Intimate Partner Violence Against Women: A Study on the Beliefs of Trainee Teachers in Spain and Latin America

Violencia íntima de pareja contra las mujeres: un estudio de las creencias en docentes en formación de España y América Latina

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Abstract.
Objective: The main aim of this study is to analyse the acceptance of distorted beliefs about gender roles and violence against women in a sample of future teachers from Spain and Latin America. Method: The methodology used has been quantitative, and the design is cross-sectional. The sampling was intentional and not probabilistic. The sample is composed of 2395 trainee teachers who studied at universities and higher education centers from Argentina, Chile, Colombia, El Salvador, Spain, and Mexico. Information was collected through a structured questionnaire that included the Inventory of Distorted Thoughts about Women and the Use of Violence-Revised (Echeburúa et al., 2016). The analysis used (chi-square, Student T, and ANOVA) made it possible to evaluate the influence of sex and country. Results: The results show statistically significant differences among countries in the acceptance of distorted beliefs. Men, compared to women, tend to present more cognitive distortions about gender roles and intimate partner violence against women. Conclusion: The education system is one of the main socialising agents, so teacher training in equality is essential to eliminate gender biases and contribute to the promotion of a society free of violence against women.

Resumen.
Objetivo: El objetivo de este estudio ha sido analizar la aceptación de creencias distorsionadas sobre los roles de género y sobre la violencia contra las mujeres en una muestra de futuros y futuras docentes de España y Latinoamérica. Metodología: La metodología del estudio ha sido cuantitativa y el diseño, transversal. El muestreo fue intencional y no probabilístico. Participaron 2395 docentes en formación de universidades y centros de formación superior de Argentina, Chile, Colombia, El Salvador, España y México. La información se recolectó a través de un cuestionario estructurado que incluyó el Inventario de Pensamientos Distorsionados sobre la Mujer y el Uso de la Violencia - Revisado (Echeburúa et al., 2016). Los análisis empleados (ciclo-cuadrado, t de Student y ANOVA) han permitido evaluar la influencia del sexo y del país. Resultados: Los resultados reportan diferencias estadísticamente significativas entre los países de la muestra en la aceptación de las creencias distorsionadas. Los hombres, en comparación con las mujeres, tienden a presentar más distorsiones cognitivas sobre los roles de género y la violencia íntima de pareja contra las mujeres. Conclusión: El sistema educativo es uno de los principales agentes socializadores, por lo que la formación del profesorado en materia de igualdad es esencial para eliminar los sesgos de género y contribuir al fomento de una sociedad libre de violencia contra las mujeres.

Keywords.
Cognitive Distortions; Violence Against Women; Gender Bias; Teacher Education Programs; Teacher Training.

Palabras Clave.
Distorsiones cognitivas; violencia contra las mujeres; sesgos de género; programas de formación docente; formación del profesorado.
1. Introduction

Violence against women (VAW) is a social problem and a human rights violation that crosses geographical, economic, social, and cultural borders and affects women all over the world (Ellsberg et al., 2015; García-Moreno et al., 2005). Although VAW is now recognised as a global public health problem (World Health Organization, 2013), it has historically been ignored, invisible and even accepted (García-Moreno et al., 2015). The 1993 World Conference on Human Rights and the 1993 Declaration on the Elimination of Violence against Women were two of the first international standards that allowed VAW to begin to be recognised as a human rights problem rather than a domestic issue (Devries et al., 2013). In the same vein, the 1994 Inter-American Convention on the Prevention, Punishment, and Eradication of Violence against Women, also known as the Convention of Belém do Pará, recognised violence as a social problem and urged states to adopt policies and regulations against VAW, which is why national laws have been progressively adopted in Latin America and the Caribbean since the 1990s (Essayag, 2017).

The United Nations General Assembly (1994) defines VAW as:

any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life. (p. 3).

One of the most common forms of violence suffered by women is intimate partner violence (IPVAW) (Devries et al., 2013; Oram et al., 2017). This includes different types of abuse that often coexist and become chronic over time in intimate relationships. In recent decades, IPVAW has been analysed and documented in numerous contextualised studies in Spain and Latin America (Bonilla-Algovia et al., 2020; Bott et al., 2012; Bott et al., 2019; De Miguel, 2015; Guedes et al., 2014; Jaen et al., 2015; Montero et al., 2013; Neves et al., 2016; Rivas et al., 2020; Ruiz-Pérez et al., 2017; Sanz-Barbero et al., 2014; Wheeler et al., 2020).

Global and regional estimates report that around 30% of ever-partnered women have suffered some form of physical and/or sexual violence at some point in their lives, and 38% of all murders of women worldwide have been committed by intimate partners (World Health Organization, 2013). The study also shows that lifetime prevalence of IPVAW varies greatly by region: high-income region (23.2%), Africa (36.6%), Americas (29.8%), Eastern Mediterranean (37%), South-East Asia (37.7%), and Western Pacific (24.6%), among others. In Spain, 12.5% of women reported having suffered physical or sexual violence by a partner or ex-partner at some time in their lives (De Miguel, 2015): 10.4% physical violence, 25.4% control psychological violence, 21.9% emotional psychological violence, and 8.1% sexual violence. A multi-country study in Latin America and the Caribbean found that a high percentage of women ever-married or in union had at some time experienced physical or sexual violence on the part of an intimate partner, with percentages ranging from 17% in the Dominican Republic to 53.3% in Peru (Bott et al., 2012; Guedes et al., 2014). The study also reports that the prevalence of emotional abuse by an intimate partner at some point in their lives ranged from 17% in Haiti to 47.8% in Nicaragua. In all Latin American countries that took part in the study, most women who had suffered physical violence in the last 12 months also experienced emotional abuse, with percentages ranging from 61.1 per cent in Colombia to 92.6 per cent in El Salvador (Bott et al., 2012; Guedes et al., 2014).

