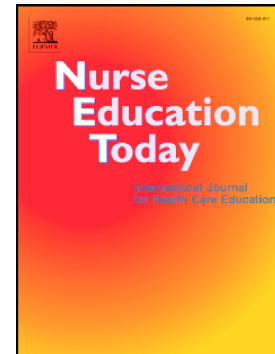


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Scale for the study of nursing students' perception of intimate partner violence: Adaptation and validation

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## TITLE PAGE

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## ABSTRACT

**Background:** Intimate partner violence (IPV) is one of the most important challenges facing today's society. Health professionals, and nurses in particular, play a leading role in addressing this problem. Having an instrument to study Nursing students' perception of this type of violence may enable appropriate and necessary educational strategies for their pre-service training and help them identify and address IPV in their future careers.

**Objectives:** To adapt and validate the IPV scale of Beccaria et al. (2011) in order to study nursing students' perception of IPV.

**Method:** The original instrument (63 items) underwent back-translation. Statistical and metrical analysis in a sample of 1,064 students of the four-year Nursing degree program at four public universities in Catalonia (Spain) were based on their responses to the Spanish version.

**Results:** The results of the exploratory factorial analysis and subsequent confirmatory analysis showed that the data had an adequate fit for a four-factor model. The reliability analysis showed adequate internal consistency for each subscale in the instrument: Education (0.83); Identification of the Victim (0.72); Nursing Role and Values (0.78), and Identification of the Perpetrator (0.66).

### Conclusion

The translation, cultural adaptation and validation process of the original IPV scale resulted in a Spanish-language instrument (IPV scale Spanish version) with 32 items in four subscales. We concluded that the Spanish version of the instrument is reliable and valid, and that its implementation would enable the assessment of nursing students' perception of IPV situations.

### Keywords

Intimate partner violence; nursing students; knowledge; attitudes; validation studies.

## INTRODUCTION

Intimate Partner Violence (IPV), is a major problem in contemporary society. International organisations such as the World Health Organization (WHO, 2013) have focused particular attention on this issue in recent decades, mainly because of its direct implications for women's health and because they consider it a violation of human rights.

Health professionals, and nurses in particular, are in a privileged position to identify and help women victims of IPV, as they often are the first point of contact with the health services in casualty treatment centres, community care centres or specialised services (Arredondo-Provecho et al., 2008; Beccaria et al., 2013, 2011; García et al., 2014; Guruge, 2012; Hughes, 2010; Robinson, 2010). However, studies in this field show that nurses do not always feel able to intervene in the identification of abuse, monitor the process or provide the necessary support in decision-making (Almutairi et al., 2013; Beccaria et al., 2013, 2011; Gutmanis et al., 2007). A lack of knowledge and skills may encourage health professionals to focus exclusively on physical care and neglect to provide comprehensive care. Robinson (2010) and Sundborg et al. (2012), consider one of the key findings in their studies to be the frustration felt by nurses who are unable to provide solutions if they identify situations of IPV in the emergency services, and how this frustration causes in turn leads to a reluctance to engage.

In its 2013 report on Global and Regional Estimates of Violence Against Women, the WHO (2013) states that new clinical and policy guidelines on the health sector response to partner and sexual violence against women emphasise the urgent need to integrate these issues into clinical teaching.

Order CIN/2134/2008 of July 3 (BOE, 2008) was published, covering Nursing studies in Spain according to the implementation of the European Higher Education Area curricula for the Nursing Degree. This Order establishes awareness and identification of the psychological and physical problems resulting from gender-based violence as one of the goals in basic Nursing training, to enable students to prevent, promptly identify, provide treatment and rehabilitate victims of this type of violence.

Given its impact on women's health and quality of life, and taking into account the suggestions by various institutions, the phenomenon of IPV is a key issue for inclusion in the contents of undergraduate courses and in training initiatives aimed at training future professionals. First, however, it is important to determine the students' perceptions of IPV in order to prepare educational interventions to address any knowledge gaps, and this requires access to instruments designed for this purpose. At the University of Southern Queensland (Australia),

Beccaria et al. (2011) carried out an extensive review of literature and developed such a scale for their nursing students, taking into account their educational background, confidence in their ability to identify and support victims and/or aggressors, and understanding of their role as nurses when they confront situations related to this type of violence.

