

## Adaptation of the Intimate Partner Violence Attitudes Scale to Colombian Culture and Colombian Spanish

Orlando Garay-Quevedo<sup>1</sup>, José-Luis Padilla<sup>2</sup>, Inmaculada Valor<sup>2</sup>, and Angélica Guillén<sup>3</sup>

<sup>1</sup> Corporación Universitaria Iberoamericana, <sup>2</sup> Universidad de Granada, and <sup>3</sup> Corporación Universitaria Minuto de Dios

### Abstract

**Background:** Violence against women has been classified as a worldwide public health problem. There are no assessment instruments of attitudes toward violence in couples adapted to the culture and the Spanish spoken in Colombia. The aim of the study is to adapt the Intimate Partner Violence Attitude Scales (IPVAS) and obtain validity evidence. **Method:** Two studies were carried out. Study 1 integrates expert appraisal evidence of content validity with psychometrics of the internal structure and evidence of the relationships between IPVAS measures and theoretically related variables by analyzing responses from a sample of the general population. Using a cross-validation approach, a confirmatory factor analysis was performed in study 2 to test the factor structure proposed in study 1. In addition, evidence of relationships with other variables was provided by analyzing data from another general population sample. **Results:** The results from study 2 support a two-dimensional structure with Abuse and Violence subscales for the Colombian IPVAS. **Conclusions:** A partial construct overlap was found between the original IPVAS and the Colombian IPVAS adapted to the culture and the Spanish spoken in Colombia.

**Keywords:** Attitudes toward partner violence; Colombian IPVAS; psychometric properties.

### Resumen

**Adaptación de la Intimate Partner Violence Attitudes Scale (IPVAS) a la Cultura y Uso del Español en Colombia. Antecedentes:** la violencia contra la mujer ha sido catalogada como un problema mundial de salud pública. No hay instrumentos de evaluación de las actitudes hacia la violencia en las relaciones de pareja adaptados a la cultura y uso del español en Colombia. El objetivo del estudio es adaptar y obtener evidencias de validez de la Intimate Partner Violence Scales (IPVAS). **Método:** el estudio 1 integra el juicio de expertos con el análisis psicométrico de la estructura interna y de las relaciones con otras variables teóricamente relacionadas. A través de una validación cruzada, el estudio 2 consistió en un análisis factorial confirmatorio sobre la estructura interna de la versión colombiana de la IPVAS propuesta en el estudio 1, y la obtención de evidencias de las relaciones entre las medidas de la IPVAS con variables teóricamente relacionadas con otra muestra independiente de población general. **Resultados:** los resultados de ambos estudios apoyan la propuesta de una estructura bi-dimensional con las subescalas de Violencia y Abuso para la versión colombiana de la IPVAS. **Conclusiones:** los resultados señalan un solapamiento parcial del constructo medido por la IPVAS entre la versión original y la versión adaptada a la cultura y uso del español en Colombia.

**Palabras clave:** actitudes violencia de pareja, versión colombiana de la IPVAS, evidencias de validez.

Violence against women is arguably the most prevalent violation of human rights on a global scale (Valor-Segura et al., 2018). During 2017, 50072 cases of physical aggression in couples were reported in Colombia (Instituto Colombiano de Medicina Legal y Ciencias Forenses, [ICMLCF], 2018). In Spain, a prevalence of 24.8% was estimated with a sample of 10322 women (Ruiz-Pérez et al., 2017). These studies only reported cases of physical aggression, excluding other manifestations of Intimate Partner Violence (IPV). Psychological violence is the most recurrent form of violence in couples (Hébert et al., 2017). Rey-Anacona et al. (2010) found that 87.9% participants in a sample of 562 Colombian students had admitted to at least one form of abusive behavior, with

psychological abuse being the most frequent followed by physical and sexual abuse, both by men and women.

Various studies have examined the consequences of violence on women's physical and mental health, such as depression, suicidal thoughts, insomnia, somatic symptoms, among others (Amor et al., 2002; Honda et al., 2018; Kiecolt-Glaser & Wilson, 2017). Psychological violence is widespread and has especially harmful consequences for victims because it is often more difficult to cope with than other forms of violence (Marqués-Fagundes et al., 2015).

Intimate Partner Violence (IPV) has been linked to the persistence of favorable attitudes towards the phenomenon (Morrison et al., 2018). Several studies indicate that legitimizing attitudes of IPV can play a role in its appearance (Khan & Islam, 2018; Toplu et al., 2017). Attitudes toward IPV denote the degree of acceptance of violence against partners under various circumstances (Copp et al., 2016; Gracia et al., 2017).