IPVAW is a multidimensional and multi-causal phenomenon in which, in addition to individual and relational factors, other factors, whether macro-social or socio-cultural, intervene (Heise, 1998). Bosch-Fiol and Ferrer-Pérez (2019) propose a pyramidal model in which patriarchal ideology (sexist attitudes, legitimacy of gender inequality, and justification of the use of violence) and the dissemination of this ideology through the processes of socialisation make up the first explanatory levels of IPVAW. In this sense, the beliefs and cultural values that justify IPVAW constitute a risk factor that reinforces violence and can have great explanatory value (Puente-Martínez et al., 2016). Distorted beliefs about IPVAW, better known as cognitive distortions, are misguided ways of analysing and interpreting reality, based on minimising and denying violence, as well as attributing responsibility to the women who suffer it (Loinaz, 2014). Therefore, their study is fundamental to understanding the social and cultural context in which IPVAW takes place.

The proposal of Bosch-Fiol and Ferrer-Pérez (2012) concludes that distorted beliefs or myths about IPDAW can be grouped into different interacting categories: myths about marginality (beliefs that IPVAW occurs in specific settings, such as developing countries, low income families, etc.), myths about aggressors (beliefs that men who abuse their partners are mentally ill, alcoholics, drug addicts, etc.), myths about women victims (beliefs that women who suffer violence have a specific profile and are also guilty of the violence suffered), myths about the importance of IPVAW (beliefs that minimise the problem by considering it to be specific and isolated and by denying the consequences of different types of violence), and denialist myths (beliefs that deny the existence of gender-based violence, spread the message that most reports are false, etc.).

The analysis of cognitive distortions has been carried out mainly with men who are violent towards their partners (Echeburúa et al., 2016, Ferrer-Pérez et al.,
2017, Loínaz, 2014), since they tend to have biases related to gender roles and the legitimisation of violence (Echeburúa et al., 2009; Echeburúa et al., 2016). However, given that these beliefs shape the social climate in which IPVAW occurs and can contribute to perpetuate levels of abuse (Ferrer-Pérez & Bosch-Fiol, 2014), it is important to analyse cognitive distortions not only among aggressors, but also among the general population and young people (Ferrer-Pérez et al., 2019). In other words, since IPVAW is not an individual problem, the socio-cultural factors that legitimise it must be analysed.

For this reason, there has been an increase in recent years in research examining attitudes and beliefs related to IPVAW among the general population, such as the acceptance of myths about IPVAW (Megías et al., 2018), the victim-blaming attitudes regarding IPVAW (Gracia & Tomás, 2014; Martín-Fernández, Gracia, & Lila, 2018), the attitudes of acceptability of IPVAW (Martín-Fernández, Gracia, Marco, et al., 2018; Tran et al., 2016) or the willingness to intervene in cases of IPVAW (Gracia et al., 2018). Along the same lines, research that analyses distorted beliefs about gender roles and IPVAW among young people and adolescents in Spain and Latin America has also proliferated (Boira et al., 2017, Ferrer, Bosch, & Ramis, 2008, Ferrer et al., 2006, Ferrer-Pérez et al., 2019, Uibillos et al., 2017). However, there is hardly any research assessing distorted beliefs about IPVAW among trainee teachers (Bonilla-Algovia & Rivas-Rivero, 2019; Ferrer, Bosch, Ramis, & Navarro, 2008). In fact, this is the first cross-cultural research assessing cognitive distortions in Spanish-speaking trainee teachers.

The magnitude and effects of VAW around the world highlight the need for national, regional, and global initiatives to address its various manifestations, translating political commitments into real changes in the lives of women and girls (García-Moreno et al., 2019). These initiatives and strategies must pay special attention to multisectoral prevention (Michau et al., 2015). The first wave of interventions began by focusing attention on providing support to survivors of violence and reducing the impunity of aggressors, while a second wave focused on prevention from multiple approaches, many of them centered on changing the social attitudes and beliefs that legitimise VAW and gender inequality (Ellisberg et al., 2015). In this sense, violence must be addressed comprehensively, articulating activities from different social sectors and institutions, including the educational system. Education, regardless of the age of the student body, is an ideal means of promoting cultural and social change in favour of equality and against VAW (San Segundo & Codina-Canet, 2019; Torres, 2010).