The Australian study used a mixed-methods, but mainly qualitative, design. Qualitative data were gathered from focus groups in which students were presented with five questions related to IPV. Quantitative data were drawn from a Likert-type scale consisting of 63 items distributed across 6 sub-scales, designed from input obtained from a review of literature and discourse analysis of the focus group data. Each item was scored on a 5-point scale from “highly disagree” (1 point) to “highly agree” (5). One of the sub-scales, *Education (E)*, assessed the students’ perceptions of their theoretical and practical knowledge about IPV. Examples of the items on this scale include, “*I have a good knowledge of the effects of partner abuse*” or “*I have good knowledge about the causes of partner abuse*”. Another sub-scale, *Identification of the Victim (IV)*, assessed student perception of the characteristics of women who are victims of IPV with statements such as “*Victims are reluctant to ask for help*” or “*Victims are socially isolated*”. The *Identification of the Perpetrator (IP)* sub-scale contained items such as “*Perpetrators lack insight into their problem*” and “*Perpetrators are most likely affected by drug and alcohol use*”. Items on the *Knowledge of the Causes of Abuse (CA)* subscale included, for example, “*The victim usually does something wrong to cause the abuse*.” The fifth sub-scale, *Self-efficacy (S)*, evaluated the students’ confidence in dealing with IPV in a clinical setting, using statements such as “*I feel confident in being able to support victims in my future nursing practice*”. Finally, *Nursing Roles and Values (NRV)* assessed the students’ perception of the nurse’s role in providing information, care, and contacts with support services to patients in IPV situations. An example of these statements is: “*The nurses’ role is to provide counselling to the victim*”. Based on the results, Beccaria et al. devised a final instrument with 30 items and just 3 sub-scales: *E* (10 items), *S* (6 items), and *NRV* (14 items). The internal consistency of the sub-scales was  $\alpha=0.91$ ,  $\alpha=0.76$ , and  $\alpha=0.68$ , respectively.

We returned to the original 63-item instrument designed by Beccaria et al. (2011) and began our process of translation to Spanish, cultural adaptation to our context in Spain, and validation by a group of student volunteers in the Nursing degree programme at our university.

## METHODS

**Phase 1: Cultural adaptation process of the original scale into Spanish*****Translation and back-translation***

The original instrument (Beccaria et al., 2011) was translated into Spanish to begin the cultural adaptation process. The English version was given to two bilingual translators - a translator of Spanish origin and a lecturer of English philology of English origin, with a strong command of both languages and a knowledge of IPV. They were told that the translation of each of the items should be semantic rather than literal, with conceptual and linguistic equivalence. The translators and members of the research group met to assess the semantic and conceptual aspects. An initial Spanish version of the scale was obtained. This version was back-translated by a third bilingual translator to evaluate the equivalence between the original version and the Spanish version.

The translators and members of the research group met again to assess the translated and back-translated versions, compared with the original version, in order to clarify concepts and produce a consensus version. The consensus version was reviewed by professional experts in IPV and the final version containing the 63 original items, adapted grammatically, linguistically and semantically to the target audience, was drafted. The Spanish version of the scale was called the Intimate Partner Violence Scale (Spanish version).

***Pilot test***

A pilot study was carried out with students in the first two years of the Nursing degree programme of the University of Barcelona (n=102), following International Test Commission guidelines (ITC, 2010). Although a smaller sample would have sufficed to beta-test the scale, it was offered to classes of beginning students and a large number of them were interested in participating, providing enough respondents for a pilot study. The purpose of this preliminary work was to determine the time needed to complete the questionnaire (mean = 15 minutes, as intended) and the usability of the scale. During the pilot testing, there were no questions about items on the scale, suggesting that these were well-formulated and understandable. Furthermore, all but two students completed all items on the questionnaire; each of these students left three items blank, and they differed in the questions they left unanswered. None of the students who assisted with the pilot study participated in the validation study.

