



# International Journal of Clinical and Health Psychology

[www.elsevier.es/ijchp](http://www.elsevier.es/ijchp)



## Peer sexual harassment in adolescence: Dimensions of the sexual harassment survey in boys and girls



Esther Vega-Gea<sup>a,b,\*</sup>, Rosario Ortega-Ruiz<sup>a,c</sup>, Virginia Sánchez<sup>b</sup>

<sup>a</sup> Universidad de Córdoba, Spain

<sup>b</sup> Universidad de Sevilla, Spain

<sup>c</sup> University of Greenwich, United Kingdom

Received 13 May 2015; accepted 10 August 2015

Available online 8 September 2015

### KEYWORDS

Adolescence;  
Sexual harassment;  
Confirmatory factor  
analysis CFA;  
Ex post facto study

**Abstract** The phenomenon of adolescent sexual harassment is a topic that has taken on special relevance in recent decades. However, general consensus regarding its nature, prevalence and dimensions has yet to emerge. This study used a representative sample of 3,489 Andalusian adolescents from the second stage of Compulsory Secondary Education (E.S.O.) and the Spanish Baccalaureate (*Bachillerato*), and it is primarily focused on two main objectives: to test the factor structure of the “sexual harassment” scale in boys and girls, and to analyze the prevalence of the sexual harassment among adolescent students. Descriptive analyses and confirmatory factor analysis (CFA) were performed, allowing us to explore the nature of the phenomenon and to describe its prevalence. The results obtained revealed a two-dimensional structure of this scale in both boys and girls: one dimension reflecting visual-verbal forms of sexual harassment and the second dimension including physical forms. Regarding to prevalence, the outcomes shown a high prevalence of sexual harassment involvement across both sexes during adolescence. However, boys were more involved in victimization and aggression than girls. The importance of analyzing the phenomenon in greater depth is also highlighted.

© 2015 Asociación Española de Psicología Conductual. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

### PALABRAS CLAVE

adolescencia;  
acoso sexual;  
análisis factorial  
confirmatorio AFC;  
estudio ex post facto

**Acoso sexual en adolescentes: dimensiones de la Escala de acoso sexual en chicos y chicas**

**Resumen** El fenómeno del acoso sexual entre adolescentes es un tópico que está tomando especial relevancia en las últimas décadas, si bien, no existe aún un consenso general sobre su naturaleza, prevalencia y dimensiones. El presente trabajo ha contado con una muestra

\* Corresponding author: Avda. San Alberto Magno, s/n, 14004, Córdoba, Spain.  
E-mail address: [esther.vega@uco.es](mailto:esther.vega@uco.es) (E. Vega-Gea).

representativa de 3.489 adolescentes andaluces del segundo ciclo de Educación Secundaria Obligatoria y Bachillerato, y se ha centrado principalmente en dos objetivos fundamentales: testar la estructura factorial de la escala de violencia sexual en chicas y chicos; analizar su prevalencia entre los adolescentes. Para ello se han realizado análisis descriptivos y análisis factoriales confirmatorios (AFC), que nos han permitido explorar la naturaleza del fenómeno y describir su prevalencia. Los resultados obtenidos en esta investigación han puesto de manifiesto la existencia de una estructura bidimensional del fenómeno, en la que se distingue un factor visual-verbal y un factor físico de acoso sexual, en chicos y chicas. Respecto a la prevalencia, los resultados han señalado una alta prevalencia de implicación en acoso sexual durante la adolescencia, en chicos y en chicas, aunque con diferencias, siendo que los chicos afirmaron estar más implicados en victimización y agresión. También se destaca la importancia que tiene analizar el fenómeno en mayor profundidad.

© 2015 Asociación Española de Psicología Conductual. Publicado por Elsevier España, S.L.U. Este es un artículo Open Access bajo la licencia CC BY-NC-ND (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

The phenomenon of sexual harassment in adolescence is a research topic that has taken on particular importance in recent decades, most notably since the publication of the study by the American Association of University Women ([American Association of University Women, AAUW, 1993](#)). This report painted a picture of high prevalence of sexual harassment among high school students ([Hill & Kearl, 2011](#); [Leaper, Brown, & Ayres, 2013](#); [Lichy & Campbell, 2012](#)), attracting the interest of researchers and educators the world over, and has succeeded in having them recognize adolescent peer sexual harassment as an issue that constitutes a public health concern ([Bucchianeri, Eisenberg, & Neumark-Sztainer, 2013](#); [Mumford, Okamoto, Taylor, & Stein, 2013](#)) and which interferes in the educational pursuits of both schools and students ([Vicario-Molina, Fuertes, & Orgaz, 2010](#)). The available literature on this phenomenon reveals an ever-increasing amount of research ([Cortés et al., 2014](#); [Mumford et al., 2013](#); [Ortega & Sánchez, 2011](#); [Ortega, Sánchez, Ortega-Rivera, Nocentini, & Menesini, 2010](#); [Wei & Chen, 2012](#); [Zych & Quevedo-Blasco, 2011](#)) suggesting that a considerable percentage of secondary students have, at some point, been at the receiving end of unwelcome behaviour that could be viewed as peer sexual harassment.

Despite this growing interest in the study of peer sexual harassment, a single definition for this phenomenon has yet to be formally adopted, encompassing gender-related, psychological, legal, sociological, psychoeducational and developmental approaches ([Bucchianeri et al., 2013](#); [Conroy, 2013](#); [Espelage, Basile, & Hamburger, 2012](#); [Petersen & Hyde, 2013](#); [Tillyer, Wilcox, & Gialopsos, 2010](#)).

We define peer sexual harassment in adolescence as "an unwanted and unwelcome sexual behaviour because sexual harassment cause distress and discomfort to the victims, which can interfere with the normal life of students in schools. Sexual harassment includes different behaviours, such as name-calling, rumours, sexual comments, looks, gestures, attempts at personal contacts, and physical attacks" ([Ortega et al., 2010](#), p. 248). Starting from a developmental perspective, sexual harassment in adolescence should be understood in terms of factors related to pubertal development, which trigger an awakening of others' sexual interest and desire ([Ortega et al., 2010](#); [Shute, Owens,](#)

[& Slee, 2008](#)). Thus, the increasing interest shown by peers, together with adolescents' lack of skills when it comes to expressing sexual interest, could in itself constitute a risk factor for episodes of sexual harassment among young people ([McMaster, Connolly, Pepler, & Craig, 2002](#); [Petersen & Hyde, 2013](#)). Several studies support this view, with pubertal status leading to an increase in both sexual harassment victimization and aggression ([Pepler, Craig, Connolly, Yulie, & McMaster, 2006](#)), and the start of dating relationships increasing the risk of sexual harassment from opposite-sex peers ([Schnoll, Connolly, Josephson, Pepler, & Simkins-Strong, 2015](#)).

