Victims of dating violence in adolescence: 
the role of problematic use of social networks sites, loneliness, and family climate

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Abstract: The relationship between online-offline socialization contexts during adolescence has become a relevant research topic in recent years, especially in the field of intimate partner violence. To better understand this association, the present study analyzes the relationship between dating violence (DV) victimization and the problematic social networking sites use (PSNSU), the feeling of loneliness, and the family climate, taking into account the adolescents’ gender. 1020 adolescents from Andalucía participated (49% boys, M = 16.12, SD = .99). A cluster analysis, which established two groups (victimized and non-victimized), multivariate analysis of variance (2x2 MANOVA) using sex and DV as independent variables, and univariate analysis of variance to explore the significant relationships detected, were performed. The results showed that adolescent victims of DV obtained higher scores than non-victims in PSNSU, feelings of loneliness, and family conflict, and lower scores in family cohesion. Victimized girls generally showed lower scores than victimized boys. The results obtained provide relevant and useful information for the prevention of DV and the promotion of healthy relationships in early dating relationships. In addition, they point out the importance of considering the online context in research on violence in adolescence.

Keywords: Dating violence victimization. Problematic social networking sites use. Loneliness. Family climate. Adolescence.

Introduction

In recent years, dating relationships in adolescence have been the focus of attention of an important group of researchers in the social sciences and, particularly, within the field of psychology, due to their special relevance in the psychosocial and emotional adjustment of the person in this evolutionary stage (Navarro-Pérez et al., 2020; Rodríguez-Franco et al., 2012; Taquette & Monteiro, 2019; Wincentak et al., 2017). On another hand, these relationships are also the object of study and concern due to the violent nature they acquire in certain cases and the experience of victimization that occurs within some of them (Breiding et al., 2015; Santoro, Martínez-Ferrer et al., 2018).

In the victimization that occurs in adolescent couples (dating violence or DV), several forms can be identified, for example: (1) physical violence, including actions such as shoving, hitting, punching, or slapping the victim; (2) relational violence, which refers to the exercise of control over the rest of the victim's social relations; and (3) verbal-emotional violence, which involves humiliation of the victim through threats, insults, or emotional blackmail (Cava et al., 2020).

In numerous studies, a significant proportion of adolescents have experienced one or more of these types of violence in their relationship, although studies on the incidence of DV victimization in adolescents reflect a wide variability in prevalence rates (Muñiz-Rivas et al., 2018; Turner et al., 2017). For example, the percentage of adolescents who state they have suffered verbal-emotional violence in their relationship is between 17% and 88% (Hérbert et al., 2017; Leen et al., 2013; Wincentak et al., 2017). In the case of physical violence, the observed prevalence rate ranges from 1% to 61%, and between 34% and 65% in the case of relational violence (Muñiz-Rivas et al., 2020; Villafañe et al., 2012).

This large variability observed in the previous literature can be attributed mainly to operational, methodological, and sampling discrepancies in the study of DV. These discrepancies could be explained by the absence of a consensus about the characteristics that make up this type of violence (Sánchez–Hernández et al., 2020; Wincentak et al., 2017). From the point of view of the consequences for the victims of DV in adolescence, it is important to note that they...
experience serious maladjustment at the individual, social, and family levels. For example, in numerous studies, it is pointed out that victimized adolescents show high levels of anxiety, stress, depressive symptoms, poor academic performance, and poor family communication (Exner-Cortens et al., 2013; Gómez-López et al., 2019; Povedano-Díaz et al., 2019). The different levels or life areas of the adolescent victimized by DV indicate the importance of their environmental contexts and also the need to examine the interaction between individual and social variables in the study of DV victimization (Gracia-Leiva et al., 2019).

In this sense, the ecological approach (Bronfenbrenner, 1979) can be considered an adequate theoretical perspective from which to perform the analysis of DV victimization in adolescence, as it considers human behavior as the result of the interaction between individuals and their relational context. However, little research has used this approach so far. The interest of this work lies precisely in the study of DV victimization from the ecological perspective, including variables related to each of the relevant adolescent life contexts, to achieve a deeper profile of the victims.