The need for assessment instruments of attitudes toward violence in couples has led to the development of different scales, namely the Acceptance of Couple Violence scale (ACV; Foshee et al., 1996),

Scale of Attitudes about Aggression in Dating Situations (AADS; Slep et al., 2001; adapted to the Spanish population by Muñoz-Rivas et al., 2011), Attitudinal Acceptance of Intimate Partner Violence (AAIPV; Valdez et al., 2012), and the Intimate Partner Violence Attitude Scale (IPVAS; Smith et al., 2005). The fundamental difference between the first three instruments and the IPVAS is that the former only assess attitudes towards physical aggression, without covering other forms of violence such as control and abuse.

The IPVAS aims to assess attitudes toward violent behaviors in the context of couple relationships. It measures three dimensions of intimate partner violence: *Abuse*, acts of denigration based on recurring criticisms, threats and verbal aggressions (O'Leary, 1999); *Control*, social control behaviors like constant monitoring and isolation of a partner; and *Physical Violence*, which includes physical threats or actual physical abuse (Mandal & Hindin, 2013; Smith et al., 2005).

Previous studies have analyzed psychometric properties of the IPVAS. Fincham et al., (2008) relied on a larger sample than Smith et al. (2005) and obtained a similar factor structure that the original version. McDermott and López (2013) confirmed the expected relationships between IPVAS measurements and theoretically related constructs, including attachment to traditional gender roles and types of attachment (anxious attachment among others). Partner dependence has been also associated with attitudes toward IPV (Valor-Segura et al., 2014). A revised version of the IPVAS (Fincham et al., 2008) has been applied in studies aimed at reducing aggression in couples (Pond et al., 2012). The IPVAS have also been adapted to other languages and cultures, including an Arabic version applied in Jordan showing acceptable reliability indices (Alzoubi & Ali, 2018), and a Turkish version (Toplu et al., 2017).

The adaptation of tests and questionnaires to different linguistic and cultural groups generally should follow the International Test Commission Guidelines for Translating and Adapting Tests (International Test Commission [ITC], 2017). Abundant bibliography is also available on the relevant cultural and linguistic aspects, especially when there are clear cultural differences between the source culture and language for which the original instrument was developed and the culture and language of the target population (Gómez-Benito et al., 2018). For example, it has been shown that in North America the incidence of IPV is lower than in Andean Latin America, and there are known differences in values and attitudes toward IPV (Devries et al., 2013). The adaptation process could also benefit of the integration of qualitative and quantitative methods (Padilla et al., 2018). The aim of this study is to adapt and provide validity evidence for the Colombian version of the Intimate Partner Violence Attitude Scales (IPVAS; Smith et al., 2005), taking into account possible cultural differences when developing the adapted version to the culture and Spanish spoken in Colombia.

## STUDY 1

The aim of Study 1 was twofold: a) to obtain evidence of content validity for the translated version of IPVAS; and b) to provide evidence of internal structure of Colombia IPVAS measures.

### Method

#### Participants

The total sample for this research was composed by 1,015 participants. From those, 350 participants were randomly selected

for performing psychometrics in study 1. Participants' ages were between 18 and 61 years. Women represent 65.1% of the sample with a mean age of 28.27 years ( $SD = 9.32$ ), while men had a mean age of 28.38 years ( $SD = 8.67$ ). No significant differences were found in age by sex ( $t = .11$ ;  $p > 0.05$ ). 69.4% of the sample were in a relationship, with a duration between 1 and 480 months ( $M = 54.53$ ,  $SD = 69.67$ ). 47.4% of the participants lived with their current partner. Regarding the socio-economical levels, 42.4% of the participants belong to a low level, 54.9, to a medium level and 2.7 to a high level, according to Colombian standards. Participants were parents attending schooling programs at Bogotá public schools, health preventions programs, and cultural events in various Colombian municipalities.

#### Instruments

*Conflict Tactics Scales-2* (Straus et al., 1996; Spanish adaptation by Loinaz et al., 2012). CTS-2 consists of 78 items (or 39 double items), one for each partner. Items address the ways couples resolve conflicts (through agreement or forms of aggression). Respondents estimate the frequency they have performed each of the behaviors described by each item, and the frequency that the partner has performed the same behavior. The CTS-2 contains five subscales, also divided into two subscales. The *Negotiation* subscale is divided into *Cognitive* and *Emotional* subscales, and the remaining four subscales into *Victimization* and *Aggression*, with latter ones subdivided into *Minor* or *Severe*. Internal consistency of the original version of CTS-2 ranges from .76 to .95 alpha values across subscales. Alpha values in this study ranges from .68 to .88.