## **Phase 2: Validation process of the scale and development of the final version. Statistical and metric analysis**

### ***Participants***

The sample consisted of 1,064 students with a mean age of 22.63 (SD:5.67) enrolled in the first to fourth year of the Nursing degree programme at four public universities in Catalonia (Spain) during the 2012-2013 academic year. Participation was voluntary and anonymous, and informed consent was obtained.

### ***Instrument***

The Spanish version of the IPV scale consisted of two parts. The first part included the sociodemographic variables: age, sex and year group. As in the original study by Beccaria et al. (2011), respondents were subsequently grouped by age: 18 to 25 years old, 25 to 35 years old, and older than 35 years.

The second part included instructions to be followed by the student to complete the Short Form IPV scale (Spanish version), which evaluates the variables for nursing students' perception of this type of violence. It uses a Likert-type response scale with scores ranging from 1 (strongly disagree) to 5 (strongly agree), consisting of 63 items in the form of statements or judgements about which the subjects' degree of agreement is requested. Like the original 63-item Beccaria scale, the original IPV Scale (Spanish version) consisted of six subscales: E (11 items) IV, (14 items), IP (9 items); CA (8 items); S (6 items), and NRV (15 items).

### ***Psychometric testing***

#### ***Content validity***

The Delphi method, enabling a qualitative analysis of the instrument by the opinions of experts, was used. The process was carried out with a group of six expert nurses in the care and teaching fields who participated voluntarily. Each nurse assessed the importance of the scale and the suitability of its constituent items. Once they completed the assessment, the research team examined their opinions and made appropriate modifications; a further assessment was subsequently conducted and the final scale of 63 items was obtained by consensus among the experts. All of the experts considered all of the items essential for inclusion in the questionnaire (Content Validity Index=1) (Lawshe, 1975).

#### ***Construct validity***



The internal structure of the scale (internal or construct validity), was evaluated using Exploratory Factorial Analysis (EFA), applying the Promin oblique rotation method (Lorenzo-Seva, 1999) and Confirmatory Factorial Analysis (CFA).

The factorial structure was confirmed by cross-validation to check the extent to which the model could fit other samples from the same population, as our sample contained (n=1,064) participants, i.e. more than the 800 subjects recommended by the authors (Lévy and Varela, 2006; MacCallum, Roznowski and Necowitz 1992).

### ***Reliability***

The reliability was determined using Cronbach's alpha coefficient ( $\alpha$ ), which is considered acceptable when its values are equal to or greater than 0.70 and less than or equal to 0.90 (Campo-Arias and Oviedo, 2008; Cronbach, 1951; Muñiz, 2003, 1998). Cronbach's alpha coefficient was calculated for each subscale in the scale adapted to Spanish.

### ***Data analysis***

Statistical analysis was performed using SPSS 20.0 software. Version 9.2 of the FACTOR program (Lorenzo-Seva and Ferrando; 2013) was used for the exploratory factorial analysis. Version 6.12 of the Mplus program (Muthén and Muthén, 1998-2011) was used for the confirmatory factorial analysis.

### ***Ethical Considerations***

This research was approved by the Bioethics Committee of the University of Barcelona for the project "Multicenter study of the perception of intimate partner violence among nursing students," of which this study is a part. Permission was obtained from the authors of the original scale (Beccaria et al., 2011) and the participating centres. The principles established in the Declaration of Helsinki (Asociación Médica Mundial, 2013) and Spanish Law 15/1999 on data protection (BOE, 1999) were followed. Prior to the students' participation in the study, they were informed what the participation would involve and the purpose of the research, and provided their signed consent to participate.

## **RESULTS**

## Phase 1

Most of the items were translated without difficulty, maintaining the original format. In the back-translation, two versions were obtained and then compared with the original version to obtain the highest possible degree of conceptual equivalence to the original scale, following the indications of the International Test Commission (2010).

As a result of this process, it was necessary to modify item 9 (*Perpetrators are more likely to come from an Aboriginal background*) in the factor Identification of the Perpetrator (IP), as the original scale was designed for the Australian population, and *Aboriginal* was not appropriate in our context. In Spain, similar stereotypes can be found in references to the immigrant population, especially undocumented populations that may be clearly differentiated from the general population by race, religion, etc. No other changes were made in the 63 items of the original scale.