**DV victimization and Social Network Sites Addiction**

As a result of the incorporation of information and communication technologies (ICTs) into adolescent social relations, DV has changed the way in which it is expressed, maintaining its incidence among younger adolescents and with similar consequences for the victims (Flores & Browne, 2017; Muñiz-Rivas et al., 2020; Sánchez-Hernández et al., 2020). Regarding the use of ICTs in the area of DV, recently, a direct link has been found between DV victimization and problematic use to social networks sites (PSNSU) (Aparicio-Martínez et al., 2020; García-Sánchez et al., 2017).

Firstly, we note that PSNSU is a disorder determined by an abnormal pattern of use, abnormally high connection times, isolation from the environment, neglect of work and academic obligations, and of offline social life (Banjanin et al., 2010). Several studies have shown that the inappropriate or excessive use of SNS during adolescence can have a negative psychosocial impact that reduces victims’ psychological well-being. It also increases anxiety (Chabrol et al., 2017), depressive symptoms (Marino et al., 2018), violent behaviors or attitudes, and frequent feelings of guilt, isolation, and loneliness (Estévez et al., 2020; Marino et al., 2018; Oberst et al., 2017).

On another hand, PSNSU is equally related to the loss or deterioration of interpersonal relationships, especially in the family environment (Banjanin et al., 2015; Carbonell et al., 2012; Parra-Sierra et al., 2016), and with peers, including the first dating relationships (Arnaiz et al., 2016; García et al., 2019; Ortega-Barón et al., 2016). In the case of affective dating relationships, PSNSU can promote violent people’s control of their partner through the permanent connection of everything that their partner or former partner does in the network. This causes them to frequently perceive their situation as threatening (Torres et al., 2014). Therefore, it increases the repetitive exposure to certain practices of these spaces with the added risk of becoming their victim (García et al., 2019; Gracia-Leiva et al., 2020).

**DV victimization and loneliness**

In the individual sphere, numerous investigations have shown that DV victims feel lonelier than non-victims (Muñiz et al., 2015; Ostrov & Kamper, 2015; Vanhalst et al., 2014). The feeling of loneliness can be defined as a negative emotional response to the difference between the desired and the achieved quality of social relationships (Vanhalst et al., 2014). Adolescent boys and girls who are victimized by their peers show high levels of loneliness and social isolation (Cañas et al., 2020; Matthews et al., 2020; Muñiz et al., 2015). As suggested in some research, the fact that adolescents present symptoms of isolation could be an indicator of their becoming a victim (Larrañaga et al., 2016; Povedano et al., 2015) but also a consequence of this role. Boys and girls who are victimized by their peers and have feelings of loneliness may have a greater need to bond affectively to a couple relationship, even if it includes aggressive behaviors. This would increase their vulnerability and, in turn, the possibility of being victimized by their partner (Estévez et al., 2018; Gracia-Leiva et al., 2020; Matthews et al., 2020).

**DV victimization and family environment**

Continuing with the ecological model, at the social level, it has been considered in previous studies that certain characteristics of the family context may be associated with DV victimization (Moreno-Ruiz et al., 2019). The family is the first context where personal identity develops and where the individual relates to others, so it is the first link between the individual and the society in which they live. Thus, some authors suggest that there is a close association between a negative family climate and the reduction of adolescents’ social and individual skills, which makes them more vulnerable to being victimized by their peers (Cerezo et al., 2018; Estévez et al., 2018). The family climate is considered as the environment perceived by family members through family cohesion, that is, the extent to which family members are committed to and help each other, family expressiveness or communication, and conflict (Moos et al., 1984).