There is an alarming prevalence of this phenomenon among the adolescent population, where prevalence rates range from 20% to 84% ([American Association of University Women, AAUW, 2011](#); [Bucchianeri et al., 2013](#); [Charmaraman, Jones, Stein, & Espelage, 2013](#)), with boys showing more involvement than girls in aggression ([AAUW, 2011](#); [Attar-Schwartz, 2013](#)) and similar rates in victimization ([McMaster et al., 2002](#); [Mumford et al., 2013](#)). However, the disparity in the data lends itself to controversy and highlights the gap in the research regarding the means of measuring this phenomenon, it is that some studies use a single item to measure peer sexual harassment and others use large scales. Theoretical models have been quite influential insofar as considering the phenomenon a one-dimensional ([Menesini & Nocentini, 2008](#); [Schnoll et al., 2015](#)), two-dimensional ([Ortega et al., 2010](#); [Witkowska & Kjellberg, 2005](#)), or three-dimensional construct ([Ormerod, Collinsworth, & Perry, 2008](#)). It is important to take account of this consideration given that one-dimensional measures tend to considerably increase prevalence rates. On the other hand, two-dimensional models, although with significant nuances, usually differentiate between physical and other forms of harassment ([Ortega et al., 2010](#)). Those models stemming from the perspective of gender also include a third dimension, namely gender-based harassment. Therefore differentiating between these forms of harassment, unwelcome sexual attention and sexual coercion ([Ormerod et al., 2008](#)). However, the variability in these dimensions has not been accompanied by conclusive studies that have explored the factorial structure

of the construct based on Confirmatory Factor Analyses. For example, the three-dimensional model proposed by Fitzgerald and colleagues (Fitzgerald, Gelfand, & Drasgow, 1995) has received moderate support, with some studies having confirmed its structure, whereas in other studies the data do not fit the model, with the best-fit models being the two-dimensional type (Espelage et al., 2012; McMaster et al., 2002; Ortega et al., 2010; Wei & Chen, 2012; Witkowska & Kjellberg, 2005). What has proven conclusive is the need to differentiate between boys and girls, given that studies have found the experience, interpretation and expression of this phenomenon to be different depending on the gender (Witekowska & Kjellberg, 2005). Another feature of this scenario are the varying time frames used in this body of research, ranging from studies that take into account the entire adolescent age span (AAUW, 2011; Hill & Kearl, 2011), to others that focus on the last two months (Ortega et al., 2010; Schnoll et al., 2015) and those that limit themselves to the last few weeks (McMaster et al., 2002).

In short, these findings indicate that the operationalization of the sexual harassment construct among peers calls for more detailed studies on its different dimensions and which afford more precise estimations of the construct's presence among adolescents. The present study falls within this framework.

Research in this field carried out in Spain is still limited and has primarily focused on dating relationships (Fernández-Fuertes, Fuertes, & Pulido, 2006; Rodríguez-Franco et al., 2012; Sierra, Bermúdez, Buena-Casal, Salinas, & Monge, 2014; Ureña, Romera, Casas, Viejo, & Ortega-Ruiz, 2014). One of the first descriptive studies used the more frequent items from the *Sexual Harassment Survey* (AAUW, 1993), revealed prevalence rates of 69.4% for aggression and 52.9% for victimization (Ortega, Ortega-Rivera, & Sánchez, 2008), in line with previous studies which used the same measure (McMaster et al., 2002; Menesini & Nocentini, 2008). Vicario-Molina et al. (2010) made progress in this sense, describing data regarding the presence of specific verbal and physical behaviours in both sexes. Specifically, the authors found that sexual insults were used by more than half of the boys and girls in the study, and unwanted attempts at sexual advances were the most frequently received conducts. However, the study was descriptive in nature and did not examine in depth the meaning of sexually aggressive behaviours via the use of comprehensive methodological procedures. Ortega and colleagues (2010) utilized the *Sexual Harassment Survey* (AAUW, 1993) to test different models of victimization in a sample of Spanish and Italian adolescent girls. The instrument was developed in 1993 (AAUW, 1993) to analyse the variety of behaviours that can be expressions of peer sexual harassment in adolescence (from visual-verbal to physical behaviour). The results confirmed a factorial structure made up of two dimensions: the visual/verbal and the physical, which proved invariant across both countries under study. The authors found that these two latent dimensions yielded differences not only in the type of behaviours they encompass, but also in terms of their severity, with visual/verbal forms considered moderate and physical forms severe. The prevalence rates revealed that 65.6% reported having been at the receiving end of visual/verbal insults and harassment from their peers, whereas 16.6% reported sexual harassment

behaviours with physical contact. This study was seen as a step forward in understanding the phenomenon of peer sexual harassment; however, it restricted itself to looking closely at female victimization, without exploring either male victimization or aggression. In this line, Witkowska and Kjellberg (2005), tried to test the bidimensional structure for boys and girls, failed to fit accurately for boys in comparison to girls. Taking into account the common and differentiating elements behind the latent dimensions of the sexual harassment construct in boys and girls is important as it brings us closer to the meaning and expression that both sexes attribute to this phenomenon.

Based on the reviewed literature, this study aimed to further analyse the dimensions of the peer sexual harassment in adolescence. Following the model of sexual harassment victimization developed by Ortega and colleagues (2010), this study will test the proposed model in boys and girls by considering victimization as well as aggression. To our knowledge, no other studies have tested models for aggression and victimization in Spain, rendering our study one which we believe contributes significantly to the body of research concerning the peer sexual harassment construct and the development of reliable and goodness-of-fit measures. Owing to the fact that a two-dimensional model encompassing visual/verbal and physical forms (Ortega et al., 2010) has been tested in this country, the present study aimed to test both these dimensions in terms of male victimization and female and male aggression, while replicating the model in a large sample of adolescent girls. The model was expected to fit the data well in boys as well as girls, although in girls the models would be more satisfactory, according to previous studies (Ortega et al., 2010; Witkowska & Kjellberg, 2005). The second aim was to present the prevalence results for this phenomenon derived from the tested models. Much like in previous studies, a greater prevalence in boys than girls was expected for both aggression and victimization (Attar-Schwartz, 2013; Vicario-Molina et al., 2010). The research design is considered to be that of a cross-sectional descriptive study (Montero & León, 2007; Ramos-Álvarez, Moreno-Fernández, Valdés-Conroy, & Catena, 2008), based on a study sample comprising secondary school and baccalaureate students from the Andalusia region of Spain.

## Method

### Participants

Three thousand, four hundred and eighty-nine ( $N = 3,489$ ) students of the second stage of Compulsory Secondary Education (E.S.O.) and the Spanish Baccalaureate (Bachillerato) attending secondary schools in the eight provinces of Andalusia, Spain participated in the study (girls 51.1% and boys 48.9%). The age range was between 12 and 18 years (average age = 16.85;  $SD = 1.24$ ). The sample was determined based on simple random sampling, using the levels corresponding to Compulsory Secondary Education and the Baccalaureate as independent samples and by calculating the number of participants according to these levels (Moreno, Martínez, & Chacón, 2000). The data contained in the "Education Statistics of Andalusia" of the Ministry of

Education's Statistical Unit, Regional Government of Andalusia, were consulted. Using a table of random numbers, a total of 48 schools were selected: 28 for Compulsory Secondary Education and 20 for Baccalaureate (state and state-subsidised schools).