*Spouse Specific Dependency Scale* (Rathus & O'Leary, 1997; Spanish adaptation by Valor-Segura et al., 2009). The SSDS consists of 17 items in Likert format with six categories of responses ranging from 1 (*Strongly disagree*) to 6 (*Strongly agree*). It consists of three similar subscales for men and women (*Anxious Attachment*, *Exclusive Dependence*, and *Emotional Dependence*). Alpha values of the Spanish version varies between .79 and .80 depending on the subscale (Valor-Segura et al., 2009). In the present study alpha values ranged between .57 and .78.

*Intimate Partner Violence Attitude Scales* (Smith et al., 2005). The IPVAS include 23 items in a Likert response format with five response categories ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). High scores denote favorable attitudes toward the use of violence in relationships. Smith et al. (2005) obtained alpha coefficient values for subscales ranging between .69 and .81, and results confirmed the expected dimensionality.

Translation and adaptation of the IPVAS followed the ITC guidelines (ITC, 2017; Muñoz et al., 2013) using a backward translation design. Forward translation was performed by a team consisting of a Colombian professional translator, an expert on gender violence, and a methodologist, both professors in Spanish universities. A different translation team with similar professional profiles performed the backward translation. The comparison of the two English versions performed "by committee" revealed the need to change item stems of nine items to reflect better nuances of the Spanish-spoken in Colombia. For example, item 9 originally read in the source English version as "My partner is egotistical, so I think it's okay to "put down" my partner's looks", was directly translated as "*Mi pareja es vanidoso/a, por lo tanto, yo creo que está bien hecho 'hablar mal' sobre la reputación de él/ella*". During the committee, item 9 became "*Mi pareja es creído/a, por lo tanto, creo que está bien ponerle en su sitio*", for the target version.

*Sociodemographic data.* A set of questions provided information on sex, age, current relationship status, and duration of relationship in months at the time of interviewing.

#### *Procedure*

After informing the participants of the study objectives, they were given informed consent forms to sign. The ethics committee of the University of Granada (Spain) approved the project. Participants completed the questionnaires in presence of the researcher.

#### *Data analysis*

To assess agreement among experts, the Content Validity Ratio (CVR'; Tristán-López, 2008), and Content Validity Index (CVI) were calculated for each item. The minimum acceptable value for the two indices is .58 (Lawshe, in Tristán-López, 2008). Principal axis factorization was performed as the extraction method along with an Oblimin rotation. In addition to descriptive statistics for item responses, corrected item-total correlations, the Cronbach's Alpha coefficient, and McDonald's Omega coefficient, were calculated. Statistical analyses were carried out using SPSS v24 and Rstudio.

## Results

#### *Evidence of content validity*

To obtain evidence of construct representation and relevance for the translated IPVAS items, we performed an expert-appraisal method. We recruited nine Colombian professional members of governmental bureaus in charge of assisting victims of partner violence. Psychologists, social workers, and lawyers formed the group. Years of professional experience in dealing with gender violence victims range from 1 to 17 years. The definitions for *Partner Violence* and *Attitudes towards Intimate Partner Violence* were presented to the experts, along with the IPVAS definitions of the *Control*, *Abuse* and *Violence* dimensions. The role of the experts was twofold. The first was to classify each item into one of the three subscales of the original IPVAS (see Table 1).

Items 5 and 12 (*Abuse* subscale) were classified by all experts into the *Control* subscale, whose items 3 and 11 were classified into the *Abuse* and *Violence* subscales respectively. The remaining four items of the *Abuse* scale were correctly classified by all experts. Regarding the *Violence* subscale, both items 10 and 18 were not classified as expected, with the former placed in the *Abuse* and *Control* subscales and item 18 classified into all three categories. These results suggest possible problems regarding the appropriateness of the IPVAS original dimensions for the Colombian cultural context.

The second task by the experts was to evaluate the representativeness, cultural relevance and clarity in writing of each item on a scale from 1 to 4. Experts were given definitions of representativeness (the degree to which the item reflects a behavior indicative of attitudes towards IPV), clarity in writing (adequacy of grammar and lexicon to the general Colombian population), and cultural relevance (the degree to which the item reflects behaviors indicative of attitudes toward IPV in Colombia). Table 1 shows CVR' and CVI estimates for each item characteristics.

