

# Perceptions of Dating Violence: Assessment and Antecedents

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## Abstract

Challenging perceptions of violence is crucial to prevent dating violence (DV), because such perceptions intervene in the organization and interpretation of violent events. However, these perceptions have received limited attention. This likely reflects the lack of a psychometric tool to do so. The current study had two purposes: to develop a measure of perceptions of psychological, sexual, and physical DV, and to explore how vertical collectivism, through hostile sexism and violence myth acceptance, shapes perceptions of DV. A total of 491 college students (55.3% women;  $M = 20.76$  years,  $SD = 1.77$  years) completed measures of the vertical collectivism, hostile sexism, domestic violence myth acceptance, and perceptions of DV. The results of exploratory factor analyses revealed a 15-item single-factor measure of perceptions of DV as initial construct validity, which had satisfactory internal consistency. A gender difference emerged in perceptions of DV; college women perceived psychological, sexual, and physical DV as more serious compared with college men. Moreover, the association between vertical collectivism and perceptions of DV was serially mediated via hostile sexism and violence myth acceptance. The findings are discussed in terms of previous research and the need to address the role of vertical collectivism in sexism,

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myth acceptance, and perceptions of violence in prevention/intervention efforts to reduce vulnerability to DV perpetration and victimization. Several recommendations are outlined to facilitate future research.

### **Keywords**

vertical collectivism, hostile sexism, acceptance of violence myths, perceptions of dating violence, construct validity, emerging adults

Dating violence (DV) constitutes a vital health concern around the world. Efforts to understand emerging adults' perceptions of DV and related antecedent factors are crucial due to their effects on future aggressive behaviors (Prospero, 2006). In a similar vein, effective interventions and preventive actions require such investigation to deliver services in a way that is understood by emerging adults (Taylor et al., 2017). This article, therefore, investigates perceptions of DV in emerging adulthood and how these perceptions are shaped by hostile sexism, vertical collectivism, and acceptance of domestic violence myths.

### **DV: Types, Definitions, and Prevalence**

DV can be defined as psychological, physical, and sexual forms of violence, which occur in adolescent and young adult romantic relationships (Anderson & Danis, 2007). Psychological violence involves behaviors such as humiliation of the partner, controlling partner behaviors, withholding information, threatening behavior, rejecting the partners right to privacy, and isolating the partner from friends and/or family (Rodríguez-Díaz et al., 2017; Saltzman et al., 1999; Ureña et al., 2015; Wolfe et al., 2001). Physical DV includes partner-directed behaviors such as hitting, biting, slapping, pulling/twisting hair, pushing, choking, throwing objects, and using a weapon such as a knife or gun (Rodríguez-Díaz et al., 2017; Straus, 1979; Wolfe et al., 2001). Sexual DV entails behaviors such as compelling the partner to have sex, insisting on sexual touching without the partner's consent, forcing the partner to undress, to have unwanted sexual acts, and to kiss (Rodríguez-Díaz et al., 2017; Wolfe et al., 2001).

DV is a concern in almost all countries. Straus (2004) studied 16 countries and reported a prevalence rate for physical DV ranging from 17% to 45%. In a large sample of adolescents, the prevalence of verbal/emotional DV was 77% (Niolon et al., 2015). In their meta-analytic study, Wincentak et al. (2017) reported an overall DV prevalence rate of 20% for physical perpetration and

9% for the sexual perpetration. Toplu-Demirtaş et al. (2013) reported 79.5% of Turkish university students had experienced violence in dating contexts within the previous 12 months.

## **Why Study DV?**

Psychological, physical, and sexual violence can occur independently or concurrently in romantic relationships (Sears et al., 2007; Toplu-Demirtaş et al., 2013). The potential consequences of DV include mental health problems (e.g., depression, anxiety, posttraumatic stress disorder [PTSD]), physical health problems, as well as unplanned pregnancies, sexually transmitted infections, academic problems, suicidal ideation, and suicide attempts (Ackard & Neumark-Sztainer, 2002; Kabasakal & Girli, 2012; Muyan & Chang, 2015; Muyan et al., 2015; Radzilani-Makatu & Mahlalela, 2015; Shen, 2014; Temple et al., 2016; Wolitzky-Taylor et al., 2008). Reasons for engaging in DV vary from attempts to gain authority or power over the partner, through culture (men's authority in some cultures), to behavior learned by observing abuse in parent or peer relationships (Radzilani-Makatu & Mahlalela, 2015).

## **Understanding Perceptions of DV: Social Cognitive Theory**

The literature on DV emphasizes social learning or social cognitive theory (Mercy & Tharp, 2015). Social cognitive theory posits that learning can occur through modeling the actions of others. Beyond simple mimicry, if such behaviors are useful in solving one's problem, they are more likely to be learned by the observer and reinforced (Bandura, 1971). In line with this theory, adolescents and young adults exposed to peer and parental aggression are more likely to use violence in dating contexts (Brendgen et al., 2002; Kalaitzaki, 2019; Milletich et al., 2010; Toplu-Demirtaş, 2015). In a similar vein, adolescents who have witnessed or been victims of family violence were found to more likely be victimized in their dating relationships (Atmaca & Gençöz, 2017; Calvete et al., 2018). Consistent with social cognitive theory, it has been posited that those who observed marital violence or experienced violence during childhood internalize behavioral scripts and develop attitudes that endorse violence as a problem-solving mechanism in dating relationships (Copp et al., 2016; McCloskey & Lichter, 2003; Toplu-Demirtaş, 2015). Finally, those who observe interparental violence and accept violence as a way of problem solving in relationships are more likely to perpetrate DV (Clarey et al., 2010; Toplu-Demirtaş, 2015).