## Instrument

Sexual Harassment Survey (AAUW, 1993). The adapted version by Ortega and colleagues (2010) was used. Numerous studies have used this instrument to measure sexual harassment in adolescence (McMaster et al., 2002; Ortega et al., 2010). The questionnaire asked students to report how often they had perpetrated or received a variety of sexual harassment behaviour during the last three months. The questionnaire instructions explicitly asked to report only unwanted a sexual behaviour. Thirteen items measured aggression and thirteen items measured victimization with a format scale on five points (from 0= *never*; 4= *daily*).

## Procedure

The instrument was administered with the prior consent of family members and the participating schools, during school time in a 60-minute session, by trained researchers. The students were informed that their responses to the questionnaires would remain anonymous. The rejection rate of students to complete the questionnaires was 1%. A survey implementation protocol was used to avoid any potential biases in data collection (Moreno et al., 2000).

## Data analysis

Prior to conducting the CFAs, the occurrence of each item for sexual aggression and victimization in boys and girls was analyzed. In all cases, item frequency was at least 1% except for female aggression, where four items presented lower percentages (items 7, 8, 9 and 12), according to previous studies (McMaster et al., 2002; Ortega et al., 2010) these items were removed from the analysis (see Table 1). The statistical software LISREL 9.1. (Jöreskog & Sorbom, 2012) was used to perform confirmatory factor analyses. Two models for aggression and another two for victimization were tested among boys and girls separately: a one-dimensional model comprising all the behaviours contained in the instrument, and a two-dimensional model encompassing the visual/verbal and physical. Because of the non-normal distribution of the study population, the large sample size, the ordinal response format (Flora & Curran, 2004) and high correlation factors (Holgado-Tello, Chacón-Moscoso, Barbero-García, & Vila-Abad, 2010), diagonally weighted least squares (DWLS) estimation was used, whereby estimations are based on a asymptotic covariance matrix of the data (Morata-Ramírez & Holgado-Tello, 2013). In order to compare the suitability of the chosen models, this study considered the indexes proposed by Hu and Bentler (1999): CFI, GFI and NNFI values greater than .95; an RMSEA less than .05; and SRMR values below .08 as acceptable and less than .05 as adequate. The Parsimony Goodness-of-Fit Index (PGFI) takes into account the complexity of the

Table 1 Occurrence percentage of sexual harassment behaviours among peers.

	V. girls	V. boys	A. girls	A. boys
1. Make sexual comments, jokes, movements, or looks	42.3%	46.6%	11.1%	36.1%
2. Brush up against in a sexual way on purpose	8.2%	22.2%	3.4%	17%
3. Make jokes or spread sexual rumours	9.9%	19.4%	5.7%	15.5%
4. Call "fag," "dyke," "lezzie," or "queer"	10.9%	24.5%	16.8%	33%
5. Flash or "moon"	18.3%	26.8%	2.3%	17.5%
6. Pull at clothing in a sexual way	3.7%	10.7%	1.3%	8.6%
7. Block way or corner them in a sexual way	2.9%	7.5%	0.8%	5%
8. Force someone to do something sexual other than kissing	1.3%	3.7%	0.4%	3%
9. Force someone to kiss	3.5%	7.1%	0.8%	3.9%
10. Touch, grabbe, or pinch in a sexual way	4.7%	14.1%	0.8%	10.7%
11. Show, give, or leave sexual pictures, photographs, messages, or notes	6.2%	17.3%	1.1%	9.3%
12. Write sexual messages or graffiti (e.g., on bathroom walls, in locker rooms, in a note or book)	3.8%	9.5%	1.1%	5.8%
13. Pull clothing off or down	4%	13.4%	2.2%	10.9%

Note. V: victimization; A: aggression; N = 3,489; missing = 0.6%. n girls = 1,770; n boys = 1,697.



**Table 2** Fit indices for peer sexual harassment.

	<i>N</i>	<i>RMSEA</i>	$X^2$	<i>df</i>	$X^2/df$	<i>NNFI</i>	<i>CFI</i>	<i>SRMR</i>	<i>GFI</i>	<i>ECVI</i>	<i>PGFI</i>
<i>Female victimization</i>											
Model 1 <sup>a</sup>	1496	.032	230.75	65	3.55	.99	.99	.09	.99	.18	.70
Model 2 <sup>b</sup>	1496	.030	171.81	64	2.68	.99	.99	.06	.99	.15	.70
<i>Male victimization</i>											
Model 1 <sup>c</sup>	1315	.043	306.62	65	4.71	.99	.99	.07	.98	.27	.70
Model 2 <sup>d</sup>	1315	.040	247.94	64	3.87	.99	.99	.06	.99	.23	.70
<i>Female aggression</i>											
Model 1 <sup>e</sup>	1538	.023	101.54	27	3.76	.99	.99	.09	.99	.09	.59
Model 2 <sup>f</sup>	1538	.023	73.01	26	2.80	.99	.99	.07	.99	.07	.57
<i>Male aggression</i>											
Model 1 <sup>g</sup>	1389	.0300	225.83	65	3.47	.99	.99	.07	.99	.20	.71
Model 2 <sup>h</sup>	1389	.0295	204.04	64	3.18	.99	.99	.06	.99	.18	.70

*Note.* <sup>a</sup> One-dimensional Model:  $\alpha=.79$ . <sup>b</sup> Two-dimensional Model: visual-verbal  $\alpha=.66$  and physical  $\alpha=.85$ . <sup>c</sup> One-dimensional Model:  $\alpha=.87$ . <sup>d</sup> Two-dimensional Model: visual-verbal  $\alpha=.76$  and physical  $\alpha=.88$ . <sup>e</sup> One-dimensional Model:  $\alpha=.71$ . <sup>f</sup> Two-dimensional Model: visual-verbal  $\alpha=.61$  and physical  $\alpha=.75$ . <sup>g</sup> One-dimensional Model:  $\alpha=.89$ . <sup>h</sup> Two-dimensional Model: visual-verbal  $\alpha=.79$  and physical  $\alpha=.90$ .

hypothesized model in the assessment of overall model fit. PGFI value equal to .67 is acceptable (Byrne, 2013). The Expected Cross-Validation Index (ECVI; Browne, 2000) was measured to obtain a comparison of both models, where the model which yielded a lower ECVI value would have the most potential for replication (Morata-Ramírez & Holgado-Tello, 2013). To calculate involvement in visual/verbal and physical sexual aggression and victimization, the scores were dichotomized, with zero indicating that adolescents reported not having been involved in any scenarios either as aggressor or victim in relation to the behaviours subject to analysis. In contrast, they were considered to be involved if they answered affirmatively to any of the items. The percentages of involvement are shown in Table 3.

## Results

The most frequent item for aggression as well as victimization in both boys and girls was item 1: "Made sexual comments, jokes, movements, or looks at you", whereas the least frequent item was number 8: "Forced you to do something sexual other than kissing" (see Table 1).

