowledge, and confidence to address these issues effectively.

5. Conclusions

The current study's objective was to provide an exploratory overview of the perceived impact that participating in a training seminar based on scientific evidence with social impact, aimed at preventing gender-based violence, has had on teachers. Our results, on the one hand, show that participant teachers perceive greater security and confidence to debunk existing misinformation or hoaxes in gender-based violence prevention and, on the other hand, they believe they have stronger arguments for the critical evaluation and selection of prevention programs on this issue in their schools. Therefore, based on the information gathered from the social impact questionnaires, we could consider that the training seminars have had an impact on the teachers' ability to distinguish scientific evidence from hoaxes in the prevention of gender-based violence.

Below, the implications, limitations, and future directions of these findings are detailed in greater depth.

5.1. Implications

By fostering critical reflection, promoting collaboration, and providing scientifically validated arguments, training grounded in scientific evidence with social impact empowers teachers to challenge harmful hoaxes, counter misinformation, and advocate for more rigorous practices. This approach not only enhances the effectiveness of prevention programs but also strengthens the role of education in shaping a society that values respect, equity, and violence-free relationships.

As schools continue to tackle the complexities of gender-based violence prevention, it is essential to prioritize training programs that are grounded in scientific evidence with social impact. By doing so, educators can build a solid foundation for meaningful change, ensuring that their efforts yield visible, lasting results that benefit both students and the broader community.

5.2. Limitations and Future Directions

While training grounded in scientific evidence with social impact can boost teachers' confidence, perceived security and effectiveness in addressing gender-based violence, the long-term sustainability of this motivation is a concern. The training's impact may diminish over time without ongoing support, resources, or follow-up initiatives to reinforce the knowledge and skills acquired.

Future research should focus on evaluating the impact of teacher education seminars on a larger scale, assessing not only the immediate outcomes but also the long-term effects on educators, students, and communities. The European project under which this research is framed did not plan to conduct a quantitative analysis; however, we believe it would be interesting to analyze it in future studies.

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