In addition, impaired or violent family relationships influence adolescents to spend more time connected to SNS, in order to replace these family deficiencies or, also, to rebel against them (Ortega-Barón et al., 2016). On another hand, a positive family climate, characterized by affective cohesion among its members, support, trust, and open family communication, and the enhancement of the children’s adjustment, is related to low participation in violent acts in dating relationships (García et al., 2019; Moral & Ovejero, 2015;
Gender differences and DV victimization

With regard to gender differences, in virtually all the studies conducted, prevalence rates in DV victimization are higher in female adolescents than in males (Carrascosa et al., 2016; Hérbert et al., 2017; Villafaña et al., 2012). However, some studies found no significant differences between the two genders in DV victimization (Foshee et al., 2015), or else they found that boys are more victimized (Bennett et al., 2011). Belief in the myths of romantic love, very common at these ages—such as the association between jealousy, controlling one’s partner, and true love—is a factor that favors VD in the adolescent stage (Ramiro-Sánchez et al., 2018; Rodríguez-Castro et al., 2013).

If we look at the primary socialization group, families in which family conflicts are frequent represent a context that facilitates the expression of violent behaviors and victimization, especially for girls (Jiménez-Iglesias et al., 2014; Muñiz, 2017). In other variables, such as PSNSU, marked gender differences are also found. Recent studies indicate girls’ higher propensity to PSNSU (Carbonell et al., 2012; García et al., 2019, Muñiz-Rivas et al., 2020), which is consistent with the results of previous research indicating girls’ greater tendency to use various media to promote interpersonal communication and the search for affective connection (Fandiño-Leguía, 2015) as instruments to cope with negative emotional states like loneliness (Muñiz et al., 2015; Polo et al., 2017).

The Current Research

DV victimization in adolescence is a growing problem, and numerous works have confirmed the important role played by individual and social variables such as PSNSU, family climate, and loneliness (Cañas et al., 2020) in its development and perpetuation. However, no previous study has analyzed the relationship between DV victimization and PSNSU, also taking into account gender differences in these psychosocial adjustment variables. These analyses provide new observations to clarify the direct role that PSNSU plays in DV victimization, as well as the relationship with individual and social variables that indicate difficulties in psychosocial adjustment, such as the feeling of loneliness and family climate.

Therefore, the present research aims to analyze: (1) the differences in DV victimization according to PSNSU and loneliness, in the individual and psycho-emotional spheres; and (2) the differences in the family climate (cohesion, expressiveness, and conflict) in relation to DV victimization in the family environment. Finally, it will also analyze the differences in the study variables (PSNSU, feelings of loneliness, and family climate) in both sexes (boys and girls), and their interaction in DV victimization because a different profile is expected in how boys and girls are victimized in DV.

Method

Participants

The analyses of the present study were conducted on data from a representative sample of Spanish secondary and high school students selected through random cluster sampling in the Autonomous Community of Andalusia. The primary sampling units were the urban and rural geographical areas of the provinces of Seville and Córdoba. The secondary units were four educational centers located in different areas of these provinces. The classrooms were considered tertiary units, as the third and fourth grades of secondary education and the first and second grades of high school include the age groups where the first dating relationships occur (Lillo, 2004).

The initial sample of participants was made up of 1255 adolescents aged between 15 and 18 years (M = 16.16, SD = 1.06). However, for the study analyses, a total of 235 cases (18.7%) were excluded from this initial group for the following reasons: participants reported not having or not having had a partner in the past 12 months (n = 195); acquiescent responses (n = 18); difficulties in understanding the items (foreign students) (n = 9); voluntary drop-out from the research (n = 7); and not having parental approval to participate in the study (n = 6). The missing data by scales were treated using the regression imputation method. Thus, the final sample was made up of 1020 adolescents balanced by sex: 495 boys (48.6%) and 525 girls (51.4%). The boys’ average age (M = 16.17, SD = 1.06) and girls’ average age (M = 16.16, SD = 1.07) were similar. Among the secondary school participants, 18.1% were in 3rd grade of Compulsory Secondary Education (CSE) at the time of data collection and 35.2% were in 4th grade. Of the high school students, 24.5% were in 1st grade and 22.2% were in 2nd grade, respectively.