Education can play a central role in eliminating gender inequalities and distorted beliefs about IPVAW, as well as preventing violence and promoting respectful and equal relationships (Bonilla-Algovia & Rivas-Rivero, 2019; Ferrer, Bosch, Ramis, & Navarro, 2008; Uibillos et al., 2017). There is a need to include intervention programmes in schools to raise awareness of the causes and consequences of VAW in general and of IPVAW in particular (San Segundo & Codina-Canet, 2019), just as there is a need to make the gender perspective and equality transversal axes of the education system (Torres, 2010). When we think of education as an environment that facilitates gender equality, attention tends to fall on teachers as one of the principal agents in the socialisation of new generations (Coffey & Acker, 1991; Sánchez & Barea, 2019). However, for prevention strategies to be successful, teachers need resources and specialised training that allow them to critically question their own beliefs and educational practices. Teachers are also born into social environments characterised by distorted beliefs about gender roles and IPVAW and can therefore become transmitters of patriarchal culture or agents of social change in favour of gender equality from schools. Consequently, the objectives of this research have been to analyse the cognitive distortions on gender roles, misogyny and IPVAW in a sample of trainee teachers from Spain and different Latin American countries, as well as to analyse the differences between men and women and among countries in the acceptance of beliefs.

### 2. Method

#### 2.1 Design

This is a non-experimental investigation based on a quantitative methodological strategy and descriptive-correlational analyses. The structured questionnaire was used as a data collection technique. Based on a cross-sectional design, the data were collected at one particular moment in time, with the aim of gathering the beliefs and opinions of the teachers in training.

#### 2.2 Participants

Initially, 2660 trainee teachers were recruited from Argentina, Chile, Colombia, El Salvador, Spain, and Mexico. However, after selecting participants who completed the questionnaire, the final sample was composed of 2395 trainee teachers from those six Spanish-speaking countries, with a mean age of 22.44 years ($SD = 6.13$). The main characteristics of the final sample are shown in Table 1. The selection of the people who participated in the study was carried out through intentional sampling, ensuring that the samples were larger than 100 participants in all countries. Each country has different legislation regarding teacher training, so common sampling inclusion criteria had to be established. The criteria established were: (a) residing in any of the countries participating in the study; (b) be enrolled in a university or higher education centre; (c) undertaking teacher education programmes; (d) studying for an officially recognised degree that would qualify the holder to work in an educational institution. Therefore, based on the charac-
were informed of the objectives and contents of the re-
search and gave their informed consent. The research
paradigm was an anonymous self-administered ques-
tionnaire. The participants were selected because they were study-
ing to become teachers in the different stages of the
educational system (Infant, Primary or Secondary Edu-
cation and Psychopedagogy, among others).

2.3 Instrument
Not only did the questionnaire incorporate a validated
scale to assess distorted beliefs about gender roles and
IPVAW, but it also included a section with sociodemo-
graphic questions (self-administered):
1. Sociodemographic characteristics: sex, country, mean
age, etc.
2. Inventory of Distorted Thoughts about Women and
the Use of Violence-Revised (IPDMUV-R; Echeburúa et
al., 2016). The scale consists of 21 items grouped into a
single factor. The items measure distorted beliefs about
gender roles, the supposed inferiority of women, IPVAW,
and the legitimacy of the use of violence. It has a di-

cotomous response format: true or false. The score on
the scale ranges from 0 to 21 points, with high scores in-
dicating a greater number of cognitive distortions about
women and the use of violence. In the psychometric
validation of the inventory, Echeburúa et al. (2016) showed
that the one-factor version had good fit indices, with
an alpha coefficient of .74. In the present research, the
reliability obtained in the IPDMUV-R ranged between
.61 and .76 among the countries in the sample: El Sal-
vador (α = .76), Argentina (α = .67), Colombia (α = .72),
Spain (α = .61), Mexico (α = .75), and Chile (α = .63).

2.4 Procedure
The participants were selected because they were studying
to become teachers in the different stages of the
educational system (Infant, Primary or Secondary Edu-
cation). Common inclusion criteria set the tone for
selection in all countries. The research team contacted
the universities and training centres or their teachers di-
rectly, in order to request access to students who met
the inclusion criteria. Participation was voluntary and
the questionnaires were self-administered. Participants
were informed of the objectives and contents of the re-
search and gave their informed consent. The research
guaranteed the confidentiality of the data at all times.

The questionnaire was completed anonymously, with the
understanding that its completion could be cancelled at
any time. No financial or other compensation was given
for participating.

2.5 Analysis
The database was created using the statistical program
SPSS (IBM SPSS Statistics 22.0). The descriptive sta-

tistics used are means, standard deviations, frequencies,
and percentages. Differences between women and men
in the acceptance of distorted beliefs are calculated us-
ing the Chi-square statistic and differences in the overall
score on the IPDMUV-R are calculated using the Stu-
dent T statistic for independent samples. The compar-
ison of means in the IPDMUV-R between the different
countries is done through the one-factor ANOVA test.
F-test is accompanied by Welch’s F-test (Welch-F) and
effect size (η²). Country pair differences are also studied
by post-hoc multiple comparisons. Based on the scores
on the sex and country scale, a classification tree for
trainee teachers is designed.