CVI index values are high for all evaluated items. CVR' is above .58 for all items across all dimensions, except for item 19 that was not recognized by the experts as representative of the *Intimate Partner Violence* construct. The experts' assessment happened despite all of them classifying the item into the *Control* subscale, which can thus be interpreted as the control behavior expressed by item 19 is a weak indicator of attitudes toward IPV in the Colombian culture. Furthermore, the *Control* subscale (.78) has a lower *Content Validity Index (CVI)* than the other two subscales (.85 and .87) regarding the representativeness and clarity in writing of their constituent items. On the other hand, the *Violence* subscale exhibits the lowest CVI in Relevance (.82) but the highest values in the two other categories (.87 and .96).

#### *Validity evidence of the internal structure*

Exploratory Factor Analysis (EFA) was performed on the 23 items. The Kaiser-Meyer-Olkin (*KMO*) adequacy measure and Bartlett's sphericity test ensured the suitability of data for factor analysis ( $KMO = .87$ ;  $\chi^2(136) = 4988.46$ ;  $p < .001$ ). *Parallel Analysis* (Horn, 1965) indicated that three factors exceeding the proposed eigenvalue of 1.19 and cumulatively explaining 39.2% of the extracted variance (Table 4).

Table 2 shows factor loadings for the IPVAS items. Factor analysis showed that items can be grouped into three factors. Factor 1 includes items 10, 17, 18, 20 and 23 from the *Violence* subscale, two items (5 and 7) from the *Abuse* subscale and items 11 and 13 from the *Control* subscale. It should be noticed items 5 and 11 were not classified by any expert into their original subscales.

Factor 2 incorporates most items from the *Abuse* subscale, such as items 6, 12, 14, 15, 21 and 22, in addition to item 16 from the *Control* subscale. Factor 3 includes items 1 and 2 from the *Abuse* subscale as well as item 3 from the *Abuse* subscale. Items 4, 8, 9 and 13 showed factor loadings below .4 and were therefore excluded. Factor 3 includes items 1 and 2 from the *Abuse* subscale and item 3 from the *Control* subscale.

#### *Item analysis and internal consistency*

Table 3 show item analysis and internal consistency results. Coefficients for the *Abuse* and *Violence* subscales are adequate, but not for the *Control* subscale since Alpha and Omega values are .50 or lower. For the *Abuse* subscale, item 8 shows low discriminative capacity, and accordingly its exclusion increases internal consistency indexes. Items 7 and 9 also shows low item-total correlations, but their exclusion does not affect internal consistency. The *Control* subscale shows low internal consistency not improved by the exclusion of any item, with item 19 exhibiting the lowest total-item correlation. Finally, the *Violence* subscale shows high internal consistency.

#### *Integration of expert appraisals and psychometrics*

Integration of item analysis results and expert judgments led removing item 5, 7, 8, and 9 (*Abuse* subscale), as well as item 3 and 19 (*Control* subscale) for further analyses. Expert appraisal also revealed difficulty in classifying items 7, 8 and 9 into a single subscale: some experts evaluated items 8 and 9 as belonging to the *Control* subscale, while item 7 was classified into all three subscales. Item 3 was classified in the *Abuse* subscale and showed a low discrimination. Although item 19 was correctly classified by