Items 2 and 5 in the E subscale were analysed in particular depth by the members of the research team and the translators, to assess whether the term *I am aware* had the same meaning and was conceptually suited to the participants in our sample. They concluded that the translation was appropriate and no further amendment was made.

## Phase 2

### *Analysis of validity*

First, the Kaiser-Mayer-Olkin index was calculated, obtaining a score of 0.87, which is considered appropriate for the application of factorial analysis (Kaiser and Rice, 1974). In addition, Bartlett's sphericity test showed that the factorial solution did not reflect relationships due to chance. After confirming that the sample was suitable for analysis at the latent factor level, the CFA of the questionnaire was adjusted to the original 6-factor model, obtaining an insufficient fit ( $\chi^2 = 9582.15$ , g.l. = 1880, CFI = 0.60, TLI = 0.58, RMSEA = 0.06, SRMR = 0.07). As it was not possible to replicate the original factors, we examined the factorial structure of the data by EFA (Table 1).

(Insert Table 1)

Adjusted sample calculations were carried out, which indicated that the data were appropriate for this approach. In addition, we determined how many factors were appropriate for use in our sample. Based on the results obtained from our analysis, which recommended

using between three and eight factors, we carried out the EFA with the six-factor adapted scale proposed by Beccaria et. al. (2011).

After completing the EFA, which recommended a model with four factors, saturation analysis was carried out for each item, based on the criteria proposed by Andreu (2012). As a result, 28 items were eliminated from the original scale at this point in the analysis.

The CFA was carried out using cross-validation because of the availability of a large sample ( $n=1064$ ). The cross-validation results confirmed the appropriateness of the four-factor structure and the need to remove 3 additional items that did not meet the required criteria.

Finally, the CFA of the total sample for the 32-item scale reconfirmed the four-factor structure, obtaining a better-adjusted model that yielded highly significant results in the statistical analysis.

We first analysed the dimensionality using the Parallel Analysis (PA) (Horn, 1965) and Minimum Average Parthia (MAP) (Velicer, 1976) indices. These procedures suggested that the number of factors to be extracted should be between 3 and 8. After the EFA, the saturations of each item in the factors were examined and the most suitable were selected. Based on the criteria established by Vigil-Colet et al., (2012), 28 items were removed from the total of 63 items in the initial scale, leaving 35 items. The cross-validation was then performed. Using a calibration sample of 532 participants that was randomly split in half for cross-validation purposes, the four-factor model was adjusted and three more items were eliminated based on the results, leaving a 32-item scale that fits the 4-factor model appropriately ( $\chi^2 = 1990.61$ , g.ll. = 554, CFI = 0.76, TLI = 0.74, RMSEA = 0.07, SRMR = 0.06). Using the confirmation sample of 532 participants, the structure obtained was replicated according to the resulting indices of goodness of fit ( $\chi^2 = 2623.41$ , g.ll. = 458, CFI = 0.78, TLI = 0.76, RMSEA = 0.06, SRMR = 0.05).

The results obtained indicate that the Short-Form IPV scale (Spanish version) consists of four factors: E (10 items), IV (7 items), IP (5 items) and NRV (10 items). The saturations of the items in the factor concerned are shown in Table 2.

*Insert Table 2*

### ***Analysis of internal consistency***

All four subscales making up the Short-Form IPV scale (Spanish version) had acceptable reliability in the internal consistency analysis (Table 3), although the IP subscale obtained values that can be considered as being at the lower limit of acceptability.

*Insert Table 3*

## DISCUSSION

The objective of this study was to assess psychometric properties of a Spanish version of the Intimate Partner Violence Scale developed by Beccaria et al. (2011), a proxy-rated instrument for assessing the perception of IPV among nursing students. The difficulties with the Spanish translation and cultural adaptation of the scale in our study sample were minimal. For the psychometric analysis, we tested all 63 items for functionality. The authors of the original scale discarded three of their original subscales (IV, IP, CA) because their analysis returned a very low internal reliability, given their small student sample. In our larger sample from a different cultural context, we were able to test the internal reliability and validity of all of the original items.