Social cognitive theory, as reviewed above, is used when explaining DV because often times, adolescents and young adults observe their parents' and peers' behaviors in these relationships rather than having direct experience of romantic involvement. Consequently, past exposure to violence in the family or with peers affect learning of interpersonal violence, which indirectly affects perceptions of adolescents about which behaviors are acceptable to use in romantic relationships (Prospero, 2006). Although exposure to peer and parental violence is not included as a variable in this study, it provides much needed context for understanding attitudes toward and perceptions of DV. In the interest of conceptual hygiene, we briefly address the distinction between attitudes and perceptions.

An attitude was early on defined as "a mental and neural state of readiness" (Allport, 1935, p. 810) and more recently as "associations between a given object and a given summary evaluation of the object" (Fazio, 2007, p. 608). Unlike perception of an object, attitudes include a strong affective element and are likely to guide behavior without any active reflection or conscious awareness (Fazio, 1990). Perception can be defined as a process of interpreting and organizing external stimuli into a meaningful understanding based on prior experiences (Pickens, 2005). Thus, an individual's attitudes can color his or her perceptions, especially in immediate situations that the individual encounters (Fazio, 1990; Fazio & Olson, 2014). Finally, attitudes are shaped by learning, modeling others, or direct experiences.

## Vertical Collectivism and Perceptions of DV

The factors that contribute to DV are essential to understand for prevention. One such factor may be the extent to which individuals endorse values relating to individualism versus collectivism. In their meta-analysis, Mallory and colleagues (2016) examined risk factors for intimate partner violence (i.e., education, employment, drug abuse) in terms of either belonging to individualistic or collectivist cultures. They found that risk factors were similar for both individualistic and collectivist cultures except witnessing parental intimate partner violence and emotional abuse. These factors showed stronger risks for individuals in collectivist cultures. Lim and Chang (2009) found collectivist attitudes predicted the use of physical violence in adolescents. It is worth noting that individuals who identify with groups that accept violence as a way of problem solving internalize these norms, thus leading to the use of physical violence.

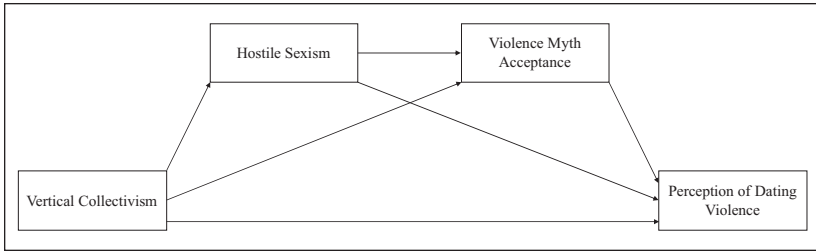
Singelis et al. (1995) further defined collectivism and individualism in terms of two dimensions, vertical and horizontal. *Vertical collectivism* was defined as seeing oneself as a part of a collective but, at the same time,

accepting the fact that everyone is not equal within the collective. *Horizontal collectivism* includes seeing oneself as a part of a collective and accepting the fact that everyone is equal within the collective. *Vertical individualism* stresses the autonomy of an individual but also implies inequalities. *Horizontal individualism*, however, similarly emphasizes individual autonomy but, at the same time, views people as equal. Laca et al. (2012) investigated the relationships between attitudes and beliefs regarding violence and vertical and horizontal dimensions of individualism and collectivism. They found that individuals higher in vertical collectivism tend to favor punishment for violent acts.

## **Sexism, Attitudes Toward DV, and Perceptions of DV**

Another contributing factor to DV is myths regarding violence. Yapp and Quayle (2018) reviewed research on the relationship between rape myth acceptance and sexual violence. They found that eight of nine studies documented strong links between these two variables. Similarly, a meta-analysis of 37 studies also found a strong correlation between rape myth acceptance and sexual aggression, hostile attitudes, and aggressive behaviors (Suarez & Gadalla, 2010).

One hostile attitude, sexism, has been investigated in the DV literature. Glick and Fiske (1996) differentiated two dimensions of sexism, hostile and benevolent. *Hostile sexism* implies women are weak or incompetent, and it is excessively intimidating. *Benevolent sexism*, however, is more complex. It supports the idea that women have traditional roles, such as dependency on men, need help from men, are weak, and need intimacy. Although seemingly positive, the consequences of such stereotyping results in male dominance, underestimation of women's power, and not being taken seriously as a professional. Both sexism types view women as the "weaker sex" and thus limits them to traditional gender roles (Glick & Fiske, 1996; Ibabe et al., 2016). Ibabe and colleagues (2016) found that both hostile and benevolent sexism were related to victimization in dating contexts. Hostile sexism is also associated with acceptance of violence and perpetration of DV; dating college students who were more accepting of DV and had more sexist beliefs were more inclined to use psychological violence (Toplu-Demirtaş, 2015). Valor-Segura et al. (2011) reported similar results as hostile sexism was related to more discriminating attitudes and aggression toward women. Finally, Sakallı-Uğurlu et al. (2007) found that both hostile and benevolent sexism predicted less positive attitudes toward victims of rape.



**Figure 1.** Serial multiple mediation model.

## Current Study

As noted earlier, DV is a universal concern. Consequently, it is important to understand the role of attitudes such as sexism and violence myth acceptance in shaping the individuals' perceptions of psychological, physical, and sexual forms of DV fully. Doing so will provide useful information for identifying both points of intervention and program content for appropriate counseling prevention efforts.

Therefore, we sought to extend research on the antecedents of perceived DV. In the absence of a standardized and validated measure to assess perceptions of psychological, physical, and sexual DV, the first goal of the study was to develop such a measure. For this aim, we applied exploratory factor analyses (EFAs) as we had no prior information regarding the number of factor(s) that might be measured and tried to get information about the nature of factor(s) as the initial step in developing an instrument. In the absence of prior information, we do not offer any hypotheses.