<b>Table 1</b>						
Proportion of matches between classification of items into each IPVAS subscale, CVR' and CVI values for item characteristics						
<b>Abuse subscale items</b>	<b>Abuse</b>	<b>Control</b>	<b>Violence</b>	<b>CVR' Representativeness</b>	<b>CVR' Clarity</b>	<b>CVR' Relevance</b>
1. Amenazar a la pareja está bien siempre y cuando yo no le hiera ( <i>Threatening a partner is okay as long as I don't hurt him or her</i> )	100%			1.00	.89	.89
2. Pienso que ayuda en nuestra relación poner a mi pareja celoso/a ( <i>think it helps our relationship for me to make my partner jealous</i> )	89%	11%		1.00	1.00	1.00
5. No es correcto insultar a mi pareja delante de otros ( <i>It is not appropriate to insult my partner in front of others</i> )		100%		.67	.78	.78
6. Para mí está bien culpar a mi pareja cuando yo hago las cosas mal ( <i>It is okay for me to blame my partner when I do bad things</i> )	78%	11%	11%	.67	.78	1.00
7. Para mí no es aceptable que mi pareja saque un tema del pasado para herirme ( <i>It is not acceptable for my partner to bring up something from the past to hurt me</i> )	78%	11%	11%	.89	.89	1.00
8. No me importa que mi pareja haga algo solamente para ponerme celoso/a ( <i>I don't mind my partner doing something just to make me jealous</i> )	87%	13%		.89	.89	.89
9. Mi pareja es creído/a, por lo tanto, creo que está bien "bajarle los humos" ( <i>My partner is egotistical, so I think it's okay to "put down" my partner's looks</i> )	87%	13%		.67	.89	.78
12. Durante una discusión acalorada, para mí está bien sacar un tema relacionado con el pasado de mi pareja para lastimarlo ( <i>During a heated argument, it is okay for me to bring up something from my partner's past to hurt him or her</i> )		100%		1.00	.89	.89
14. No es importante si mi pareja me insulta delante de otros ( <i>It is no big deal if my partner insults me in front of others</i> )	89%	11%		.78	1.00	.89
15. Siempre y cuando mi pareja no me lastime, "las amenazas" son perdonables ( <i>As long as my partner doesn't hurt me, "threats" are excused</i> )	89%	11%		1.00	1.00	1.00
21. No hay nada malo en que mi pareja me culpe cuando hace las cosas mal ( <i>It is okay for me to accept blame for my partner doing bad things</i> )	89%			.78	.89	.89
22. Durante una discusión acalorada, está bien decir algo a propósito para lastimar a mi pareja ( <i>During a heated argument, it is okay for me to say something to hurt my partner on purpose</i> )	89%		11%	.89	1.00	1.00
			<i>CVI</i>	.85	.91	.92
<b>Control subscale items</b>	<b>Abuse</b>	<b>Control</b>	<b>Violence</b>	<b>CVR' Representativeness</b>	<b>CVR' Clarity</b>	<b>CVR' Relevance</b>
3. Me sentiría halagado si mi pareja me dijera que no hablara con alguien del sexo opuesto ( <i>I would be flattered if my partner told me not to talk to someone of the opposite sex</i> )	89%	11%		.67	.89	1.00
4. No me gustaría que mi pareja me pregunte por lo que hago cada minuto del día ( <i>I would not like for my partner to ask me what I did every minute of the day</i> )		100%		.89	.89	.89
11. No estaría con una pareja que tratara de impedirme que haga cosas con otras personas ( <i>I would not stay with a partner who tried to keep me from doing things with other people</i> )	11%		89%	.78	.78	1.00
13. Nunca trataría de impedir que mi pareja haga cosas con otras personas ( <i>I would never try to keep my partner from doing things with other people</i> )		100%		.78	.89	.78
16. Está bien decirle a mi pareja que no hable con alguien del sexo opuesto ( <i>It is okay for me to tell my partner not to talk to someone of the opposite sex</i> )		100%		.78	1.00	1.00
19. Mi pareja debería contarme con detalle lo que hizo durante el día ( <i>I think my partner should give me a detailed account of what he or she did during the day</i> )		100%		.56	.78	.89
			<i>CVI</i>	.78	.87	.93
<b>Violence subscale items</b>	<b>Abuse</b>	<b>Control</b>	<b>Violence</b>	<b>CVR' Representativeness</b>	<b>CVR' Clarity</b>	<b>CVR' Relevance</b>
10. Nunca es correcto usar un cuchillo o un arma contra la pareja ( <i>Using a knife or gun on a partner is never appropriate</i> )	56%	44%		.78	1.00	.89
17. Nunca es correcto amenazar la pareja con un cuchillo o con un arma ( <i>Threatening a partner with a knife or gun is never appropriate</i> )			100%	1.00	1.00	.89
18. Está mal romper algo que le pertenezca a mi pareja ( <i>I think it is wrong to ever damage anything that belongs to my partner</i> )	44%	11%	44%	.89	.89	.78
20. Nunca sería correcto patear, morder, o golpear con el puño a la pareja ( <i>It would not be appropriate to ever kick, bite, or hit a partner with one's fist</i> )			100%	.89	1.00	.89
23. Nunca sería correcto golpear o intentar golpear a la pareja con un objeto ( <i>It would never be appropriate to hit or try to hit one's partner with an object</i> )			100%	.78	.89	.67
			<i>CVI</i>	.87	.96	.82
			<i>CVI Total IPVAS</i>	0.84	.91	.90

Table 2  
Factor Analysis of the IPVAS items

Item	Factor		
	1	2	3
1			.57
2		.32	.64
3		.32	.43
4			
5	.67		
6		.49	
7	.49		
8			
9			
10	.79		
11	.68		
12		.52	
13			
14		.48	
15		.48	
16		.50	
17	.83		
18	.65		
19		.32	
20	.79		
21		.57	
22		.64	
23	.72		
Variance (%)	23.11	12.93	3.16
Eigenvalue	4.42	2.81	1.14
Cronbach's $\alpha$	.88	.74	.65
McDonald's $\omega$	.89	.75	.65

all experts, CVR of the Representativeness category was below the cut-off point and showed an inadequate item discrimination, being thus excluded too.