In our results, we observed some differences from the original findings. Four of the scales were internally consistent (E, IV, IP, and NRV). In our population, neither the S nor CA subscales achieved sufficient reliability and validity. The final Spanish-language version of the Intimate Partner Violence Scale, presented as a 32-item short-form instrument with four subscales, showed that the work done on the translation and adaptation of the instrument was appropriate, as respondents had no difficulties with grammatical or semantic comprehension or with the response system. The time required to complete the scale was also within the intended duration (15 to 20 minutes).

Beccaria et al. recommend using their 30-item short-form with just three subscales (E, S and NRV), based on the reliability analysis of a small sample (n = 27) (2013). One of the objectives of the present study was to analyse the original scale with a much larger sample in order to incorporate a more extensive quantitative analysis, in contrast to the largely qualitative approach of the original study. This resulted in 32 validated items in four subscales, as described above (E, IV, IP, and NRV).

Two of the factors obtained in the present study, E and NRV, conceptually match the original scale, and have similar psychometric properties. The items that make up the E factor match those in the original scale; notably, one item (#11, *"I think that we need to cover more about how to identify and address partner abuse within the nursing curriculum"*) was removed in both the Spanish and the English version. In both cases, this item was considered to be more closely related to a future action than to the students' perceptions about their training at a specific point in time.

In our study, the items that comprise the NRV subscale differed from the original scale in three items: #50, *"The nurse should spend time listening to the victim"*, #51 *"The nurse should provide good physical care to the victim"*, and #52, *"The nurse should provide good emotional care to the victim"*. These items had complex saturations, as they also had significant saturations in the IV subscale, and as such they were eliminated from the Spanish version. It is possible to hypothesize that the result could be explained by a lack of specificity to the role of the professional in providing IPV care. Item 63 (*"Nurses should not make value judgements"*) and item 61 (*"Nurses should refer them to other health professionals such as social workers and psychologists and not get involved"*) were not significantly saturated in any subscale and as such they were also eliminated. The length of item 61 is believed to favour an acquiescent response (Ferrando et al., 2011), which explains the result obtained.

The analysis of the reliability of the scale, performed by means of the internal consistency study using Cronbach's alpha index (Cronbach, 1951), showed acceptable results for each of the subscales in the instrument: rates exceeded 0.70 in three of them and the fourth had a discrete result of 0.66. Because the scale is designed to be able to guide the development of training plans tailored to the group and for research on the perception of IPV, the low reliability of the IP scale is not considered a major threat to its validity. Nonetheless, its results should be interpreted with caution. An increase in the number of items in this subscale is likely to notably improve its reliability indices, an aspect that could be considered in future studies.

We believe that an analysis of all concepts incorporated into the Short-Form IPV scale (Spanish version) constitutes major progress in the training of students and future healthcare professionals. In our opinion, the students' lack of experience and their concern with learning clinical skills sometimes makes it difficult for them to address issues related to a psychosocial perspective and/or one related to mental health. Having the Short-Form IPV scale (Spanish version) and incorporating it into the training of nursing students means that it is possible to analyse much more specific issues related to training and how these situations are addressed in order to identify shortcomings and design training plans tailored to the training needs of each group.

## CONCLUSION

The psychometric properties evaluated in the Spanish version of the IPV scale confirmed the validity and reliability of the 32-item scale with four sub-scales (E, IV, IP and NRV), and obtained good content validity, acceptable internal consistency, and adequate construct

validity. Its application will contribute to further research and the study of nursing students' perception of IPV, in order to carry out training activities aimed at preparing future professionals so that they can deal with this social/health problem more effectively. However, use of the Spanish version of the IPV Scale in Spanish-speaking countries other than Spain should include a country-specific adaptation process, as cultural characteristics could affect the meaning of the items to be analysed.

Meanwhile, gaining a more profound insight into the mechanisms of how IPV affects women's mental and physical health, and simultaneously that of children and the family in general, is a challenge for university Nursing faculty, as addressing these issues during training activities could have an emotional impact on students who are directly or indirectly affected by this problem. Providing timely and valuable information to refocus these situations is part of our role as nurses and of our teaching and mentoring as instructors.