## Confirmatory Factor Analysis

Models were tested for female and male victimization and aggression, obtaining a total of eight models: four one-dimensional and four two-dimensional types. The one-dimensional models contained 13 items to measure male aggression and male and female victimization. Nine of the models' items tested female aggression. The two-dimensional models differentiated between visual/verbal aggression and victimization (items 1, 3, 4, 5, 11 and 12) and physical aggression and victimization (2, 6, 7, 8, 9, 10 y 13). In terms of female aggression, the physical scale was represented by three items (2, 6 and 13). The mean scores and standard deviations of the scales were: *visual/verbal*

*aggression* -girls  $M=0.09$ ;  $SD=0.22$ ; boys  $M=0.35$ ;  $SD=0.56$ -; *visual/verbal victimization* -girls  $M=0.21$ ;  $SD=0.33$ ; boys  $M=0.41$ ;  $SD=0.57$ -; *physical aggression* -girls  $M=0.03$ ;  $SD=0.19$ ; boys  $M=0.15$ ;  $SD=0.46$ -; *physical victimization* -girls  $M=0.05$ ;  $SD=0.22$ ; boys  $M=0.18$ ;  $SD=0.44$ -.

Table 2 shows the results obtained. The fit indexes were correct for both the one-dimensional and two-dimensional models. The reliability indexes of the scales for the one-dimensional models were good. As for the two-dimensional models, the reliability indexes yielded better outcomes for the physical scale than for the visual/verbal scale in both male and female victimization and aggression, especially among girls. Reliability was acceptable in all cases except for female visual-verbal sexual victimization and aggression, where slightly lower values were found (.66 and .61). The correlation between factors reached moderate to high values across the board, reaching .90 for male sexual aggression. This led us to consider whether we should opt for a global or a two-dimensional model. Finally, and bearing in mind that the one-dimensional model could also fit the data for boys, we opted for the two-dimensional model. This was in spite of the high correlation between latent factors and which did not produce a substantially better fit than the one-factor model, namely for the following reasons: because a) the global fit indexes (RMSEA, NNFI, GFI and SRMR); b) the  $X^2$  test (chi-square/degrees of freedom); c) the replicability index (ECVI); and d) factorial loads and item errors yielded better results in the two-dimensional models. Furthermore, according to the theory furnished by Holgado-Tello et al. (2010), in the field of psychology and interpersonal relationships, and more so when talking about phenomena that involve violence, it is highly likely that the behaviours being measured are closely related, although this does not mean that they are measured exactly the same way. Further support for the decision to adopt the two-factor model resides in the recommendations made by some authors who have studied the dimensional structure of adolescent sexual harassment. Two-dimensional structures

**Table 3** Involvement in visual/verbal and physical sexual victimization and aggression in girls and boys.

	Visual/verbal victimization	Physical victimization	Visual/verbal aggression	Physical aggression
Girls	53.1% (849)	14.2% (225)	25.7% (408)	5.1% (80)
Boys	63.1% (943)	33.8% (503)	52.6% (781)	25.2% (372)

were found to better fit the data than the one-factor kind, although the differences between the one- and two-dimensional models were not substantial.

The graphical solutions of the aggression and victimization models (see Figures 1, 2, 3 and 4) found all saturations to be above .50 and below 0.94.

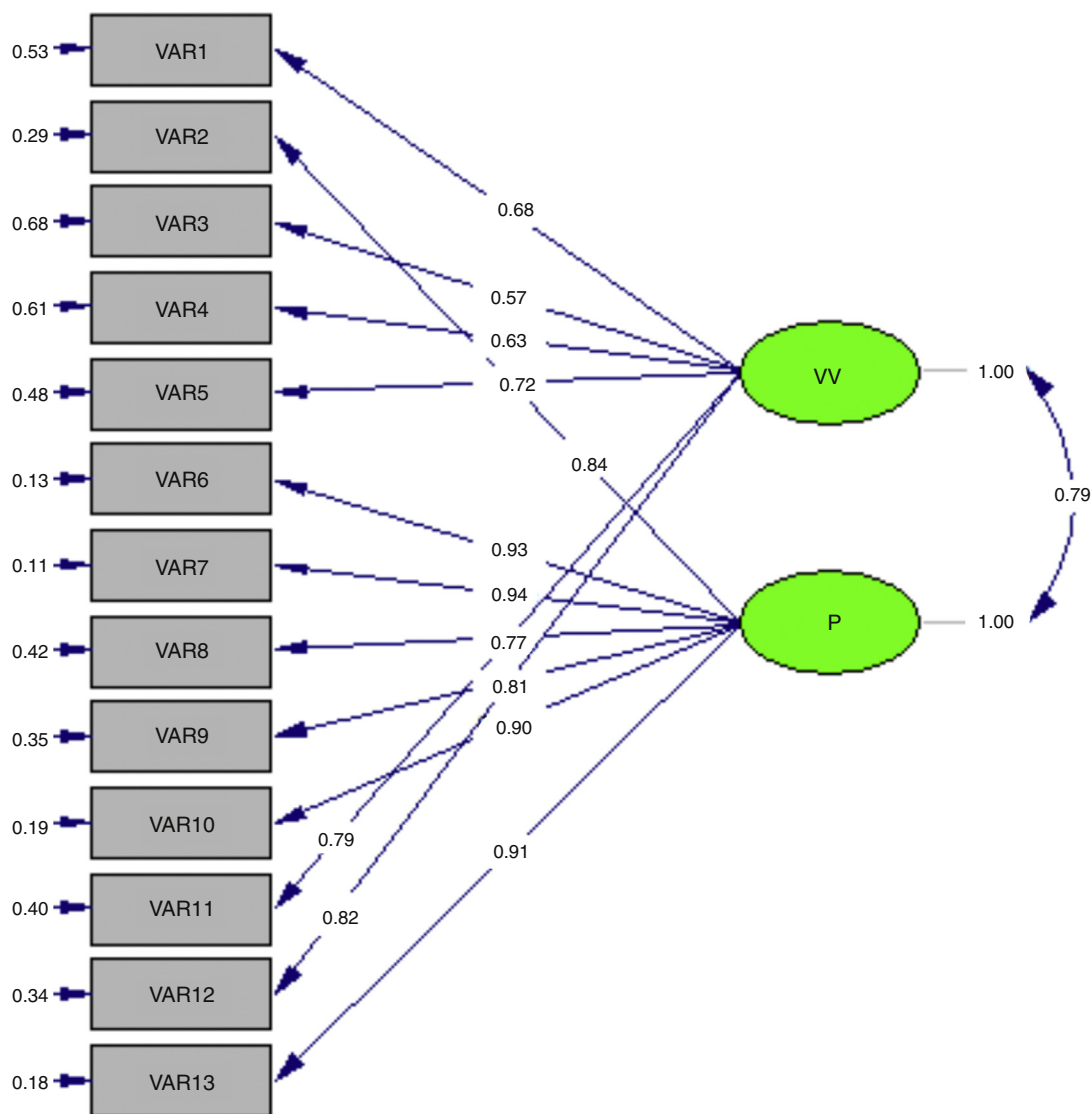
**Adolescent sexual harassment**

As the results show, the highest percentage of involvement was found in visual/verbal rather than physical forms, and in victimization over aggression. Whereas visual/verbal

victimization exceeded 50% across both sexes, visual/verbal aggression maintained the same levels in boys but fell to 25% in girls. In terms of the physical forms, victimization reached around 30% involvement, whereas aggression did not exceed 25%. Boys showed more involvement than girls in visual/verbal forms and, fundamentally, in physical forms.