At the end, a target version of IPVAS consisting only of the factors *Abuse* (items 6, 12, 14, 15, 21 and 22) and *Violence* (items 10, 17, 18, 20, and 23) is proposed. Together with internal structure evidence, that decision was based on solid evidence obtained by the expert appraisal methods and psychometrics: factor 3 shows the lowest internal consistency, the *Control* subscale exhibits the lowest CVI values in two of the three categories used in the expert appraisal, and that its original items do not clear group into any of the factors.

Table 4 shows psychometrics for the proposed version of the Colombian IPVAS along with descriptive statistics for IPVAS the two remaining subscales: *Abuse* ( $M = 11.10$ ;  $SD = 4.35$ ), and *Violence* ( $M = 15.05$ ;  $SD = 7.23$ ). Total mean score for all subscales was 26.14 ( $SD = 7.88$ ). In addition, the percentage of variance were 33.5 for *Violence* scale, 21.64 for *Abuse* scale, and 55.18 for the whole scale.

Results show that men present more favorable or justifying attitudes toward intimate partner violence, except for the *Violence*

Table 3  
Analysis of IPVAS items and internal consistency (n=350)

Item	Mean	SD	r IT-c	When item is excluded	
				Cronbach's $\alpha$	McDonald's $\omega$
Abuse					
1	1.56	0.97	.36	.61	.68
2	1.83	1.07	.46	.59	.67
5	2.37	1.65	.24	.63	.71
6	1.66	1.01	.45	.59	.67
7	2.68	1.57	.18	.64	.71
8	3.32	1.39	-.21	.71	.75
9	2.52	1.30	.14	.65	.71
12	1.91	1.17	.40	.60	.68
14	1.58	1.10	.39	.60	.68
15	1.74	1.13	.40	.60	.68
21	1.76	1.13	.47	.59	.67
22	1.77	1.08	.48	.59	.66
Cronbach's $\alpha$	.64				
McDonald's $\omega$	.71				
Control					
3	1.78	1.07	.24	.46	.48
4	2.78	1.42	.21	.48	.50
11	2.47	1.50	.33	.40	.45
13	2.77	1.45	.32	.41	.45
16	1.85	1.16	.26	.45	.45
19	2.42	1.23	.18	.49	.50
Cronbach's $\alpha$	.49				
McDonald's $\omega$	.50				
Violence					
10	2.37	1.70	.72	.87	.87
17	2.26	1.66	.78	.85	.85
18	2.37	1.58	.65	.88	.88
20	2.32	1.63	.77	.85	.86
23	2.33	1.67	.72	.87	.87
Cronbach's $\alpha$	.89				
McDonald's $\omega$	.89				

subscale where no significant differences were found (see Table 4). The effect size indicates that differences between men and women in the total IPVAS and in the *Abuse* and *Control* subscales are small (Cohen, 1988).

#### Evidence of validity of relationships with other variables

Evidence of possible relationships of Colombian IPVAS scores with SSDS and CTS-2 scores was then analyzed with the underlying rationale that more favorable attitudes towards partner violence would be associated with higher levels of dependence and higher levels of aggression and victimization in couples. Table 5 shows that total IPVAS subscales scores correlates with *Exclusive Dependence* measures. *Abuse* subscale scores were positively associated with *Anxious Attachment* and *Exclusive Dependence* scores. Finally, positive attitudes towards physical violence were also associated with emotional dependence.

STUDY 2

*Table 4*  
Comparison of IPVAS scores by sex and reliability coefficients of the remaining items

	M	SD	t	d	α	ω	# items
<i>Total IPVAS</i>							
Man	26.81	8.06					
Woman	25.91	7.61	-.17	n.s	.70	.72	11
<i>Abuse</i>							
Man	12.10	4.76					
Woman	10.53	4.01	3.10**	.36	.73	.74	6
<i>Violence</i>							
Man	13.88	7.00					
Woman	15.58	7.30	-2.10*	.23	.89	.89	5