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Table 1. Initial factorial structure of the original six-factor, 63-item scale.

Items	E	IV	IP	CA	S	NRV
1. I have good knowledge about the causes of partner abuse.	<b>0.603</b>	-0.148	-0.053	0.157	0.095	0.045
2. I am aware of community / societal attitudes towards partner abuse.	<b>0.534</b>	-0.210	0.021	0.007	0.105	-0.023
3. I have good knowledge about the nurses' legal responsibilities.	<b>0.633</b>	-0.041	-0.054	0.014	-0.218	0.061
4. I have good knowledge of local support services which may assist a victim or perpetrator.	<b>0.615</b>	-0.076	-0.009	-0.026	-0.159	-0.063
5. I am aware of other health professionals' roles in supporting victims and perpetrators.	<b>0.599</b>	<b>-0.089</b>	<b>-0.013</b>	<b>-0.032</b>	<b>-0.007</b>	<b>-0.149</b>
6. I have good knowledge of the effects of partner abuse.	<b>0.627</b>	<b>-0.192</b>	<b>0.007</b>	<b>0.041</b>	<b>0.121</b>	<b>0.023</b>
7. I have a good beginning knowledge of how to effectively respond to victims and perpetrators.	<b>0.692</b>	<b>0.020</b>	<b>-0.043</b>	<b>0.036</b>	<b>-0.274</b>	<b>0.007</b>
8. I feel confident from my nursing education in addressing partner abuse.	<b>0.674</b>	0.072	-0.016	-0.130	-0.417	0.020
9. I have a beginning understanding of the nurses' role in community interventions to prevent abuse.	<b>0.723</b>	-0.015	-0.035	-0.036	-0.291	0.036
10. I have a good theoretical knowledge of abuse cycles.	<b>0.622</b>	0.059	0.012	0.017	-0.250	-0.027
11. Think that we need to cover more about how to identify and address partner abuse within the nursing curriculum.	0.062	-0.085	0.144	-0.082	0.322	0.138
12. Usually victims are women	0.085	-0.293	<b>0.589</b>	0.103	0.131	-0.096
13. Men can also be victims of abuse	0.109	0.026	-0.085	-0.081	<b>0.316</b>	0.155
14. Victims usually have a weak personality	0.125	<b>0.369</b>	0.278	0.162	-0.013	-0.109
15. Victims are usually not assertive people	0.133	<b>0.399</b>	0.050	0.265	-0.027	0.021
16. Victims are socially isolated	0.167	<b>0.358</b>	0.101	0.124	-0.021	-0.021
17. Sometimes victims don't seek help because they have accepted the situation	0.137	<b>0.462</b>	-0.006	-0.038	0.234	-0.025
18. Victims might feel shame about their problem	0.104	0.265	0.112	-0.130	<b>0.459</b>	0.034
19. Victims may want to keep their problem secret	0.076	0.284	0.110	-0.125	<b>0.434</b>	0.036
20. Victims have learnt to be helpless over time	0.046	<b>0.471</b>	0.114	0.024	0.154	-0.017
21. Victims usually have poor self esteem	0.006	<b>0.502</b>	0.248	0.012	0.114	0.053