3. Results
3.1 Distorted beliefs by sex
Table 2 shows the percentages of agreement and the
significant differences between men and women in the
distorted beliefs that make up the IPDMUV-R. The re-

results show that, in Spain, men show significantly greater
agreement than women on item 3 (χ² = 4.84, p = .028),
item 4 (χ² = 17.58, p = .000), item 11 (χ² = 6.35, p = .012),
item 13 (χ² = 7.07, p = .008), item 16 (χ² = 15.63,
= .000), item 19 (χ² = 6.64, p = .010) and item 20 (χ² =
9.43, p = .002). Spanish women, on the other hand, show

greater agreement on item 8 (χ² = 4.81, p = .028). In El
Salvador, men agree significantly more than women on
item 11 (χ² = 3.92, p = .048) and item 16 (χ² = 5.12, p = .024).
In Chile, significant differences are found for item 4
(χ² = 4.72, p = .030) and item 17 (χ² = 4.17, p = .041),
where men agree more. In Argentina, men show signifi-
cantly greater agreement on item 3 (χ² = 4.57, p = .033),
item 5 (χ² = 4.57, p = .033), item 6 (χ² = 4.22, p = .040)
and item 19 (χ² = 11.12, p = .001). Finally, in Mexico,
men obtain higher percentages of agreement than women
for item 4 (χ² = 10.27, p = .001), item 5 (χ² = 6.36, p =

<p>| Table 1 |</p>
<table>
<thead>
<tr>
<th>Sample Characteristics</th>
<th>n</th>
<th>Women</th>
<th>Men</th>
<th>Mean age (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>1012</td>
<td>830 (82.0%)</td>
<td>182 (18.0%)</td>
<td>20.86 (4.46)</td>
</tr>
<tr>
<td>Colombia</td>
<td>443</td>
<td>317 (71.6%)</td>
<td>126 (28.4%)</td>
<td>20.64 (3.91)</td>
</tr>
<tr>
<td>El Salvador</td>
<td>102</td>
<td>61 (59.8%)</td>
<td>41 (40.2%)</td>
<td>23.25 (5.70)</td>
</tr>
<tr>
<td>Argentina</td>
<td>467</td>
<td>383 (82.0%)</td>
<td>84 (18.0%)</td>
<td>28.12 (8.92)</td>
</tr>
<tr>
<td>Chile</td>
<td>101</td>
<td>61 (60.4%)</td>
<td>40 (39.6%)</td>
<td>21.03 (2.11)</td>
</tr>
<tr>
<td>Mexico</td>
<td>270</td>
<td>205 (75.9%)</td>
<td>63 (23.3%)</td>
<td>21.77 (3.21)</td>
</tr>
</tbody>
</table>

Note: SD=Standard deviation

int.j.psychol.res | doi: 10.21500/20112084.5103
Table 2

Percentages of agreement on the IPDMUV-R by sex and country

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
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<th>Women</th>
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<th></th>
<th></th>
<th>Men</th>
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<th></th>
<th></th>
<th>Women</th>
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</thead>
<tbody>
<tr>
<td>3. Men are the heads of the family, so women must obey them.</td>
<td>1.1%</td>
<td>4.84*</td>
<td>9.8%</td>
<td>.35</td>
<td>2.5%</td>
<td>1.54</td>
<td>1.2%</td>
<td>4.57*</td>
<td>4.8%</td>
<td>1.50</td>
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<tr>
<td>4. Women must have lunch and dinner ready when men get home.</td>
<td>2.8%</td>
<td>17.58***</td>
<td>31.7%</td>
<td>.17</td>
<td>7.5%</td>
<td>4.72*</td>
<td>3.6%</td>
<td>.41</td>
<td>11.1%</td>
<td>10.27***</td>
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<tr>
<td>5. A woman must have sex with her partner, even if the woman doesn’t want to at the time.</td>
<td>0%</td>
<td>–</td>
<td>7.3%</td>
<td>.86</td>
<td>2.5%</td>
<td>1.54</td>
<td>1.2%</td>
<td>4.57*</td>
<td>6.3%</td>
<td>6.36*</td>
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<tr>
<td>6. Women must not contradict their partners.</td>
<td>5.8%</td>
<td>.48</td>
<td>7.3%</td>
<td>.48</td>
<td>5%</td>
<td>3.11</td>
<td>3.6%</td>
<td>4.22*</td>
<td>7.9%</td>
<td>3.07</td>
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<tr>
<td>8. Many women consider abuse by their partners to be a token of their partners’ concern for them.</td>
<td>36.3%</td>
<td>4.81*</td>
<td>41.5%</td>
<td>.30</td>
<td>37.5%</td>
<td>3.22</td>
<td>41.7%</td>
<td>.37</td>
<td>38.1%</td>
<td>.02</td>
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<td>9. When a man hits his partner, the woman knows the reason behind it.</td>
<td>2.2%</td>
<td>1.07</td>
<td>14.6%</td>
<td>2.88</td>
<td>0%</td>
<td>2.03</td>
<td>1.2%</td>
<td>.29</td>
<td>12.7%</td>
<td>10.99***</td>
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<tr>
<td>11. Many women deliberately provoke their partners so their partners lose control and hit them.</td>
<td>4.9%</td>
<td>6.35*</td>
<td>22%</td>
<td>.92</td>
<td>4.8%</td>
<td>1.10</td>
<td>11.1%</td>
<td>3.15</td>
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<tr>
<td>13. Teachers at school are right to use physical punishment against children who are repeatedly disobedient and rebellious.</td>
<td>3.3%</td>
<td>7.07**</td>
<td>17.1%</td>
<td>.65</td>
<td>5%</td>
<td>.95</td>
<td>1.2%</td>
<td>.14</td>
<td>7.9%</td>
<td>4.06*</td>
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<tr>
<td>14. Children do not realize that their fathers abuse their mothers unless the children witness a fight.</td>
<td>42.9%</td>
<td>2.53</td>
<td>41.5%</td>
<td>.52</td>
<td>22.5%</td>
<td>1.65</td>
<td>35.7%</td>
<td>2.31</td>
<td>39.7%</td>
<td>10.67***</td>
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<tr>
<td>16. Most men who assault their partners feel ashamed and guilty because of the abuse.</td>
<td>13.3%</td>
<td>15.63***</td>
<td>29.3%</td>
<td>5.12*</td>
<td>17.5%</td>
<td>1.27</td>
<td>7.1%</td>
<td>.15</td>
<td>20.5%</td>
<td>9.14**</td>
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<tr>
<td>17. What happens within a family only concerns the family.</td>
<td>5.2%</td>
<td>11.5%</td>
<td>9.8%</td>
<td>6%</td>
<td>7.3%</td>
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<tr>
<td>19. On many occasions, men mistreat their partners because their partners annoy the men.</td>
<td>5.5%</td>
<td>20</td>
<td>31.7%</td>
<td>1.24</td>
<td>20%</td>
<td>4.17*</td>
<td>13.1%</td>
<td>3.34</td>
<td>31.7%</td>
<td>12.32***</td>
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<tr>
<td>20. Most people who employ some type of violence are unsuccessful people or “losers”.</td>
<td>9.9%</td>
<td>6.64**</td>
<td>14.6%</td>
<td>.06</td>
<td>12.5%</td>
<td>.18</td>
<td>19%</td>
<td>11.12***</td>
<td>23.8%</td>
<td>4.60*</td>
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</tbody>
</table>