\* p < .05; \*\* p < .01; \*\*\* p < .001

*Table 5*  
Correlations between IPVAS, SSDS and CTS-2 subscales

SSDS subscales	Mean (SD)	Violence	Abuse	Total IPVAS
Emotional dependence	22.92 (6.98)	.11*	.07	.07
Anxious attachment	14.91 (5.66)	.10	.27***	.06
Exclusive dependence	15.28 (5.60)	.07	.26***	.21**
<i>CTS-2 negotiation subscales</i>				
Practiced negotiation-emotional	35.24 (23.17)	.05	.02	.06
Practiced negotiation-cognitive	31.09 (21.90)	.04	.00	.03
Received negotiation-emotional	15.36 (11.88)	.09	-.01	.08
Received negotiation-cognitive	5.74 (8.36)	.06	.00	.06
<i>CTS-2 aggression subscales</i>				
Type of practiced aggression				
Psychological	20.11 (28.32)	.09	.28***	.24***
Physical	14.65 (35.26)	.03	.36***	.23***
Sexual	8.17 (21.52)	.03	.35***	.22***
Damage	5.22 (16.21)	.003	.34***	.19***
Type of received aggression				
Psychological	10.94 (23.19)	.04	.34***	.22***
Physical	25.09 (31.23)	-.01	.32***	.21***
Sexual	26.46 (22.94)	.01	.14*	.07
Damage	18.81 (16.76)	.04	.18***	.10

\* p < .05; \*\* p < .01; \*\*\* p < .001

Correlations were also found between *Abuse* scores and the subscales *Physical Assault*, and *Psychological Aggression* of the CTS-2. Both the *Abuse* subscale and total IPVAS correlate with all the being victim of psychological aggression. On the other hand, the *Violence* subscale did not correlate with any of the other variables.

No relationship was found between IPVAS subscales and CTS-2 negotiation subscales, implying that favorable attitudes toward violence against a partner do not relate to producing or being subject to a non-violent strategy to resolve conflicts in the couple. This “unexpected” result may indicate that attitudes toward intimate partner violence do not relate to the ability to adequately resolve conflicts at least in the sample of Colombia participants.

The main aim of Study 2 was to cross-validate results of Study 1. The objective of Stud 2 was to examine the factor structure of the original 23 items version of the IPVAS, and the internal structure for the Study 1 resulting IPVAS version of 11 items by performing confirmatory factor analyses (CFA).

Method

Participants

This study was carried out with the second randomly conformed sub-sample of 665 participants who were aged between 18 and 66 years. Women represent 67.1% of the sample with a mean age of 27.83 years (SD = 9.10), while men show a mean age of 28.98 years (SD = 9.67). No significant differences were found in age by sex (t = .15; p > 0.05). 71.16 % of the sample were in a relationship, with a duration between 1 and 396 months (M = 58.29, SD = 75.96). 47.4% of the participants lived with their current partner. The sample was recruited by following the same procedure as in study 1.

Data Analysis

Maximum likelihood estimation was employed for this analysis. Previous revision showed acceptable values of skewness for each item. Two models were tested. Model 1 was a three-factor model conformed by all the 23 IPVAS items, while Model 2 was a two-factor model proposed in Study 1. Chi-square, goodness-of-fit index (GFI), the comparative fit index (CFI), the root mean square error of approximation (RMSEA), the non-normed fit index (NNFI) and the standardized root mean squared residual (SRMR) were used to examine the fit of the models. CFA was carried by using AMOS 24. Reliability of the two subscales was also evaluated on this sample.

Results

The CFA showed that the 3-factor model had the following fit indexes, Chi-square = 1383.48 df = 227, GFI = .82, AGFI = .78, NNFI = .68, RMSEA = .90 and SRMR = .10. On the other hand, the 2-factor model showed better fit indexes values, Chi-square = 79.00, df = 41, GFI = .97, AGFI = .96, NNFI = .96, RMSEA = .05 and SRMR = .05. This results meet the criteria proposed by Hu and Bentler (1999).

The three-factor model did not generate satisfactory results in any on the evaluated indexes. However, the two-factor model shows adequate fit indexes. These results support the option for the two-factor structure of the Colombian IPVAS. Table 6 shows item analysis and internal consistency coefficients for the Colombian two-sub-scales IPVAS. On general terms, all items have adequate psychometrics and internal consistency coefficient values are satisfactory.

Lastly, we analyzed correlation patterns between Colombian IPVAS subscales measures and the same theoretically related constructs that in Study 1. Table 7 shows the correlations between the different subscales.

Abuse subscale of the IPVAS correlated positively with all the SSDS subscales. In this sample, a negative correlation between attitudes towards abuse and have been practiced emotional negotiation with a partner were found. The *Abuse* subscale correlate positively with all the aggressions subscales of the CTS-2. The *Violence* subscale did not correlate with any of the variables.