The second goal was to explore the extent to which vertical collectivism and hostile sexism might work in tandem to predict violence myth acceptance as well as the perceptions of DV. Specifically, we tested the serial multiple mediation model shown in Figure 1.

As noted, there are significant positive associations between sexism, violence myth acceptance, and perceptions of DV. The association of vertical collectivism to sexism and myth acceptance has somewhat been established, but not particularly in the dating context. Thus far, no research has focused on the association between vertical collectivism and perceptions of DV. Moreover, we know little about the mechanisms underlying the vertical collectivism–perceptions of DV relationship. Therefore, in this exploratory study, we hypothesized that sexist college students with dysfunctional collectivist tendencies who tend to accept violence myths may, in turn, perceive DV as less abusive.

## Method

### Participants

Participants were college students ( $N = 491$ ) between the ages of 18 and 30 years ( $M = 20.76$  years,  $SD = 1.77$  years) from a large Midwestern urban public university in Turkey. There were 259 women (55.3%) and 229 men (46.7%). Two participants (2.2%) identified as gender-other. A majority (90.4%) identified as heterosexual, with two identifying as lesbian, five as gay, and 14 as bisexual. Of the sample, 78 (15.9%) were preparatory, 69 (14.1%) freshmen, 196 (39.9%) sophomores, 97 (19.8%) juniors, and 48 (9.8%) seniors; 18.7% and 41.5% of the participants, respectively, reported that they never or previously had a dating relationship. The rest defined their relationships as serious dating (34.8%), casual dating (2.2%), cohabiting (1.2%), engaged (0.08%), and married (0.04%).

### Measures

**Demographics.** We developed a form to gather personal (i.e., gender, sexual orientation, age) and relational (i.e., romantic relationship status) data from the participants.

**Vertical collectivism.** We used the Turkish version (Wasti & Erdil, 2007) of the Vertical Collectivism subscale of the Individualism and Collectivism Scale (INDCOL; Singelis et al., 1995) to measure vertical collectivism, which reflects seeing the self as a part of a collective and being willing to accept hierarchy and inequality within that collective. This 10-item scale includes items such as “Family members should stick together, no matter what sacrifices are required”; “It is my duty to take care of my family, even when I have to sacrifice what I want”; and “I would sacrifice an activity that I enjoy very much if my family did not approve of it.” Respondents rated their level of agreement on a Likert-type scale ranging from (1) *strongly disagree* to (5) *strongly agree*. Higher scores indicate greater acceptance of hierarchy and inequality within the collective. Cronbach’s alpha was .68.

**Hostile sexism.** We measured hostile sexism using the Turkish version (Sakallı-Uğurlu, 2002) of Glick and Fiske’s (1996) 11-item Hostile Sexism subscale of the Ambivalent Sexism Inventory, including items such as “Women seek to gain power by getting control over men” and “Most women interpret innocent remarks or acts as being sexist.” Hostile sexism is rated on a 6-point Likert-type scale (1 = *disagree strongly* to 6 = *agree strongly*), with higher scores reflecting more sexist attitudes. Cronbach’s alpha was .85.

*Violence myth acceptance.* The Domestic Violence Myth Acceptance Scale (DVMAS) is an 18-item measure developed to gauge domestic violence myth acceptance (Peters, 2008). It includes items such as “If a woman doesn’t like it, she can leave” and “Domestic violence results from a momentary loss of temper.”

The DVMAS was translated into Turkish through a rigorous forward translation and back-translation process by a team led by the first author. Preliminary analyses of construct validity revealed an unstable factor structure for men and women as in the original English version. Thus, the first author contacted the original author, and upon their recommendation, we created an index of domestic violence myth acceptance by adding all items for the current study. Higher scores indicated greater acceptance of domestic violence myths ( $\alpha = .79$ ).

*Perceptions of DV.* We developed a new measure—the Perceptions of Dating Violence Scale (PDVS)—to address the need for a brief measure to gauge perceptions of DV in college students. For the development of the instrument, we did the following: constructed relevant subconstructs, generated items, did cognitive interviews, and then collected data to determine validity and reliability.

*Construction of constructs and item generation.* Through reviewing the relevant literature, we first created three individual vignettes that depicted circumstances in which a college man (Hakan) commits physically, sexually, or psychologically aggressive behaviors toward his partner (Pınar) in a long-term, committed heterosexual dating relationship (for the vignettes, see Appendix A). The names Hakan and Pınar were chosen because they do not imply any religious and/or political sentiments, and thereby avoid bias (in English, Richard and Lisa might be considered, for example). We then generated an initial pool of 20 items assessing perceptions of DV from the perspective of victim and perpetrator, and responsibility for the violence. Our primary focus in this step was to establish the relevance of each of the 20 items for each vignette. Upon completion of this step, two experts in the field of DV reviewed the draft version. Experts suggested that items “Hakan behaved as he did because he was just jealous of Pınar,” “Hakan’s anger led him to behave in that way,” and “Hakan behaved as he did because he was drunk” might appear as a separate factor as motives for DV and not be relevant to all psychological, sexual, and physical DV vignettes. Thus, we deleted the items.

*Content validation.* Three experts, a Turkish teacher, counselor, and an expert in the area of measurement and assessment, assessed content validity.



The judges were first asked to assess the grammar, fluency, intelligibility, and appropriateness of the items for the target group (undergraduate and graduate students). Second, they were asked to rate the appropriateness of the items for the intended domain. The measurement and evaluation expert further shared his expert knowledge and recommended the deletion of two items as they included extreme adverbs such as “no matter what” and “never” unlike the rest of the scale. This resulted in a 15-item scale. Participants indicated level of agreement on a 6-point Likert-type scale ranging from *disagree strongly* (1) to *agree strongly* (6).