Instruments

- Scale of SNS Addiction (Muñiz-Rivas, et al., 2020). This is a unifactorial scale that evaluates dependence on the social networks used by the respondent, through a single dimension called Dependence (e.g., “If I don’t connect to my social network, I feel bad and get into a bad mood”). The instrument consists of 13 items with a Likert response format ranging from 1 (never) to 4 (always). Cronbach’s alpha obtained in the sample of this study was .84.
- Loneliness Scale (UCLA; Russell et al., 1980; Spanish adaptation of Expósito & Moya, 1999). For this study, the dimension called Emotional Loneliness was used, which refers to the respondent’s perception of isolation and the feeling of solitariness (e.g., “How often do you feel that you miss company?”). This dimension is evaluated with 11 items on a Likert format, ranging from 1 (never) to 4 (al-
ways). The Cronbach alpha obtained in this study had a value of .84.

- **Conflict in Adolescent Dating Relationships Inventory (CADRI)**: Wolfe et al., 2001; Spanish adaptation of Fernández-Fuertes et al., 2006. This instrument has three subscales that assess different types of dating victimization: (1) physical victimization, (e.g., "My partner pushed me or shook me"); (2) verbal-emotional victimization (e.g., "My partner insulted me with contemptuous expressions"); and (3) relational victimization (e.g., "My partner tried to separate me from my group of friends"). The response scale is a Likert format ranging from 1 (never) to 4 (always). Cronbach's alphas obtained in the present sample were .82, .85, and .91, respectively, for each dimension.

- **Family Environment Scale (FES)**: Moos & Moos, 1981; Spanish version of Fernández-Ballesteros & Sierra, 1989). This scale is composed of three dimensions each of which contains nine dichotomous items, with true/false response options: (1) Family Cohesion (e.g., "In my family, there is a strong feeling of union"); (2) Family Expressivity (e.g., "We are generally careful about what we say to each other"); and (3) Family Conflict (e.g., "In my family, we sometimes come to blows"). Cronbach's alphas obtained in this study were .84, .79, and .86, respectively, for each dimension.

**Procedure**

This study is part of a broader work on problem behavior in adolescence in the Spanish population, for the research project with the reference PS12012-33464. After the centers were selected, the managers were contacted by telephone to explain the objectives and scope of the study. Once they agreed to participate, a two-hour informative seminar was organized with the teachers of each school, in which the main points of the study were explained, and their collaboration was requested. In parallel, a letter was sent to the parents describing the study, the main objectives and methodology, asking them to indicate in writing if they did not want their child to participate (1% of parents chose this option). After obtaining the permissions by passive consent, each student was given a list and instructed not to reveal their answers. They were then asked to sign a consent form to voluntarily participate in the research. Then, the battery of instruments was administered to the participating adolescents, guided by a group of trained and expert researchers. The instruments were administered on the dates scheduled with the teaching staff, in two of the students' usual tutoring classes, with a one-week interval. The instruments were administered in the presence of the students' classroom tutor and the researchers, in order to resolve any doubts and thus ensure an impartial process. Participants were previously informed that their participation in the research was voluntary, their data confidential, and that they could leave the study at any time if they so wished. The study complied at all times with the ethical requirements of the Declaration of Helsinki.

**Data Analysis and procedure to calculating variables**

The IBM Statistical Package for Social Sciences (SPSS v20) was used. First, two groups of adolescents were formed according to their different degrees of victimization in dating relationships: Cluster (1) low or non-victimized students and Cluster (2) victimized students. The clusters have been created from a two-stage cluster analysis with a Euclidean measurement distance. The quality of the cluster is good based on a distribution of the cases according to the three dimensions of the victimization variable and on average Silhouette Index (.7). In the interests of research, these groups were established for boys and girls. Adolescents who answered "never" or "rarely" to all the three DV victimization subscale items (score = 1) were assigned to the "non-victimized" group. Adolescents with scores that exceeded the mean score were assigned to the "victimized" group. The frequency and percentage both of boys and girls assigned to each group were calculated.

Previously we checked whether the assumption of normality was met for all variables included in our analyses in order to carry out the multivariate analysis. Each of the Kolmogorov-Smirnov tests has a p-value of .05 and therefore conforms to the assumption of normality.