Discussion

*Table 6*  
Analysis of IPVAS items and internal consistency (n=665)

Item	Mean	SD	r IT-c	When item is excluded	
				Cronbach's $\alpha$	McDonald's $\omega$
Abuse					
6	1.81	1.12	.42	.67	.68
12	2.08	1.20	.42	.67	.67
14	1.71	1.17	.41	.68	.68
15	1.83	1.16	.40	.68	.68
21	1.86	1.18	.47	.66	.66
22	1.90	1.10	.51	.65	.65
Cronbach's $\alpha$	.71				
McDonald's $\omega$	.71				
Violence					
10	3.15	1.78	.70	.85	.85
17	2.99	1.78	.75	.84	.84
18	3.01	1.63	.64	.86	.86
20	3.04	1.71	.74	.84	.84
23	3.01	1.75	.68	.85	.85
Cronbach's $\alpha$	.87				
McDonald's $\omega$	.88				

*Table 7*  
Correlations between IPVAS, SSDS and CTS-2 subscales

SSDS subscales	Mean (SD)	Violence	Abuse	Total IPVAS
Emotional dependence	22.77 (6.90)	-.02	.08*	.03
Anxious attachment	14.81 (5.76)	-.07	.26**	.09*
Exclusive dependence	15.25 (5.77)	.04	.20**	.15**
CTS-2 negotiation subscales				
Practiced negotiation-emotional	34.08 (21.90)	.04	-.08*	-.01
Practiced negotiation-cognitive	28.72 (20.91)	.02	-.05	-.01
Received negotiation-emotional	14.21 (11.59)	.01	-.07	-.03
Received negotiation-cognitive	5.13 (8.20)	.02	-.03	-.00
CTS-2 aggression subscales				
Type of practiced aggression				
Psychological	20.42 (29.45)	.00	.37***	.207***
Physical	15.04 (37.09)	-.01	.44***	.238***
Sexual	8.37 (22.71)	-.02	.44***	.235***
Damage	5.98 (18.09)	-.02	.41***	.217***
Type of received aggression				
Psychological	11.07 (24.16)	-.01	.45***	.24***
Physical	25.35 (34.21)	-.01	.41***	.23***
Sexual	24.89 (22.96)	.05	.22***	.17***
Damage	18.67 (16.43)	.00	.30***	.17***

\* p < .05; \*\* p < .01; \*\*\* p < .001

The study provided qualitative and quantitative validity evidence obtained from two separate studies aimed to supporting interpretations of the Colombian IPVAS measures. We integrated content validity evidence and psychometrics in Study 1, and then used them to propose a two-dimension version of the Colombian IPVAS with the *Abuse* and *Violence* scales showing adequate psychometric properties. A two-dimension version IPVAS contrast with the original three-dimension version developed by Smith, et al. (2005), and other adaptations of the IPVAS (e. g., Toplu et al., 2017).

The methodological approach conducted in the research have not been reported either for the original IPVAS or any of the adapted versions (e. g., Alzoubi & Ali, 2018; Fincham et al., 2008; Smith et al., 2005). Having performed a back-translation design complemented with a committee approach to the comparison of the two linguistic version in the source language, together with findings from the expert appraisal and psychometrics results, allow us to be confident about the appropriateness of the two-dimension Colombian IPVAS without the original *Control* subscale. The support for the two-dimension Colombian IPVAS increase with the results of Study 2. CFA results reveal better fit values for the two-factor model than for the original three-factor model. Even though IPVAS is intended to provide separate subscale measures, further studies could resort to multifaceted approaches integrating internal information from item scores with evidence of relationships with other variables (Calderón et al., 2019).

The lack of validity evidence for keeping the *Control* subscale in the Colombian IPVAS could point out a partial construct overlap. We do think original *Control* subscale items do not capture “relevant” indicators of the construct for the Colombian samples. Likewise, the “unexpected” not correlation between Colombian IPVAS *Violence* measures and CTS-2 negotiation subscales can also point out content relevance problems with both measures beside the sample dependency explanations. On the other hand, further research should investigate alternative interpretations of the results like those on the potential effects of the presence of reverse items in IPVAS on acquiescence or social desirability response biases (Suárez-Alvarez et al., 2018; Vigil-Colet et al., 2020).

To sum up, we do think the research provide solid evidence from both a content-oriented and methodological perspectives. Attitudes towards IPV is an elusive and culture dependent construct that can require resort to mixed-method approach when adapting assessment instruments. In addition to the culture dependency attitudes toward violence against women change over time (e. g., Ferrer-Pérez et al., 2019). Future research should go further to develop cultural relevance and time sensitive indicators of the *Control* dimension by applying qualitative methods like focus groups or in-depth interviews in line with ITC Guidelines (ITC, 2017).

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