Note: $\chi^2=$ Chi squared; ES=Spain; SV=El Salvador; CL=Chile; AR=Argentina; MX=Mexico; $* p \leq .05$; $** p \leq .01$; $*** p \leq .001$. 


.012), item 9 ($\chi^2 = 10.99, p = .001$), item 13 ($\chi^2 = 4.06, p = .044$), item 14 ($\chi^2 = 10.67, p = .001$), item 16 ($\chi^2 = 9.14, p = .003$), item 17 ($\chi^2 = 12.32, p = .000$), item 19 ($\chi^2 = 4.60, p = .032$) and item 20 ($\chi^2 = 10.22, p = .001$). Gender differences in trainee teachers from Colombia are not included because they were published in a previous study (Bonilla-Algovia & Rivas-Rivero, 2019). The Colombian sample is used in the section below.

Compared to women, in all countries men have higher average scores on the IPDMUV-R (see Figure 1). In the joint sample of trainee teachers from Spain, El Salvador, Chile, Argentina and Mexico, men present significantly more cognitive distortions than women ($M_{men} = 3.54, SD = 3.05; M_{women} = 2.75, SD = 2.27; t = 4.86, p = .000$). The results, when disaggregating data by country, show that differences between men and women are significant in Mexico ($M_{men} = 4.87, SD = 3.51; M_{women} = 3.07, SD = 2.62; t = 3.77, p = .000$) and marginally significant in Spain ($M_{men} = 2.84, SD = 2.43; M_{women} = 2.50, SD = 1.99; t = 1.75, p = .082$). However, despite the fact that men also score higher than women, the differences in averages are not significant in El Salvador ($M_{men} = 5.76, SD = 3.88; M_{women} = 5.30, SD = 3.26; t = .65, p = .518$), Chile ($M_{men} = 3.40, SD = 2.35; M_{women} = 3.34, SD = 2.41; t = 1.12, p = .090$) and Argentina ($M_{men} = 3.01, SD = 2.93; M_{women} = 2.63, SD = 2.14; t = 1.13, p = .263$).

Figure 1

Differences between men and women in IPDMUV-R

3.2 Comparison of Acores Among Countries

Figure 2 shows the total scores obtained in the IPDMUV-R by country. From this point on, in addition to the teachers-in-training from the countries used previously (Spain, El Salvador, Chile, Argentina and Mexico), the analyses include the sample from Colombia. A comparison of means among countries reveals statistically significant differences ($F = 70.85, p < .001, \eta^2 = .13; Welch – F = 55.51, p < .001$). The sum of inter-group squares is 2190.84 and the sum of intra-group squares, 14675.86. The inter-group mean square is 438.17 and the intra-group mean square is 6.19. The average number of cognitive biases on gender roles and on IPVAW is, in ascending order among the sample countries, as follows: Spain ($M = 2.56, SD = 2.08$), Argentina ($M = 2.70, SD = 2.30$), Chile ($M = 3.37, SD = 2.38$), Mexico ($M = 3.48, SD = 2.94$), Colombia ($M = 4.79, SD = 2.93$) and El Salvador ($M = 5.48, SD = 3.51$).