**Discussion and conclusions**

The first aim of this research was to test a one-dimensional and two-dimensional model of sexual victimization and aggression among adolescent peers by studying boys and



**Figure 1** Two-dimensional model of female sexual victimization.

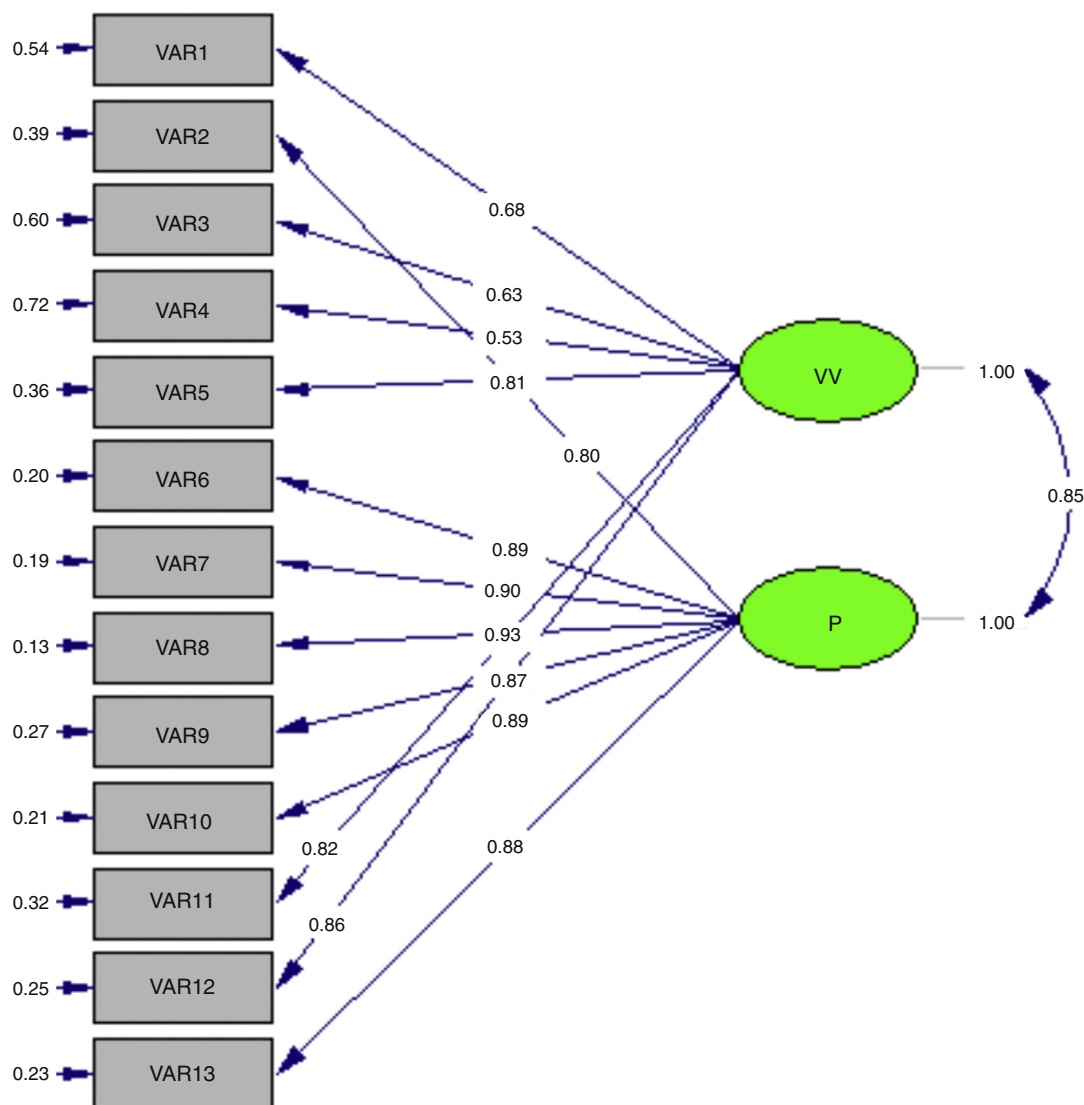


Figure 2 Two-dimensional model of male sexual victimization.

girls separately, thus contributing to the small body of research available on the dimensions and factors related to adolescent sexual harassment. The results obtained for sexual victimization in girls and boys confirmed that the two-factor models (visual/verbal and physical contact) reported some fit and replicability indexes slightly more suitable than the one-factor kind. Thus, we chose to adhere to the approach taken in those studies that defend the two-dimensional structure as the most adequate when it comes to defining the adolescent sexual harassment construct (McMaster et al., 2002; Ortega et al., 2010; Wei & Chen, 2012; Witkowska & Kjellberg, 2005).

If we compare our results with those obtained in research using similar statistical analyses (CFAs), we will find that the model developed in the present study shares the two-factor structure approved by Witkowska and Kjellberg (2005), as well as instrument validation for girls and boys separately. However, these authors did not find a satisfactory victimization model that fits both sexes. Therefore, the findings of this study are seen as a step forward in identifying the

dimensions for female and male victimization and aggression, highlighting the importance of aggression models and, most importantly, male ones, given that this is the first Spanish study that has successfully tested models whereby the data pertaining to sexual aggression fit well for both sexes, albeit slightly better among girls.

Victimization models. The CFAs have shown both the one-dimensional and two-dimensional models to correctly fit the data in the female and male samples. However, the two-dimensional model (visual/verbal and physical) was deemed most suitable for both boys and girls as indicated by the fit indexes. This seems to indicate that irrespective of sex, adolescents perceive two forms of sexual victimization in peer sexual harassment: one characterized by insults and behaviours with an important visual component of a sexual nature, and another characterized by including physical contact. This constitutes a relevant contribution to the scientific field of adolescent sexual harassment given that, to date, there were no victimization models that fit both male and female samples.