Subsequently, a factorial (2×2) multivariate analysis of variance (MANOVA) was applied for each set of dependent variables (PSNSU, loneliness, and dimensions of family environment scale), with cluster of victimization (CADRI) (non-victimized vs, victimized) and sex (men vs. women) as independent variables. Univariate F-tests were performed for all sources of variations when multivariate statistically significant differences were found. Univariate significant results were followed by Bonferroni comparisons correction among all possible pairs of means, in the interaction effect.

To determine the minimum distances between the means in the confidence combinations of victimization and sex that are significant, the Bonferroni test was applied, limiting the type I error rate to 1% in order to limit the alpha to 0.01 and to prevent the type I error from increasing as a consequence of the dependence that may exist between different measures of the same subject.

**Results**

**Distribution of Victimization and Gender**

When analyzing the adolescents' distribution according to the degree of DV victimization and gender (see Table 1), the highest frequency was observed in non-victimized (85.3%), and the rest of the participants (14.7%) were in the victimized group. Regarding gender, the prevalence in non-victimized girls (43.5%) was higher than that of the boys (41.8). Conversely, regarding the victimized group, the girls' prevalence was higher (7.9%) than the boys’ (6.8%).
Multivariate analysis

Table 2 presents the results of MANOVA, in which statistically significant differences were found in all the main effects of the study: gender, $\Lambda = .965$, $F(8, 1009) = 4.622$, $p < .001$, $\eta^2 = .035$, and DV victimization, $\Lambda = .950$, $F(8, 1009) = 6.687$, $p < .001$, $\eta^2 = .035$. Also, two statistically significant interaction effects were obtained between these two variables, $\Lambda = .984$, $F(8, 1009) = 2.64$, $p < .05$, $\eta^2 = .022$ (see Figure 2), family Cohesion, $\Lambda = .984$, $F(8, 1009) = 2.041$, $p < .05$, $\eta^2 = .031$ (see Figure 4), and Loneliness, $\Lambda = .965$, $F(8, 1009) = 18.71$, $p < .001$, $\eta^2 = .018$, $d = .38$, and Loneliness, $F(1, 1018) = 17.52$, $p < .001$, $\eta^2 = .017$, $d = .37$; and in the family environment dimensions, Cohesion, $F(1, 1018) = 13.33$, $p < .001$, $\eta^2 = .013$, $d = .32$, and Conflict, $F(1, 1018) = 30.78$, $p < .001$, $\eta^2 = .029$, $d = .49$. The results in the dimension Expressiveness was not significant $F(1, 1018) = 3.23$, $p = .066$, $\eta^2 = .003$, $d = .16$. The Bonferroni tests ($\alpha = .05$) indicated that DV victimized adolescents scored higher on the variables Loneliness, PSNSU, and family Conflict than the non-victimized ones. Also, non-victimized adolescents scored higher in family Cohesion.

Univariate analysis

Regarding DV victimization, the results of the ANOV-A (see Table 3) yielded significant group differences in the variables PSNSU, $F(1, 1018) = 18.71$, $p < .001$, $\eta^2 = .018$, $d = .38$, and Loneliness, $F(1, 1018) = 17.52$, $p < .001$, $\eta^2 = .017$, $d = .37$; and in the family environment dimensions, Cohesion, $F(1, 1018) = 13.33$, $p < .001$, $\eta^2 = .013$, $d = .32$, and Conflict, $F(1, 1018) = 30.78$, $p < .001$, $\eta^2 = .029$, $d = .49$. The results in the dimension Expressiveness was not significant $F(1, 1018) = 3.23$, $p = .066$, $\eta^2 = .003$, $d = .16$. The Bonferroni tests ($\alpha = .05$) indicated that DV victimized adolescents scored higher on the variables Loneliness, PSNSU, and family Conflict than the non-victimized ones. Also, non-victimized adolescents scored higher in family Cohesion.

As noted in Table 4, girls obtained higher scores than boys in PSNSU, $F(1, 1253) = 15.26$, $p < .001$, $\eta^2 = .012$, $d = .22$ and Loneliness, $F(1, 1253) = 5.78$, $p < .05$, $\eta^2 = .005$, $d = .14$. On another hand, no significant gender effects were found in the dimensions of family environment, Cohesion $F(1, 1253) = 2.64$, $p = .104$, $\eta^2 = .002$, $d = .09$, Expressiveness, $F(1, 1253) = 1.51$, $p = .220$, $\eta^2 = .001$, $d = .07$ and Conflict $F(1, 1253) = .09$, $p = .316$, $\eta^2 = .000$, $d = .02$.