Figure 2

IPDMUV-R score by country

One-factor variance analysis allows us to accept the existence of significant differences between population averages, so that country pairs are analysed to find out which countries differ from each other. This is done through a post-hoc multiple comparison analysis (see Table 3). The test of variance homogeneity yields a significant p value (Levene = 20.82, $p < .001$); therefore, the assumption of homoscedasticity is rejected and the Games-Howell method is used. The results of the multiple comparisons show that a) trainee teachers in Spain present significantly fewer cognitive distortions on gender roles and on IPVAW than trainee teachers in El Salvador, Colombia, Chile and Mexico; b) trainee teachers in El Salvador and Colombia present significantly more cognitive distortions than those in Spain, Chile, Argentina and Mexico; c) trainee teachers in Chile present significantly more cognitive distortions than those in Spain and fewer than those in El Salvador and Colombia; d) trainee teachers in Argentina present significantly fewer cognitive distortions than those in El Salvador, Colombia and Mexico; e) trainee teachers in Mexico present more cognitive distortions than those in Spain and Argentina and fewer than those in El Salvador and Colombia.

3.3 Model of Classification According to Number of Cognitive Distortions

The classification of trainee teachers has been carried out by building a decision tree (see Figure 3), using Chi-square Automatic Interaction Detector (CHAID) as a
Table 3

<table>
<thead>
<tr>
<th>(I) Country</th>
<th>(J) Country</th>
<th>Mean difference (I-J)</th>
<th>SD</th>
<th>IC 95% Lower value</th>
<th>higher value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>El Salvador</td>
<td>-2.92***</td>
<td>.35</td>
<td>-3.91</td>
<td>-1.94</td>
</tr>
<tr>
<td>Colombia</td>
<td>El Salvador</td>
<td>-2.23***</td>
<td>.15</td>
<td>-2.67</td>
<td>-1.79</td>
</tr>
<tr>
<td>Chile</td>
<td>El Salvador</td>
<td>-.81*</td>
<td>.25</td>
<td>-1.49</td>
<td>-0.13</td>
</tr>
<tr>
<td>Argentina</td>
<td>El Salvador</td>
<td>-.14</td>
<td>.13</td>
<td>-.49</td>
<td>.20</td>
</tr>
<tr>
<td>Mexico</td>
<td>El Salvador</td>
<td>-.92***</td>
<td>.19</td>
<td>-1.45</td>
<td>-.40</td>
</tr>
<tr>
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<td>Spain</td>
<td>2.92***</td>
<td>.35</td>
<td>1.94</td>
<td>3.91</td>
</tr>
<tr>
<td>Colombia</td>
<td>Spain</td>
<td>.69</td>
<td>.38</td>
<td>-0.39</td>
<td>1.77</td>
</tr>
<tr>
<td>Chile</td>
<td>Spain</td>
<td>2.11***</td>
<td>.42</td>
<td>.95</td>
<td>3.27</td>
</tr>
<tr>
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<td>.36</td>
<td>1.77</td>
<td>3.79</td>
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<tr>
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<td>.39</td>
<td>.92</td>
<td>3.08</td>
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<tr>
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<td>El Salvador</td>
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<td>.15</td>
<td>1.79</td>
<td>2.67</td>
</tr>
<tr>
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<td>.38</td>
<td>-1.77</td>
<td>.39</td>
</tr>
<tr>
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<td>El Salvador</td>
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<td>.28</td>
<td>.63</td>
<td>2.21</td>
</tr>
<tr>
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<td>El Salvador</td>
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<td>1.59</td>
<td>2.59</td>
</tr>
<tr>
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<td>Argentina</td>
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<td>.23</td>
<td>.66</td>
<td>1.96</td>
</tr>
<tr>
<td>Argentina</td>
<td>Mexico</td>
<td>.81*</td>
<td>.25</td>
<td>.13</td>
<td>1.49</td>
</tr>
<tr>
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</tr>
<tr>
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<td>.28</td>
<td>-2.21</td>
<td>-.63</td>
</tr>
<tr>
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<td>.26</td>
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<tr>
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<td>Argentina</td>
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<td>.30</td>
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</tr>
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<td>.78**</td>
<td>.21</td>
<td>-1.35</td>
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<tr>
<td>Argentina</td>
<td>Mexico</td>
<td>.92***</td>
<td>.19</td>
<td>.40</td>
<td>1.45</td>
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<tr>
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<td>El Salvador</td>
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<td>.39</td>
<td>-3.08</td>
<td>-.92</td>
</tr>
<tr>
<td>Chile</td>
<td>El Salvador</td>
<td>-1.31***</td>
<td>.23</td>
<td>-1.96</td>
<td>-.66</td>
</tr>
<tr>
<td>Argentina</td>
<td>El Salvador</td>
<td>.12</td>
<td>.30</td>
<td>-.70</td>
<td>.93</td>
</tr>
<tr>
<td>Mexico</td>
<td>Argentina</td>
<td>.78**</td>
<td>.21</td>
<td>.21</td>
<td>1.35</td>
</tr>
</tbody>
</table>

Note: *p ≤ .05; **p ≤ .01; ***p ≤ .001.

growth method. The dependent variable is the score in the IPDMUV-R and the independent variables are sex and country. Nodes and categories are divided when the chi-square statistic is significant ($p \leq .05$). The dependent variable has been divided into two groups according to the number of cognitive distortions on gender roles and on the IPVAW: four or fewer distortions (group 1) and five or more distortions (group 2). The results provide a risk estimate of .268 and correctly classify 73.2% of trainee teachers.