*Cognitive interviewing.* Finally, cognitive interviewing, which allowed us to explore the cognitive processes the respondents used (Collins, 2003), was conducted. Four college students—two men and two women—separately assessed the instrument for appearance, clarity of instructions, rating scale, items, and length while completing it by thinking aloud. With minor feedback from the respondents, we finalized the scale.

## Procedure

Prior to data collection, we gained ethical approval from the Human Subjects Ethics Committee. We then collected the data through an in-class pencil and paper survey in which each respondent was randomly assigned to respond to a vignette depicting psychological ( $n = 158$ , 32.2%), sexual ( $n = 164$ , 33.4%), or physical sexual ( $n = 169$ , 34.4%) violence. The survey took roughly 10 to 15 min to complete. No incentive for participation was offered.

## Data Analysis

To document construct validity for the PDVS, we performed three separate EFAs for the psychological, sexual, and physical vignettes samples, respectively. Then, the relationships between gender and perceptions of psychological, physical, and sexual violence through one-way univariate analysis of variance (ANOVA) were investigated for further validity evidence. We then conducted correlational analyses to see the associations between income (vertical collectivism), two mediators (hostile sexism and violence myth acceptance), and outcome variables (perceptions of violence). Finally, we tested our hypothesis to determine whether hostile sexism and violence myth acceptance serially mediated the association between vertical collectivism and perceptions of DV. In the mediation analyses, we used the PROCESS (Hayes, 2013) macro and employed bootstrapping to estimate indirect and total effects.

## Results

The first goal of the study was to develop the PDVS.

### *Psychometric Analyses*

*Factor analysis.* In the factor analyses done separately for each vignette, we followed the same procedures. The sample size was within the acceptable limits (158, 164, and 169 observations for 15 items for psychological, physical, and sexual DV vignettes, respectively) according to the 10:1 ratio proposed by Hair et al. (2006). To assess the factorability of the data, we inspected the strength of intercorrelations among items and used two statistical measures: Bartlett's Test of Sphericity and Kaiser–Mayer–Olkin (KMO). Correlation coefficients were greater than .30 (Tabachnick & Fidell, 2007). Bartlett's Test of Sphericity was significant,  $\chi^2(105) = 1,264.74, p = .00$ , for psychological;  $\chi^2(105) = 819.71, p = .00$ , for sexual; and  $\chi^2(105) = 1,340.50, p = .00$ , for physical samples. KMO values (.92, .88, and .93 for psychological, sexual, and physical samples, respectively) exceeded the recommended minimum (.60). Both statistics ensured the factorability of the data (Hair et al., 2006). We selected principal axis factoring for factor extraction as recommended by Fabrigar et al. (1999) due to its robustness against the violation of the assumption of multivariate normality. We selected oblique rotation (direct oblimin) as we expected our factors, if any, to be correlated (Preacher & MacCallum, 2003). In deciding on the number of factors to retain, we considered different criteria such as Kaiser's criterion (eigenvalues greater than 1), Catell's scree test, and percentage of variance accounted for (Conway & Huffcutt, 2003).

For the psychological vignette sample, the EFA yielded two factors with eigenvalues greater than one, explaining 58.03% of the total variance. However, the scree plot indicated a clear break after the first factor and implied a single factor solution.<sup>1</sup> Moreover, the results of the EFA (based on the Kaiser's criterion) implied no interpretable solutions. In such situations, Hinkin (1998) suggests the use of theory for selecting the factor structure. Therefore, we reran the analysis and forced a single-factor solution.

The new factor structure accounted for 47.57% of the total variance (eigenvalue = 7.14) for the psychological vignette sample. Identical procedures were followed in analyzing the data obtained for the sexual and physical violence vignettes. The factor loadings of the items are displayed in Table 1. All the items had factor loadings greater than .40 (Hair et al., 2006). The factors for each sample are labeled as "perceptions of dating violence" and included the 15 items of the revised final version.

**Table 1.** Factor Loadings of the Scale Items, Percentages of the Variances, Eigenvalues, and Alphas.

Samples	Sequence of Items	Psychological Violence	Sequence of Items	Sexual Violence	Sequence of Items	Physical Violence
Item 1	9	.657	14	.434	12	.577
Item 2	8	.657	11	.508	6	.717
Item 4	11	.621	6	.606	8	.676
Item 5	10	-.629	13	-.463	11	-.634
Item 10	7	.662	5	.618	10	.650
Item 11	6	-.683	12	-.501	9	-.673
Item 12	4	.723	4	.633	3	.775
Item 13	14	.551	15	.416	15	.484
Item 15	5	.709	7	.599	2	.784
Item 16	12	-.567	1	-.686	7	-.700
Item 18	13	.565	2	.673	13	.547
Item 19	1	.817	3	.670	5	.744
Item 21	3	.727	9	.549	4	.754
Item 23	15	.524	10	.531	14	.497
Item 26	2	.782	8	.599	1	.786
Eigenvalue	7.135		5.557		7.320	
Variance	47.567%		37.044%		48.802%	
M (SD)	38.56 (12.27)		30.70 (9.17)		39.20 (13.07)	
$\alpha$	.874		.813		.873	

**Reliability.** We next calculated Cronbach's alphas. As illustrated in the Table 1, perceptions of DV for the psychological, sexual, and physical samples had coefficients higher than the recommended minimum (.70; Nunnally, 1978). Reliability analyses did not show a positive change when any item was omitted.