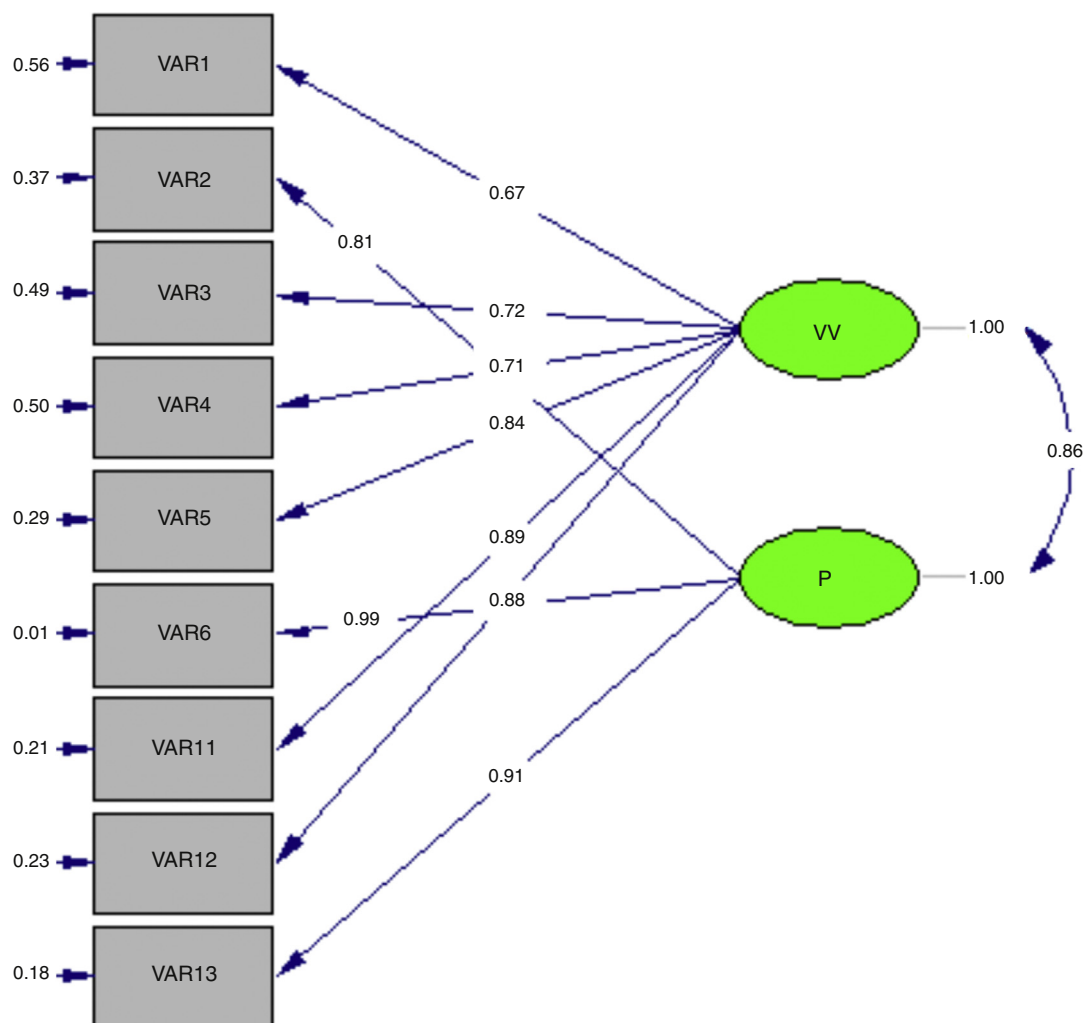


Figure 3 Two-dimensional model of female sexual aggression.

Aggression models. The models for female and male aggression presented the same structure as those for victimization, although with differences in the female model, where the physical sexual aggression scale fell from 7 to 3 items. Hence, it appears that the factorial structure is similar to that observed for female and male victimization and for male aggression. However, the results seem to highlight the importance attached to the expression of behaviours that boys and girls perpetrate and receive; while they seem to be the same in nature, both sexes express them differently. It is for this reason that girls failed to acknowledge performing certain behaviours that involved physical contact. Specifically, boys were found to express themselves by displaying different behaviours when it comes to sexual aggression, whereas girls primarily did so via visual/verbal behaviours, meaning that the severity of peer sexual harassment may be greater in the male population.

We also opted for two-dimensional models to measure aggression; although the one-dimensional model fit the data correctly, the two-factor model yielded better outcomes. However, this was not an easy decision to make for the male aggression model, given that the high correlation

between latent factors (visual/verbal and physical) posed difficulties when choosing the model. Finally, we also decided on the two-dimensional model to measure male aggression; we found theoretical support for selecting the two-dimensional model as a better option than the one-dimensional model (Ortega et al., 2010; Wei & Chen, 2012; Witkowska & Kjellberg, 2005). Furthermore, the chi-square, goodness-of-fit, and replicability indexes also proved to be slightly better in the two-dimensional model.

Thus, it can be said that peer sexual harassment seems to clearly distinguish two types of behaviours in both female victimization and aggression and in male victimization (visual/verbal behaviours and behaviours involving physical contact), and somewhat less conclusive but acceptable in male aggression. It is thereby fair to say that this study contributes to the small body of research that has examined the dimensions of peer sexual harassment.

The second aim of this research was to analyze the prevalence of sexual harassment among peers. From this perspective, the results revealed higher indexes of victimization than aggression, as well as greater involvement by boys than by girls in both phenomena (AAUW, 2011; Wei &