Table 4 shows the percentages classified for each of the nodes and the statistical significance. The classification model obtained allows us to draw three principal conclusions: a) El Salvador has the highest percentage of trainee teachers with scores equal to or greater than five on the IPDMUV-R ($\chi^2 = 279.08, p < .001$); b) 43.7% of men in Chile and Mexico, compared to 30.5% of women, present five or more cognitive distortions ($\chi^2 = 5.79, p < .05$); and c) 24.4% of men in Spain and Argentina, compared to 17.6% of women, present five or more cognitive distortions ($\chi^2 = 6.66, p < .01$).

4. Discussion

VAW is a public health and social problem that occurs worldwide (Bott et al., 2012; Ellsberg et al., 2015; García-Moreno et al., 2005; World Health Organization, 2013). The magnitude and consequences of all forms of violence against women require governments to develop strategies that translate political commitments into concrete actions (García-Moreno et al., 2015; Michau et al., 2015). IPVAW is one of the most common forms of violence suffered by women (Devries et al., 2013; Oram et
Intimate Partner Violence Against Women and Trainee Teacher’s Beliefs

Figure 3

Classification tree

![Classification Tree Image]

Table 4

<table>
<thead>
<tr>
<th>Node</th>
<th>Distortions ≤ 4</th>
<th>Distortions ≥ 5</th>
<th>Variable</th>
<th>Primary independent variable</th>
</tr>
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<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>0</td>
<td>1669</td>
<td>70.2%</td>
<td>708</td>
<td>29.8%</td>
</tr>
<tr>
<td>1</td>
<td>203</td>
<td>45.9%</td>
<td>239</td>
<td>54.1%</td>
</tr>
<tr>
<td>2</td>
<td>1189</td>
<td>81.2%</td>
<td>275</td>
<td>18.8%</td>
</tr>
<tr>
<td>3</td>
<td>34</td>
<td>33.3%</td>
<td>68</td>
<td>66.7%</td>
</tr>
<tr>
<td>4</td>
<td>243</td>
<td>65.9%</td>
<td>126</td>
<td>34.1%</td>
</tr>
<tr>
<td>5</td>
<td>991</td>
<td>82.4%</td>
<td>211</td>
<td>17.6%</td>
</tr>
<tr>
<td>6</td>
<td>198</td>
<td>75.6%</td>
<td>64</td>
<td>24.4%</td>
</tr>
<tr>
<td>7</td>
<td>185</td>
<td>69.5%</td>
<td>81</td>
<td>30.5%</td>
</tr>
<tr>
<td>8</td>
<td>58</td>
<td>56.3%</td>
<td>45</td>
<td>43.7%</td>
</tr>
</tbody>
</table>

Note: χ²=Chisquared; df=Degree of freedom.

al., 2017). Approximately one in three ever-partnered women have been subjected to physical and/or sexual violence worldwide (World Health Organization, 2013). The prevalence and effects of IPV are widely documented, highlighting the fact that it is a problem that continues to recur today (Bonilla-Algovia & Rivas-Rivero, 2020; Bott et al., 2012; Bott et al., 2019; De Miguel, 2015; Guedes et al., 2014; Jaen et al., 2015; Montero et al., 2013; Neves et al., 2016; Rivas et al., 2020; Ruiz-Pérez et al., 2017; Sanz-Barbero et al., 2014; Wheeler et al., 2020). Therefore, if IPV is a multi-causal phenomenon encompassing multiple dimensions (Heise, 1998; Puente-Martínez et al., 2016), it is essential to analyse the individual, relational, socio-cultural, and macro-social risk factors that facilitate its reproduction. For this reason, this research analyses distorted beliefs about gender roles, misogyny and IPV in a sample of trainee teachers from Spain and Latin America.
The results of the individual analysis of distorted beliefs indicate that beliefs related to misogyny are the most widely rejected by men and women in all countries, which may be due to the explicit way in which these beliefs subordinate women and exalt male dominance. These results reveal that most trainee teachers reject the fact that women are inferior to men and should be subordinated to them in their relationships. However, in general, distorted beliefs about IPVAW have higher percentages of agreement than those related to women’s inferiority. In this regard, as shown by other research (Ferrer et al., 2006, Ferrer, Bosch, & Ramis, 2008, Ubillos et al., 2017), special attention should be paid to beliefs that legitimise and minimise IPVAW, blame the women who suffer it, exonerate male aggressors and accept violence as a strategy for conflict resolution. These beliefs, which are often not as explicit as misogyny, may generate less social rejection among the population, making it difficult to eliminate IPVAW. Therefore, if violence is to be prevented, false beliefs or myths that distort understanding of the problem and make it difficult to understand must be addressed (Bosch-Fiol & Ferrer-Pérez, 2012).