**Validity.** As evidence for construct validity, we ran ANOVAs to test whether the scale discriminated between men and women's perceptions of psychological, sexual, and physical DV as has been found previously (e.g., Hutchinson, 2012). There was a significant main effect of gender on perceptions of psychological,  $F(2, 150) = 9.93, p < .00, \eta^2 = .12$ ,<sup>2</sup> sexual,  $F(1, 159) = 15.32, p < .00, \eta^2 = .09$ , and physical,  $F(1, 164) = 28.12, p < .00, \eta^2 = .15$ , violence. These findings show that men compared with women perceived psychological ( $M_{\text{men}} = 42.30, SD_{\text{men}} = 14.25; M_{\text{women}} = 32.85, SD_{\text{women}} = 12.50$ ), sexual ( $M_{\text{men}} = 31.13, SD_{\text{men}} = 11.90; M_{\text{women}} = 24.81, SD_{\text{women}} = 8.34$ ), and physical ( $M_{\text{men}} = 43.10, SD_{\text{men}} = 17.35; M_{\text{women}} = 31.54, SD_{\text{women}} = 10.18$ ) violence less abusive with medium to large effect sizes.

**Table 2.** Cronbach Alphas, Means, Standard Deviations, and Intercorrelations Among Study Variables by Gender.

Gender	1	2	3	4	Women		Men	
					<i>M</i> ( <i>SD</i> )	$\alpha$	<i>M</i> ( <i>SD</i> )	$\alpha$
Vertical collectivism (1)	1	.205**	.193**	.209**	35.88 (4.43)	.60	35.47 (5.26)	.71
Hostile sexism (2)	.441**	1	.520**	.265**	37.44 (10.13)	.86	44.08 (9.19)	.84
Myth acceptance (3)	.379**	.572**	1	.330**	67.13 (14.52)	.80	73.60 (13.47)	.75
Perceptions of violence (4)	.249**	.400**	.384**	1	29.81 (11.02)	.69	38.62 (15.64)	.70

Note. Intercorrelations for women are presented above the diagonal; intercorrelations for men are presented below the diagonal. Total *N* is 491. *N* women = 259, *N* men = 229. Two cases deleted due to defining as gender-other.

\*\* $p < .001$ .

We next turn to the second goal of the study concerning the correlation among measures and mediation analyses.

### Correlation Analyses

The zero-order correlations with regard to gender are illustrated in Table 2 to explore the associations among the study variables before mediation analyses. As seen, all the study variables showed significant and positive correlations for both genders. To name a few, for women, correlations from perceptions of DV to vertical collectivism ( $r = .21, p < .001$ ), hostile sexism ( $r = .27, p < .001$ ), and violence myth acceptance ( $r = .33, p < .001$ ) were significant and positive.

### Mediation Analyses

We tested our hypothesis regarding serial multiple mediation (Model 6, serial mediation with two mediators) using PROCESS (Version 2.041; Hayes, 2013). Using 5,000 bootstrap samples, we tested each path of the mediation model. This entailed the use of three separate regression models (please see Table 3 and Figure 1), one for each of the outcomes (mediator 1 [hostile sexism], mediator 2 [myth acceptance], and dependent variable [perceptions of DV]). The first estimated model included the relationships between vertical collectivism and hostile sexism. In the second, myth acceptance was regressed on both vertical collectivism and hostile sexism. Finally, in the third regression, vertical collectivism, hostile sexism, and myth acceptance were all included as predictors of perceptions of DV. The model controlled for gender.

**Table 3.** Multiple Regression Models With Regard to the Significance Test of Serial Mediation With Two Mediators.

Predictors	Model 1 (Outcome = Hostile Sexism)		Model 2 (Outcome = Myth Acceptance)		Model 3 (Outcome = Perceptions of Violence)	
	Standardized Parameter Estimate	CI	Standardized Parameter Estimate	CI	Standardized Parameter Estimate	CI
Gender	6.602***	[4.958, 8.245]	1.666	[-0.546, 3.879]	5.885	[3.565, 8.204]
Vertical collectivism	<b>0.740***</b>	[0.556, 0.925]	0.417**	[0.169, 0.665]	0.365*	[0.103, 0.628]
Hostile sexism			<b>0.719***</b>	[0.605, 0.883]	0.239***	[0.101, 0.376]
Myth acceptance					<b>0.211***</b>	[0.117, 0.305]

Notes. Model 1:  $R^2 = .20$ ,  $F(2, 477) = 57.88$ ,  $p = .000$ ; Model 2:  $R^2 = .34$ ,  $F(3, 476) = 82.51$ ,  $p = .000$ ; Model 3:  $R^2 = .24$ ,  $F(4, 475) = 38.40$ ,  $p = .000$ . The values in bold correspond to the three paths of the mediational model. CI = confidence interval.

\* $p < .05$ . \*\* $p < .001$ . \*\*\* $p = .000$ .

Table 3 shows that for the first model, we found a significant positive association between vertical collectivism and hostile sexism,  $\beta = 0.74$ ,  $t(477) = 7.89$ ,  $p = .000$ . In Model 2, there was a significant association between hostile sexism and myth acceptance,  $\beta = 0.72$ ,  $t(476) = 12.40$ ,  $p = .000$ , and between vertical collectivism and myth acceptance,  $\beta = 0.42$ ,  $t(476) = 3.30$ ,  $p < .001$ . In Model 3, that regressed perceptions of DV on vertical collectivism, hostile sexism, and myth acceptance, a significant relationship emerged between vertical collectivism and PDVS,  $\beta = 0.37$ ,  $t(475) = 2.74$ ,  $p < .005$ , and between hostile sexism and PDVS,  $\beta = 0.24$ ,  $t(475) = 3.43$ ,  $p = .000$ . The association between myth acceptance and PDVS was also significant,  $\beta = 0.22$ ,  $t(475) = 4.42$ ,  $p = .000$ . In summary, the three paths of interest were all significant.