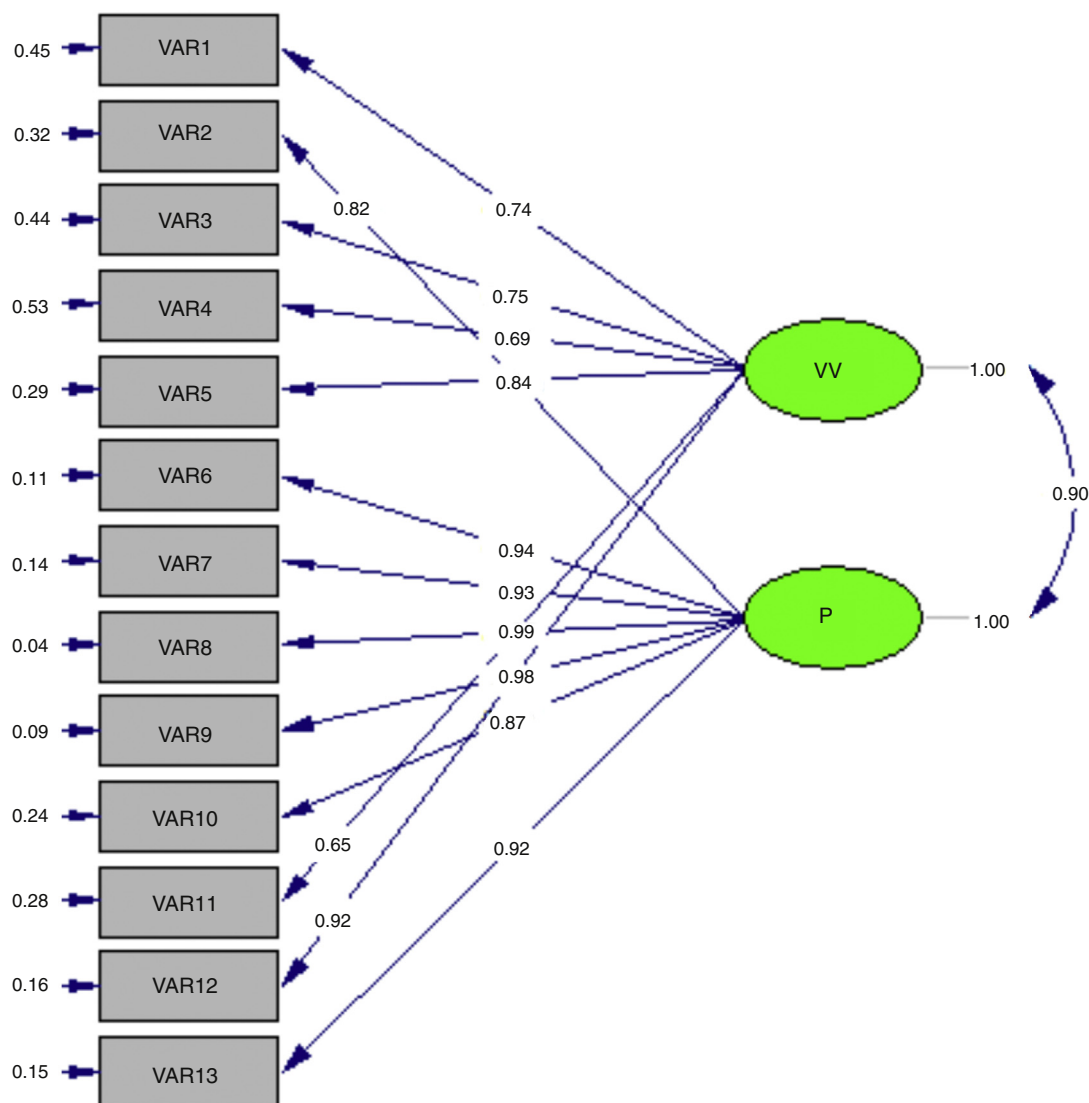


Figure 4 Two-dimensional model of male sexual aggression.

Chen, 2012). The prevalence of visual/verbal victimization involvement yielded the highest rates in the male sample. Physical victimization was less pronounced in both the male and female populations, although boys were two times more likely than girls to be physically victimized (33.8% boys and 14.2% girls). Our findings confirmed prevalence levels in visual/verbal victimization similar to studies that reported the highest indexes (AAUW, 2011; Mumford et al., 2013; Ortega et al., 2008), whereas the results corresponding to physical victimization coincided more with those studies where the percentages ended up being lower (Bucchianeri et al., 2013; Ortega et al., 2010; Wei & Chen, 2012).

The aggression prevalence results yielded higher percentages than most of the previous international studies that used the *Sexual Harassment Survey* (Espelage et al., 2012; McMaster et al., 2002; Mumford et al., 2013), except for the study by the AAUW (1993) which found that more than half of boys and girls had assaulted their peers (66% boys and 52% girls). What is more, the majority of authors did not differentiate between one form of violence and another, which

poses a problem when it comes to us making comparisons. What is clear from the results of this study, and those that have identified less and more severe displays of aggression, is that adolescents use milder forms of aggression, mainly verbal (Mumford et al., 2013; Ortega et al., 2010).

In the same vein, the results have shown that both sexes share the same most frequent and less frequent behaviours. Most boys and girls were recipients and initiators of "sexual looks, comments, jokes and movements". This observation finds support in most international research (AAUW, 2011; Attar-Schwartz, 2013; Tillyer et al., 2010) as well as on a national level (Ortega et al., 2010; Vicario-Molina et al., 2010). The behaviour that fewer participants reported to have experienced and perpetrated was "forcing someone to do something other than kissing". In this case, previous research has not come to a conclusive argument regarding this point, primarily because data regarding the less common behaviour are usually not provided. However, the scientific community is generally in agreement that the most frequent behaviours are those that entail some form

of forced physical contact (Espelage et al., 2012; McMaster et al., 2002; Ortega et al., 2010).

The two-dimensional approach chosen to analyze and explore adolescent sexual harassment is arguably one of the strengths of this study. This approach has allowed us to more accurately gain a sense of how these types of violent sexual relationships work over the course of adolescence, to enable us to respond more appropriately to the needs of both sexes. Specifically, this research has served to further develop understanding of the male victimization model as well as that of male victimization and aggression, given that we have successfully validated aggression models in both girls and boys.

Another strength of this study resides in the fact that it constitutes one of the first prevalence studies carried out in Spain, which gives us a more realistic picture of peer-to-peer sexual harassment.

In terms of the study's limitations, a high correlation between factors was found in the two-dimensional model of male aggression; as a result, the data should be interpreted carefully. A replication of the model in a sample with similar characteristics to those addressed in this study is also warranted. That said, the replication data yielded slightly better outcomes in the two-dimensional model, which was one of the reasons why we opted for this particular model.

The instruments used in this study also came with certain limitations, one of them would be inherent to use of self-reports, because of social desirability that could be associated with, and another one could be the lack data supporting the criterion validity of this questionnaire. Also the inclusion of qualitative measures to this set of questionnaires would have helped us to evaluate other aspects that we were unable to assess. Examples may include focus groups or interviews.

Following on from this study, we consider it important to continue exploring the evolution of sexual harassment over the course of adolescence, the effects that sexual harassment has on male and female populations, and the coping strategies that both sexes employ when faced with these aggressive behaviours. Furthermore, comparing this and other phenomena that occur during this stage of the life cycle is also a topic that would be interesting to pursue. It would also be advantageous to examine which variables predict and influence involvement in these types of phenomena.

## Funding

This research was financed by the Spanish Ministry of Education under the National Program of Research and Innovation (I+D+i 2013-2016) "Dat Adolescence" (PSI2013-45118-R) and under the National Program of Research and Innovation (I+D 2008-2011) "Violencia y Cortejo Juvenil: los riesgos del cortejo violento, la agresión sexual y el cyberbullying (PSI 2010-17246).