In a study of 646 university students in Ecuador, Boira et al. (2017) found that men scored higher than women for hostile sexism and distorted beliefs about the use of violence. Similarly, but in a study of the adolescent population, Ubillos et al. (2017) found that in different age groups, men had significantly more cognitive distortions about misogyny and IPVAW than women. In line with this research, the results of the present study report some influence of sex on the acceptance of distorted beliefs. For example, men in Spain, Argentina, and Mexico agree significantly more than women that "On many occasions, men mistreat their partners because their partners annoy the men", a belief that blames women victims of IPVAW. Men in Chile and Mexico consider, to a greater extent than women, that "What happens within a family only concerns the family, a belief that depicts IPVAW as a domestic issue rather than a social problem. Therefore, if beliefs and attitudes about IPVAW play an important role in structuring social environments (Ferrer-Pérez & Bosch-Fiol, 2014), identifying cognitive distortions in teachers, especially men, can guide teacher training programmes, making schools environments capable of identifying and preventing IPVAW.

Furthermore, in a study of 1800 participants from the general Spanish population and 50 men convicted of IPVAW, Martín-Fernández et al. (2018) found that men in the general population had higher levels of acceptability of IPVAW than women and lower levels than male offenders. Similarly, Martín-Fernández et al. (2018) reported that men in the general population tended to have higher levels of victim-blaming attitudes towards IPVAW than women. Ferrer-Pérez et al. (2019) used two different samples of university students to conduct a comparative study of beliefs about IPVAW at two time points (2006 and 2018), finding that women presented lower levels of cognitive distortions than men in both periods. In the present research, men, compared to women, tend to present a higher score in the IPDMUV-R. The differences are significant or marginally significant in Mexico and Spain, but are not so significant in El Salvador, Chile, and Argentina. In the sample of trainee teachers in Colombia, as we previously published (Bouilla-Algovia & Rivas-Rivero, 2019), men scored significantly higher on the IPDMUV-R than women, which means that men presented more cognitive distortions about gender roles and the IPVAW. Likewise, as the results of the classification model show, the sex variable significantly explains the scores of above four cognitive distortions in the Chile-Mexico and Spain-Argentina nodes. Consequently, as Ferrer-Pérez and Bosch-Fiol (2014) explain, attention must be paid to gender gaps in beliefs towards IPVAW and these must be taken into account when carrying out interventions.

Finally, in a study conducted in 39 countries, Tran et al. (2016) found that the prevalence of attitudes accepting IPVAW varied among countries, with a higher prevalence of these attitudes in countries with lower human development and higher gender inequality. In the present research, the average number of cognitive distortions on gender roles and IPVAW varies significantly among countries, ranging from 2.56 to 5.48. Trainee teachers from Spain and Argentina tend to have less cognitive biases about misogyny and IPVAW than their counterparts from El Salvador, Colombia, Chile, and Mexico. In this sense, achieving lives free of violence for women around the world is a goal that must be prioritised to ensure an equitable agenda for sustainable development (García-Moreno et al., 2015), and consequently all necessary steps must be taken to prevent violence and discrimination (Michau et al., 2015), especially in countries with higher levels of acceptability of gender roles and IPVAW. Therefore, given that achieving gender equality and eliminating all forms of VAW are part of the 2030 Agenda for Sustainable Development, it must occur without gender gaps and beyond VAW (UN Women, 2018).

This study is not without its limitations, the main one being that the number of participants is uneven across the countries; however, it was guaranteed that the samples were greater than 100 in all countries. Furthermore, unequal sample size does not affect intra-country comparisons, such as the differences between men and women. It should also be noted that the results are not intended to be representative of all countries, but they are rather intended to alert that distorted beliefs about gender roles and IPVAW may be present in trainee teachers, regardless of the cultural background they belong to. Another limitation is the imbalance between the male and female samples. This is because in patriarchal societies, the teaching profession is often feminised due
to the sexual division of labor (Bonilla-Algovia & Rivas-Rivero, 2020). Even so, the present study makes visible the acceptance of cognitive distortions regarding IPVAW and gender roles in future teachers, a little-studied sample that plays a key role in the construction of social norms.

In conclusion, according to the academic literature, the prevention programmes with the best results are those that include the participation of multiple sectors and address the risk factors of violence, such as the beliefs and attitudes that justify VAW, traditional gender norms, etc. (Ellsberg et al., 2015). As a space for socialisation, the education system plays a very important role in achieving these objectives. Schools can become spaces that reproduce traditional gender norms or spaces that develop new egalitarian alternatives. The very conditions of the school make it an ideal place to promote socio-cultural change, to question the beliefs that justify VAW, and to foster healthy and egalitarian relations. Consequently, teacher training programmes must incorporate gender content that allows teachers to reflect critically on their own beliefs and helps them to promote equality from within the schools. The prevention of VAW in general and IPVAW in particular will be easier if education systems have trained teachers who know how to apply a gender perspective to their daily practices.

5. Declaration of interest statement
No potential conflict of interest was reported by the authors.

6. Fundings
This work has been carried out with the support of a Contrato Predoctoral de Formación de Profesorado Universitario de la Universidad de Alcalá.

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