Four statistically significant interaction effects were obtained between DV victimization and gender (see Table 5), in the variable PSNSU, $F(3, 1016) = 10.92$, $p < .001$, $\eta^2 = .031$ (see Figure 1), Loneliness, $F(3, 1016) = 7.50$, $p < .001$, $\eta^2 = .022$ (see Figure 2), family Cohesion, $F(3, 1016) = 7.25$, $p < .001$, $\eta^2 = .030$ (see Figure 3), and family Conflict $F(3, 1016) = 10.97$, $p < .001$, $\eta^2 = .031$ (see Figure 4). No significant interaction effect was found only in the dimension of family Expressiveness $F(3, 1016) = 1.86$, $p = .135$, $\eta^2 = .005$ (see Figure 4). Female DV victims obtained higher scores in PSNSU than did males, with highly significant differences. In addition, Loneliness scores were higher in DV

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Table 1

<table>
<thead>
<tr>
<th>Gender</th>
<th>Total Sample</th>
<th>DV Victimization</th>
<th>Non-victimized (n=870)</th>
<th>Victimized (n=150)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>495 (48.6%)</td>
<td>426 (41.8%)</td>
<td>69 (6.8%)</td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>525 (51.4%)</td>
<td>444 (43.5%)</td>
<td>81 (7.9%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1020 (100%)</td>
<td>870 (85.3%)</td>
<td>150 (14.7%)</td>
<td></td>
</tr>
</tbody>
</table>

Note. DV= Dating violence.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>F(1, 1253)</th>
<th>p-value</th>
<th>$\eta^2$</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSNSU</td>
<td>2.64</td>
<td>.104</td>
<td>.002</td>
<td>.09</td>
</tr>
<tr>
<td>Loneliness</td>
<td>5.78</td>
<td>.016</td>
<td>.005</td>
<td>.14</td>
</tr>
<tr>
<td>Cohesion</td>
<td>2.64</td>
<td>.104</td>
<td>.002</td>
<td>.09</td>
</tr>
<tr>
<td>Expressiveness</td>
<td>1.51</td>
<td>.220</td>
<td>.001</td>
<td>.07</td>
</tr>
<tr>
<td>Conflict</td>
<td>.09</td>
<td>.762</td>
<td>.000</td>
<td>.02</td>
</tr>
</tbody>
</table>

Note. PSNSU = Problematic social networking sites use. * Small effect size (d=0.2), ** medium effect size (d=0.5), *** large effect size (d=0.8).

Table 3

<table>
<thead>
<tr>
<th></th>
<th>Non-Victimized</th>
<th>Victimized</th>
<th>F(1, 1018)</th>
<th>p-value</th>
<th>$\eta^2$</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSNSU</td>
<td>1.82 (43)</td>
<td>1.99 (47)</td>
<td>18.71</td>
<td>.000</td>
<td>.018</td>
<td>.38**</td>
</tr>
<tr>
<td>Loneliness</td>
<td>1.84 (42)</td>
<td>2.00 (45)</td>
<td>17.52</td>
<td>.000</td>
<td>.017</td>
<td>.37**</td>
</tr>
<tr>
<td>Cohesion</td>
<td>1.77 (22)</td>
<td>1.70 (26)</td>
<td>13.33</td>
<td>.000</td>
<td>.013</td>
<td>.32**</td>
</tr>
<tr>
<td>Expressiveness</td>
<td>1.59 (21)</td>
<td>1.55 (22)</td>
<td>3.23</td>
<td>.066</td>
<td>.003</td>
<td>.16*</td>
</tr>
<tr>
<td>Conflict</td>
<td>1.34 (19)</td>
<td>1.43 (22)</td>
<td>30.78</td>
<td>.000</td>
<td>.029</td>
<td>.49**</td>
</tr>
</tbody>
</table>

Note. DV= Dating violence; PSNSU= Problematic social networking sites use. * Small effect size (d=0.2), ** medium effect size (d=0.5), *** large effect size (d=0.8).