## References

- American Association of University Women, AAUW (1993). *Hostile hallways: The AAUW survey on sexual harassment in America's schools*. Washington, DC: American Association of University Women.
- American Association of University Women, AAUW (2011). *Crossing the line: Sexual harassment at school*. Washington, DC: Catherine Hill and Holly Kearl.
- Attar-Schwartz, S. (2013). Runaway behavior among adolescents in residential care: The role of personal characteristics, victimization experiences while in care, social climate, and institutional factors. *Children and Youth Services Review, 35*, 258–267.
- Browne, M. W. (2000). Cross-validation methods. *Journal of Mathematical Psychology, 44*, 108–132.
- Bucchianeri, M. M., Eisenberg, M. E., & Neumark-Sztainer, D. (2013). Weightism, Racism, Classism, and Sexism: Shared Forms of Harassment in Adolescents. *Journal of Adolescent Health, 53*, 47–53.
- Byrne, B. M. (2013). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. London: Psychology Press.
- Charmaraman, L., Jones, A. E., Stein, N., & Espelage, D. L. (2013). Is it bullying or sexual harassment? Knowledge, attitudes, and professional development experiences of middle school staff. *Journal of School Health, 83*, 438–444.
- Conroy, N. E. (2013). Rethinking adolescent peer sexual harassment: Contributions of feminist theory. *Journal of School Violence, 12*, 340–356.
- Cortés, L., Bringas, C., Rodríguez-Franco, L., Flores, M., Ramiro, T., & Rodríguez, F. J. (2014). Unperceived dating violence among Mexican students. *International Journal of Clinical and Health Psychology, 14*, 39–47.
- Espelage, D. L., Basile, K. C., & Hamburguer, M. E. (2012). Bullying Perpetration and Subsequent Sexual Violence Perpetration Among Middle School Students. *Journal of Adolescent Health, 50*, 60–65.
- Fernández-Fuertes, A. A., Fuertes, A., & Pulido, R. F. (2006). Evaluación de la violencia en las relaciones de pareja de los adolescentes. Validación del conflict in adolescent dating relationships inventory (CADRI) - Spanish Version. *International Journal of Clinical and Health Psychology, 6*, 339–358.
- Fitzgerald, L. F., Gelfand, M. J., & Drasgow, F. (1995). Measuring sexual harassment: Theoretical and psychometric advances. *Basic and Applied Psychology, 17*, 425–445.
- Flora, D. B., & Curran, P. J. (2004). An Empirical Evaluation of Alternative Methods of Estimation for Confirmatory Factor Analysis With Ordinal Data. *Psychological Methods, 9*, 466–491.
- Hill, C., & Kearl, H. (2011). *Crossing the line. Sexual harassment at School*. Washington: DC: AAUW.
- Holgado-Tello, F. P., Chacón-Moscoso, S., Barbero-García, I., & Vila-Abad, E. (2010). Polychoric versus Pearson correlations in exploratory and confirmatory factor analysis of ordinal variables. *Quality & Quantity, 44*, 153–166.
- Hu, L., & Bentler, P. M. (1999). Cutt off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55.
- Jöreskog, K. G., & Sorbom, D. (2012). *Lisrel 9. 1 Student Edition for Windows (Computer software)*. Skokie, IL: Scientific Software International, Inc.
- Leeper, C., Brown, C. S., & Ayres, M. M. (2013). Adolescent girls' cognitive appraisals of coping responses to sexual harassment. *Psychology in the Schools, 50*, 969–986.
- Lichty, L. F., & Campbell, R. (2012). Targets and witnesses: Middle school students' sexual harassment experiences. *Journal of Early Adolescence, 32*, 414–430.
- McMaster, L. E., Connolly, J. A., Pepler, D. J., & Craig, W. M. (2002). Peer to peer sexual harassment in early adolescence. A developmental perspective. *Development and Psychopathology, 14*, 91–105.
- Menesini, E., & Nocentini, A. (2008). Dating aggression in adolescence. *Giornale Italiano di Psicologia, 2*, 405–430.

- Montero, I., & León, O. G. (2007). A guide for naming research studies in Psychology. *International Journal of Clinical and Health Psychology, 7*, 847–862.
- Morata-Ramírez, M. A., & Holgado-Tello, F. P. (2013). Construct Validity of Likert Scales through Confirmatory Factor Analysis: A Simulation Study Comparing Different Methods of Estimation Based on Pearson and Polychoric Correlations. *International Journal of Social Science Studies, 1*, 54–61.
- Moreno, R., Martínez, R., & Chacón, S. (2000). *Fundamentos metodológicos en psicología y ciencias afines*. Madrid: Pirámide.
- Mumford, E. A., Okamoto, J., Taylor, B. G., & Stein, N. (2013). Middle School Sexual Harassment, Violence and Social Networks. *American Journal of Health Behavior, 37*, 769–779.
- Ormerod, A. J., Collinsworth, L. L., & Perry, L. A. (2008). Critical climate: Relations among sexual harassment, climate, and outcomes for high school girls and boys. *Psychology of Women Quarterly, 32*, 113–125.
- Ortega, R., Ortega-Rivera, J., & Sánchez, V. (2008). Violencia sexual entre compañeros y violencia en parejas adolescentes. *International Journal of Psychology and Psychological Therapy, 8*, 63–72.
- Ortega, R., & Sánchez, V. (2011). Juvenile dating and violence. In I. Coyne, & C. Monks (Eds.), *Bullying in different contexts: Commonalities, differences and the role of theory* (pp. 113–135). London: Cambridge University Press.
- Ortega, R., Sánchez, V., Ortega-Rivera, J., Nocentini, A., & Menesini, E. (2010). Peer sexual harassment in adolescent girls: A cross-national study (Spain-Italy). *International Journal of Clinical and Health Psychology, 10*, 245–264.
- Pepler, D. J., Craig, W. M., Connolly, J. A., Yulie, A., & McMaster, L. (2006). A developmental perspective of bullying. *Aggressive Behavior, 32*, 376–384.
- Petersen, J. L., & Hyde, J. S. (2013). Peer Sexual Harassment and Disordered Eating in Early Adolescence. *Developmental Psychology, 49*, 184–195.
- Ramos-Álvarez, M. M., Moreno-Fernández, M. M., Valdés-Conroy, B., & Catena, A. (2008). Criteria of the peer review process for publication of experimental and quasi-experimental research in Psychology: A guide for creating research papers. *International Journal of Clinical and Health Psychology, 8*, 751–764.
- Rodríguez-Franco, L., Cepero, J. L., Díaz, F. J. R., Molleda, C. B., Estrada, C., Bellerín, M. Á. A., & Quevedo, R. (2012). Labeling dating abuse: Undetected abuse among Spanish adolescents and young adults. *International Journal of Clinical and Health Psychology, 12*, 55–67.
- Schnoll, J. S., Connolly, J., Josephson, W. J., Pepler, D., & Simkins-Strong, E. (2015). Same-And Cross-Gender Sexual Harassment Victimization in Middle School: A Developmental Contextual Perspective. *Journal of School Violence, 14*, 196–216.
- Shute, R., Owens, L., & Slee, P. (2008). Everyday victimization of adolescent girls by boys: Sexual harassment, bullying or aggression? *Sex Roles, 58*, 477–489.
- Sierra, J. C., Bermúdez, M. P., Buela-Casal, G., Salinas, J. M., & Monge, F. S. (2014). Factors Associated with the Intimate Partner Violence and their Complaint in a Sample of Women. *Universitas Psychologica, 13*, 37–46.
- Tillyer, M. S., Wilcox, P., & Gialopsos, B. M. (2010). Adolescent school-based sexual victimization: Exploring the role of opportunity in a gender-specific multilevel analysis. *Journal of Criminal Justice, 38*, 1071–1081.
- Ureña, J., Romera, E. M., Casas, J. A., Viejo, C., & Ortega-Ruiz, R. (2014). Original psychometrics properties of psychological dating violence questionnaire: A study with young couples. *International Journal of Clinical and Health Psychology, 15*, 52–60.
- Vicario-Molina, I., Fuertes, A., & Orgaz, B. (2010). Acoso sexual entre iguales: Incidencia y reacción emocional en una muestra de estudiantes de 4º de educación secundaria obligatoria. *Behavioral Psychology, 18*, 629–650.
- Wei, H., & Chen, J. (2012). Factors Associated with Peer Sexual Harassment Victimization Among Taiwanese Adolescents. *Sex Roles, 66*, 66–78.
- Witkowska, E., & Kjellberg, A. (2005). Dimensions of peer sexual harassment in Swedish high schools: What factor structure show the best fit to girls' and boys' self-reports? *Sex Roles, 53*, 677–687.
- Zych, I., & Quevedo-Blasco, R. (2011). A decade of the International Journal of Clinical and Health Psychology (2001-2011). *International Journal of Clinical and Health Psychology, 11*, 549–561.