The total effect of vertical collectivism on perceptions of violence was significant in the model controlling for gender,  $\beta = 0.74$ ,  $t(477) = 5.65$ ,  $p = .000$ . The total indirect effect (i.e., vertical collectivism  $\rightarrow$  hostile sexism  $\rightarrow$  myth acceptance  $\rightarrow$  perceptions of violence) was significant (95% confidence interval [CI] = [0.0556, 0.1992]), providing evidence for serial mediation. The other indirect paths (i.e., vertical collectivism  $\rightarrow$  hostile sexism  $\rightarrow$  perceptions of violence and vertical collectivism  $\rightarrow$  myth acceptance  $\rightarrow$  perceptions of violence) were also significant, providing evidence for mediation (Table 4). In summary, consistent with our hypothesis, greater vertical collectivism was related, serially, to more hostile sexism and acceptance of violence myths and, in turn, to perception of DV as less abusive.

**Table 4.** Bootstrapped Results of Indirect Effects.

Path	$\beta$	Boot SE	Boot LLCI	Boot ULCI
Vertical collectivism → Hostile sexism → Perceptions of violence	0.1171	0.0691	0.2546	0.5239
Vertical collectivism → Myth acceptance → Perceptions of violence	0.0883	0.0345	0.0343	0.1762
Vertical collectivism → Hostile sexism → Myth acceptance → Perceptions of violence	0.1128	0.0357	0.0556	0.1992

Note. Reported BC intervals are the bias-corrected 95% CI of estimates resulting from bootstrap analysis; 5,000 bootstrapped samples. Total *N* is 480. Eleven cases were deleted due to missing data. LLCI = lower limit of CI; ULCI = upper limit of CI; CI = confidence interval.

## Discussion

The current study had two purposes. The first was to develop and validate an instrument to gauge perceptions of psychological, sexual, and physical DV. The second was to test a serial multiple mediation model of vertical collectivism on perceptions of DV with hostile sexism and violence myth acceptance as serial mediators.

### *Perceptions of DV: Assessment*

Drawing on relevant literature, we developed an initial, 20-item scale and then subjected it to an expert opinion evaluation, which resulted in the deletion of five items. The goal was to develop an instrument with a solid and valid factor structure that measures perceptions of different types of DV. Therefore, one of three different scenarios portraying psychological, physical, and sexual violence was randomly distributed to each participant, and EFAs were conducted to test the underlying factor structure. The findings of factor analyses provided initial construct validity evidence, and the factor identified was titled “perceptions of dating violence.”

In regard to construct validity, we tested whether the new measure discriminated between male and female college students’ perceptions of DV. Consistent with the literature (e.g., Carlson, 1999; Dardis et al., 2017; Hutchinson, 2012), men compared with women perceived psychological, sexual, and physical violence as less abusive. This result is also consistent

with gender schema theory (Bem, 1981), where the aggressive role is more consistent with maleness, whereas nurturing or compliance is more consistent with the female gender schema; therefore, men could consider all three DV types as less abuse compared with women. Thus, consistent with gender schema theory, all abusive behaviors might be justified or tolerated more by men compared with women participants (Courtain & Glowacz, 2018; García-Díaz et al., 2017).

The difference between men and women was largest in perceptions of physical violence and smallest for sexual violence. When it comes to nonconsensual sex, the perception differences appear to be blurred, which largely mirrors findings in the literature, in that, both genders tend to perceive it as serious (Price et al., 1999). As suggested by Price et al. (1999), the magnitude of the harm might result in this kind of DV being perceived seriously by both genders compared with physical and psychological violence. As seen in the vignette, acts of sexual violence were apparently clear, which might have reduced the gender difference. For the physical violence vignette, men might consider the acts of physical violence (i.e., driving dangerously, grabbing the phone, pushing, slapping) as minor or justify the use of violence in the current context. However, because males are physically stronger and bigger than females, women might regard physical violence as more serious than men (Hamby & Jackson, 2010). This is highlighted in a study by Sears et al. (2007), where female's aggressive behaviors were likely perceived as "joking around" because the injury inflicted by women does not usually cause the same degree of harm as that caused by men owing to physical size and strength differences. Hammock et al. (2015) similarly reported that the aggression from a man was perceived to cause more harm, and, therefore, evaluated as deserving greater punishment. For all three violence types, women viewed the behavior as more abusive than men did. Because the victim in each scenario was a college woman, women's responses might also reflect their empathy for the victim (Taylor et al., 2017). Men might justify DV perpetration in each vignette as the victim and perpetrator in the scenarios drank alcohol. Men are more inclined to refer to alcohol as justification for violent acts.

Regardless of gender, college students perceived sexual violence as more abusive, followed by psychological and physical violence, which comports with existing literature. Hutchinson (2012) found that psychological violence by a dating partner was seen as more abusive than physical violence. Hilton et al. (2003) measured only perceptions for physical and sexual violence and found that both genders perceived sexual violence more seriously than physical violence. The reason that sexual violence is perceived as more serious than physical and psychological violence could be the magnitude of the harm

(i.e., Price et al., 1999). Psychological violence might be perceived as more serious than physical violence due to the higher frequency of this type of abuse. Consequently, physical violence might be seen as a one-time incident, whereas psychological violence might be considered more frequent and thus more serious. For instance, Sears et al. (2007) reported that 35% of boys and 47% of girls reported the use of psychological violence in their dating relationships. The percentage of physical violence was 15% and 28% for boys and girls, respectively, and 17% and 5% for sexual violence by boys and girls, respectively. Jezl et al. (1996) also reported higher rates for psychological violence (96% for adolescent boys and girls) compared with physical (59%) and sexual violence (15%). Overall, the findings supported the discriminative power of the instrument.