Items	E	IV	IP	CA	S	NRV
22. Victims are reluctant to ask for help	0.028	<b>0.456</b>	0.142	-0.008	0.152	0.002
23. Victims have lots of options available to them to leave	0.171	0.080	-0.020	0.268	-0.095	0.063
24. If victims really wanted to leave they could	0.160	0.091	-0.068	0.253	-0.063	0.032
25. Abuse within homosexual relationships is common	0.066	0.060	-0.207	0.220	0.078	0.078
26. A perpetrator is usually male	-0.004	-0.247	<b>0.690</b>	0.182	0.050	-0.118
27. Perpetrators lack self esteem	0.085	0.211	0.145	0.050	0.058	0.057
28. Perpetrators have probably learnt their behaviour from their family	0.121	0.261	0.152	0.154	0.040	0.159
29. Perpetrators lack insight into their problem	0.010	0.227	0.048	0.164	0.042	0.112
30. Perpetrators are most likely affected by drug and alcohol use	-0.018	0.039	<b>0.450</b>	0.267	-0.200	0.043
31. Perpetrators often are physically strong	-0.004	-0.047	<b>0.479</b>	<b>0.309</b>	-0.169	-0.072
32. Perpetrators often don't want to seek help	-0.047	0.139	0.269	-0.133	0.123	-0.016
33. Perpetrators are more likely to have a tattoo	-0.089	-0.009	0.190	<b>0.532</b>	-0.244	-0.044
34. Perpetrators are more likely to come from an Indigenous background	-0.040	-0.079	0.164	<b>0.668</b>	-0.177	-0.017
35. The perpetrator has control over the victim	-0.018	0.161	<b>0.418</b>	-0.117	0.153	-0.008
36. The perpetrator knows how to manipulate the victims response to be most in control and get what they want	0.061	0.239	<b>0.361</b>	-0.210	0.157	0.020
37. Perpetrators are often affected by alcohol and drugs	-0.055	-0.017	<b>0.315</b>	0.127	-0.159	0.011
38. The victim's personality type makes them vulnerable to being abused	0.098	0.346	<b>0.360</b>	0.136	0.047	-0.127
39. Women are more likely to be abused by men who don't like women having more control or being more independent	0.026	0.138	<b>0.422</b>	0.068	0.078	-0.031
40. Women who are dependent on their partner are more likely to become abused	0.050	0.212	0.221	0.152	0.036	0.007

Items	E	IV	IP	CA	S	NRV
41. The victim usually does something wrong to cause the abuse	-0.036	0.065	0.003	<b>0.368</b>	-0.110	-0.065
42. Not respecting or valuing women causes the abuse	0.080	-0.034	0.299	-0.051	0.197	0.018
43. I feel confident in being able to support victims in my future nursing practice.	0.179	-0.065	0.252	-0.152	0.086	0.195
44. I feel confident in being able to support perpetrators in my future nursing practice.	0.060	-0.034	-0.175	0.225	0.088	<b>0.384</b>
45. I am worried about what I might say to the victim.	-0.117	-0.247	-0.050	0.297	<b>0.703</b>	0.042
46. I am worried about what I might say to a perpetrator which could make the situation worse.	-0.077	-0.242	-0.066	<b>0.407</b>	<b>0.826</b>	0.004
47. I am reluctant to get involved in abuse situations. I think that I might avoid these abuse situations	-0.042	0.074	-0.106	0.276	0.004	-0.147
	0.173	-0.059	0.103	0.136	-0.168	0.092
48. Nurses should provide education to the victim.	0.040	-0.027	0.250	0.008	-0.066	<b>0.460</b>
49. Nurses should try and convince the victim that they could have a better life.	-0.024	-0.032	<b>0.354</b>	-0.074	-0.024	<b>0.373</b>
50. The nurse should spend time listening to the victim.	0.033	-0.123	<b>0.424</b>	-0.283	0.124	<b>0.397</b>
51. The nurse should provide good physical care to the victim.	0.005	-0.082	<b>0.403</b>	-0.265	0.121	0.263
52. The nurse should provide good emotional care to the victim.	-0.013	-0.125	<b>0.392</b>	-0.265	0.119	<b>0.399</b>
53. The nurse should link the victim with other support services.	0.016	-0.076	0.261	-0.183	0.146	<b>0.474</b>
54. The nurse should link the perpetrator with other support services.	-0.040	0.038	-0.022	0.115	0.054	<b>0.671</b>
55. The nurses' role is to provide counselling to the victim.	0.009	0.063	0.076	0.084	-0.071	<b>0.763</b>
56. The nurses' role is to provide counselling to the perpetrator.	-0.033	0.122	-0.239	0.288	-0.002	<b>0.832</b>
57. The nurse should identify victims via screening programs.	0.057	0.012	0.201	0.041	0.037	<b>0.459</b>
58. The nurse should identify the victim in their assessment.	0.014	-0.020	0.281	-0.073	0.003	<b>0.483</b>