The bivariate correlations among study variables provided further evidence of criterion-related validity. As previous studies (Herrero et al., 2017; Lonsway & Fitzgerald, 1995) have shown, the associations between hostile sexism, violence myth acceptance, and perceptions of violence were positive. Lonsway and Fitzgerald (1995) found that the relationships among hostile sexism, acceptance of interpersonal violence, and rape myths were positive. Eight of nine studies included in the meta-analytic study of Yapp and Quayle (2018) found significant associations between rape myth acceptance and sexual violence. Ibabe and colleagues (2016) showed the predictive role of hostile sexism on victimization. Similarly, Cross et al. (2019) found that men who endorse hostile sexism perceive their power as lower in romantic relationships, which in turn lead them to use more aggression. The central study of Burt (1980) also emphasized this relationship where the higher sexual stereotyping and acceptance of violence were related to higher levels of acceptance of myths related to rape. Reyes et al. (2016) also reported that the greater the gender stereotypes held by men related to more acceptance of DV and as a result predicted more perpetration. In a similar vein, Valor-Segura and colleagues (2011) reported that people higher in hostile sexism tended to hold discriminative attitudes and justify the aggression toward women. The positive yet modest associations of perceptions of DV to hostile sexism and violence myth acceptance further provide evidence in favor of our argument that perceptions of DV is a related yet distinct construct. Moreover, we found a positive association between vertical collectivism and perceptions of DV, such that college students higher in vertical collectivism tend to favorably perceive DV (less abusive).

Overall, our results suggest that this initial version of the “Perceptions of Dating Violence Scale” is a brief yet comprehensive and psychometrically sound instrument to gauge perceptions of psychological, sexual, and physical DV.



## *Perceptions of DV: Antecedents*

Turning to our second purpose, the test of a serial mediation model, our results supported the proposed indirect effect. We hypothesized that vertical collectivism would be related to perceptions of DV perpetration with hostile sexism and violence myth acceptance as serial mediators. We found that college students with greater vertical collectivism, which emphasizes hierarchy and distinctive roles, have more support for male dominance and gender differentiation, which in turn contributed to more acceptance of violence-related myths, and that these more accepting attitudes were related to perceptions of DV behaviors. The sequential association accounting for perceptions of DV was supported. This finding replicates previous findings (Laca et al., 2012; Lim & Chang, 2009) and extends our understanding of how vertical collectivism operates through hostile sexism and myth acceptance to shape violence perceptions in dating contexts. The model held true for both college men and women, which may imply that gendered perceptions of violence is a matter of gender stereotypes instead, defining women as weaker sex, rather than sex itself (Berkel et al., 2004; Stith et al., 2004; White & Kurpius, 2002)

Although we did not set any hypotheses regarding the (a) vertical collectivism → hostile sexism → perceptions of violence and (b) vertical collectivism → violence myth acceptance → perceptions of violence indirect paths, they were also significant. In the first indirect effect, vertical collectivism appeared to make a strong contribution to college students' perceptions of violence through the mechanism of hostile sexism. In the second indirect effect, vertical collectivism was associated with increased levels of violence myth acceptance, which in turn contributed to perceptions of DV. Although no studies exist that directly assess these indirect relationships among the variables, in his comprehensive analysis of data from 16 nations, Archer (2006) found that hostile attitudes were related to male-to-female acceptance of violence. He also found that collectivism was a strong predictor of violence as it was more strongly related to hierarchical structure in collectivist cultures than the more egalitarian attitudes in individualistic cultures. Finally, Archer (2006) also reported that hostile sexism was related to more acceptance of violence (i.e., slapping). Based on these relationships, vertical collectivism, which emphasizes inequality within the collective, might contribute to the perception of DV through hostile sexism, which was a significant predictor of violence, as shown in many studies (i.e., Glick et al., 2002; Rollero & Tartaglia, 2019). Similarly, keeping in mind that vertical collectivism refers to acceptance of hierarchy, the patriarchal structure in Turkey (Marshall & Furr, 2010) might facilitate acceptance of myths regarding domestic violence, and thereby contribute to the perception of DV as less abusive.

### *Limitations and Research Implications*

This study has several strengths and limitations. First, the development of the PDVS seems a promising attempt to fill the need for a psychometrically sound instrument to assess college students' perceptions of psychological, sexual, and physical DV. However, it is only a first step as more psychometric data are needed. Toward this end, we recommend testing factor structure and measurement invariance across gender (for psychological, sexual, and physical vignettes) with different, diverse, and larger samples to increase the generalizability of the results. In doing so, random sampling will be important to ensure a more representative sample. It will also be important to assess and control for socially desirable responding. Although support was found for the proposed serial mediation model, it provides limited information on the direction of effects. Stronger evidence is needed that can be obtained by collecting longitudinal data that allow temporal ordering to be examined. The relationship of perceptions of DV to other constructs such as masculinity and femininity, hegemonic and fragile masculinity, gender role stereotyping, and victim blaming should be investigated in future validation of the scale.

In addition, this study provided us with evidence of a single and integrated framework to delve deeper into perceptions of DV. We explored how hostile sexism and acceptance of violence myths served as serial mediators of the association between vertical collectivism and perceptions of DV. Yet, we do not know whether these perceptions will give rise to actual violent behaviors. Further studies may add DV perpetration as the consequence of perceptions. Finally, the perpetrator of violent behaviors in the psychological, sexual, and physical vignettes was a college man. We strongly suggest that future studies examine other gender patterns (female to male, female to female, male to male).

### *Practical Implications*

The current research is of practical significance. One intriguing implication might be for mental health practitioners at colleges to deliver psychoeducation in an effort to prevent DV. This is likely to be critical at colleges where students display collectivistic tendencies. Our findings imply that leveraging horizontal collectivism, accepting the fact that everyone is equal within the collective, might be a prerequisite for challenging sexism. Thus, framing a message that highlights an antihierarchical and egalitarian group environment could positively affect group participants' attitudes toward gender, sexism, acceptance of violence, and, thus, perceptions of violence. Previous studies showed a rights-based, antihierarchical, empowering, interactive, material, and technology-assisted group was captivating and effective in preventing DV (Cinsel Şiddetle Mücadele Derneği, 2019). In

those groups, the emphasis on egalitarianism in the collective further contributed to understanding that in close relationships, partners are equal regardless of gender, sexual orientation, and sexual identity, thus challenging views of superiority and privilege. We also suggest participation of both genders, independent of their sexual orientation or gender identity, in prevention groups to create a more inclusive, comprehensive, and challenging group environment. Although sexism, violence myth acceptance, and perceptions of DV are interrelated, sexism seems to precede the two others. Thus, in preventive, psychoeducational groups, participants may benefit from the discussion of interaction in terms of hierarchy and egalitarianism as it may challenge perceptions of hierarchy. Steps can then be devised to create a safe group environment. This can be followed by engagement of topics such as gender, gender-related concepts, gender equality, gender-based violence, DV (definition, types), DV myths, personal borders, consent, construction of consent, and healthy, unhealthy, and violent relationships. Any prevention program should give college students a voice to discuss issues. Efforts that only and directly address perceptions of DV might be insufficient to meet the needs of college students to capture comprehensively the dynamics behind the perceptions of DV. Similarly, in the education of mental health practitioners as group leaders, the same method can be used to promote their self-awareness about DV, build their professional capacities pertaining to DV, and encourage them to conduct prevention studies.

### **Concluding Comments**

Despite its limitations, the findings of this study add to the growing literature on perceptions of DV. It does so in many ways, including the provision of a new, solid, and sound measure and a serial causal model with practical implications for preventive interventions for undergraduate and graduate students, particularly those who have dysfunctional collectivistic tendencies. Finally, it shows that along with vertical collectivism, sexism is still a barrier that needs to be overcome in challenging attitudes toward and perceptions of DV.

## **Appendix A**

### ***Sexual Dating Violence (DV) Vignette***

Lisa and Richard<sup>3</sup> are students who met at college. They have been dating for almost a year and have begun to talk about marriage after college. They had been invited to a party by one of their mutual friends. (Introduction)

They went together, drank, and enjoyed the party, and afterward decided to stay the night at Richard's house as usual. When arrived at home, Richard wanted to have sex with Lisa. She refused saying that she was tired, feeling

dizzy, and somewhat drunk. Richard insisted on having sex; again Lisa said no. Richard threw Lisa on the bed, started to kiss her and the more she resisted, the more he insisted. He held her down and forced her to have sex with him although she continued to ask him to stop. (Description)

### ***Psychological DV Vignette***

Lisa and Richard are students who met at college. They have been dating for almost a year and have begun to talk about marriage after college. They had been invited to a party by one of their mutual friends. (Introduction)

At the beginning of the party, Richard compared Lisa's party dress, which was low cut, with the others and put down her appearance. He did not listen to her explanation for wearing that particular dress and kept shaming her in front of the others. He started calling her names, which made her very upset. She wanted to discuss her concerns with him, but he refused to go out and talk about what was going on. He told her she was crazy and irrational. He also blamed her for spoiling the party and withheld affection from her for the rest of the night. (Description)

### ***Physical DV Vignette***

Lisa and Richard are students who met at college. They have been dating for almost a year and have begun to talk about marriage after college. They had been invited to a party by one of their mutual friends. (Introduction)

They went together, and at the party, Richard was away for a while. When he came back, he saw that Lisa was talking to a guy. Richard knew that the guy once asked Lisa for a date, which she refused. After the party, on their way to home in the car, Richard let Lisa know that her talking to that guy disturbed him and they started to argue. While arguing, Richard yelled and cursed and drove dangerously with Lisa still in the car. When Lisa tried to make a phone call to one of her friends, he pushed her, grabbed the cell phone, destroying it, and slapped Lisa, saying that it would be better for her not to talk to that guy or any other guy who was interested in her. (Description)

## **Appendix B**

### ***The Perceptions of Dating Violence Scale (PDVS)***

Below are a scenario and a series of statements following about a man and woman and their relationships. Please read the scenario first and then indicate the degree to which you agree or disagree with each statement using the following scale:

1 = *disagree strongly*, 2 = *disagree somewhat*, 3 = *disagree slightly*, 4 = *agree slightly*, 5 = *agree somewhat*, 6 = *agree strongly*  
 Disagree strongly 1-----2-----3-----4-----5-----6 Agree strongly

Item 1. Richard<sup>4</sup> had the right to behave as strongly as he did.

Item 2. There was nothing wrong with Lisa's behavior.

Item 4. Lisa<sup>5</sup> had some fault in the incident.

Item 5. Richard had responsibility for this incident.

Item 10. Lisa provoked the incident.

Item 11. Richard should blame himself for what happened.

Item 12. Lisa should not have behaved as she did.

Item 13. Richard did not mean to behave as he did.

Item 15. Lisa had some responsibility for creating this situation.

Item 16. It was okay for Richard to act as he did to discipline Lisa's actions.

Item 18. Richard had the right to behave as he did, but not as strongly as he did.

Item 19. Richard had the right to be angry.

Item 21. Lisa should be blamed for Richard's actions.

Item 23. Richard had the right to behave as he did as long as he did not cause Lisa permanent physical injury.

Item 26. Lisa should be blamed because she behaved badly.

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## Notes

1. We observed the same pattern of results for the sexual and physical vignettes samples.
2. For perceptions of psychological dating violence sample, two of the participants identified as gender-other unlike the other samples.
3. Hakan and Pınar.
4. Hakan.
5. Pınar.

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