Items	E	IV	IP	CA	S	NRV
59. The nurse should work with others in the health care team to support the victim.	0.090	-0.080	0.294	-0.195	0.131	<b>0.433</b>
60. The nurse should refer onto other health professionals such as social workers and psychologists and not get involved	-0.018	0.064	0.069	0.158	0.055	-0.110
61. The nurse should inform the victim of their legal rights.	-0.004	-0.012	0.136	0.085	0.012	<b>0.522</b>
62. Nurses need to be non-judgmental.	0.024	-0.019	0.005	0.018	0.274	0.223

**Table 2. Saturations of the items in the factors in the total sample (N = 1,064)**

Items	E	IV	IP	NRV
No. 1 "I know the causes of intimate partner abuse well"	0.48			
No. 2 "I am aware of the attitudes of the community/society towards intimate partner abuse"	0.42			
No. 3 "I am well aware of the legal responsibilities of nurses"	0.61			
No. 4 "I am well aware of the local support services that can deal with the victim or the perpetrator"	0.55			
No. 5 "I am aware of the role of other health professionals in supporting victims and perpetrators"	0.51			
No. 6 "I have good knowledge of the effects of intimate partner abuse"	0.51			
No. 7 "I have good initial knowledge of how to effectively respond to victims and perpetrators"	0.69			
No. 8 "I am confident that because of my training as a nurse that I can handle cases of intimate partner abuse"	0.66			
No. 9 "I have a good basic understanding of the role of the nurse in community intervention to prevent abuse"	0.73			
No. 10 "I have good theoretical knowledge about the cycles of abuse."	0.61			
No. 11 "Victims usually have a weak character"		0.52		
No. 12 "Victims are often unassertive"		0.43		
No. 13 "Victims are socially isolated"		0.41		
No. 14 "Sometimes victims do not seek help because they have accepted the situation"		0.49		
No. 15 "Victims have learned to be helpless over time"		0.59		
No. 16 "Victims usually have low self-esteem"		0.67		
No. 17 "Victims are reluctant to ask for help"		0.55		
No. 18 "The perpetrator is usually a man"			0.37	
No. 19 "The perpetrator has control over the victim"			0.70	
No. 20 "The perpetrator knows how to manipulate the victim's responses to have control and get what he wants"			0.73	
No. 21 "The victims' personality type makes them vulnerable to abuse"			0.46	
No. 22 "Women are often abused by men who do not like women to have more control or to be more independent"			0.44	
No. 23 "Nurses must educate victims"				0.53
No. 24 "Nurse(s) should try to convince the victim that they can have a better life"				0.49
No. 25 "The nurse should put the victim in touch with other support services"				0.65
No. 26 "The nurse should put the perpetrator in touch with other support services"				0.55
No. 27 "The role of the nurse is to give advice to the victim"				0.71
No. 28 "The role of the nurse is to give advice to the perpetrator"				0.54
No. 29 "The nurse must identify victims through screening programs"				0.62
No. 30 "The nurse must identify the victim in their assessment"				0.65
No. 31 "The nurse should work with others in the healthcare team to support the victim"				0.66
No. 32 "The nurse should inform the victim of their legal rights"				0.57

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**Table 3. Factors, number of items, range and internal consistency of the final PIPV-NS scale**

Scale	Number of items	Score range	Internal consistency
Education	10 items	10 to 50 points. The higher the score, the higher the level of education.	$\alpha = 0.83$
Identification of the Victim	7 items	7 to 35 points. The higher the score, the greater the perception of identification of the characteristics of the victim.	$\alpha = 0.72$
Identification of the Perpetrator	5 items	5 to 25 points. The higher the score, the greater the perception of identification of the characteristics of the perpetrator.	$\alpha = 0.66$
Nursing Role and Values	10 items	14 to 70 points. The higher the score, the greater the perception of the role of nursing in IPV.	$\alpha = 0.78$



**Highlights**

The Spanish version of the instrument PIPV-NS is reliable and valid

PIPV-NS' implementation would enable nursing students' perception of IPV to be studied

Age, sex and year group are related in each subscale of PIPV-NS

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