Table 4

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
<th>F(1, 1253)</th>
<th>p-value</th>
<th>$\eta^2$</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSNSU</td>
<td>1.79 (41)</td>
<td>1.88 (43)</td>
<td>15.26</td>
<td>.000</td>
<td>.012</td>
<td>.22**</td>
</tr>
<tr>
<td>Loneliness</td>
<td>1.85 (40)</td>
<td>1.91 (43)</td>
<td>5.78</td>
<td>.016</td>
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</tr>
<tr>
<td>Expressiveness</td>
<td>1.58 (20)</td>
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<td>1.51</td>
<td>.220</td>
<td>.001</td>
<td>.07*</td>
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<tr>
<td>Conflict</td>
<td>1.34 (20)</td>
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victimized girls than in non-victimized girls and DV victimized boys. Regarding the family environment dimensions, DV non-victimized males and females both scored significantly lower in family Conflict than did DV victimized females. Furthermore, non-victimized males obtained higher scores in family Cohesion than did non-victimized females, and DV victimized girls obtained lower scores than victimized boys. (Table 5) (Figure 1) (Figure 2) (Figure 3) (Figure 4)

Table 5
Means, Standard Deviations (SD), and ANOVA results between DV victimization, gender and the Variables.

<table>
<thead>
<tr>
<th>DV victimization</th>
<th>Gender</th>
<th>Non-victimized</th>
<th>Victimized</th>
<th>F(3, 1016)</th>
<th>p-value</th>
<th>η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSNSU</td>
<td>boy</td>
<td>1.78 (.42) b</td>
<td>1.88 (.42) b</td>
<td>10.92</td>
<td>.000</td>
<td>.031</td>
</tr>
<tr>
<td></td>
<td>girl</td>
<td>1.86 (.44) b</td>
<td>2.07 (.50) *</td>
<td>7.50</td>
<td>.000</td>
<td>.022</td>
</tr>
<tr>
<td></td>
<td>boy</td>
<td>1.82 (.42) b</td>
<td>1.97 (.38)</td>
<td></td>
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<tr>
<td></td>
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<td>1.86 (.42) b</td>
<td>2.03 (.50)</td>
<td></td>
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<tr>
<td>Loneliness</td>
<td>boy</td>
<td>1.78 (.22) a</td>
<td>1.76 (.23) a</td>
<td>7.25</td>
<td>.000</td>
<td>.021</td>
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<tr>
<td></td>
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<td>1.77 (.22) a</td>
<td>1.65 (.27) b</td>
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</tr>
<tr>
<td></td>
<td>boy</td>
<td>1.58 (.21)</td>
<td>1.56 (.20)</td>
<td>1.86</td>
<td>.135</td>
<td>.005</td>
</tr>
<tr>
<td></td>
<td>girl</td>
<td>1.60 (.21)</td>
<td>1.55 (.23)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expressiveness</td>
<td>boy</td>
<td>1.34 (.19) b</td>
<td>1.41 (.21) a</td>
<td>10.97</td>
<td>.000</td>
<td>.031</td>
</tr>
<tr>
<td></td>
<td>girl</td>
<td>1.34 (.18) b</td>
<td>1.45 (.23)</td>
<td></td>
<td></td>
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</tr>
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</table>

Note. DV= Dating violence; PSNSU= problematic social networking sites use

Figure 1
Interaction between PSNSU, DV victimization, and gender.

Figure 2
Interaction between Loneliness, DV victimization, and gender.

Figure 3
Interaction between Conflict, DV victimization, and gender.

Figure 4
Interaction between Cohesion, DV victimization, and gender.
Discussion and Conclusions

This research had as its primary objective to analyze PSNSU, loneliness, and family environment in DV victimization and to determine possible differences as a function of gender. We examined the dimensions of PSNSU and loneliness and also the different dimensions of family environment (family Cohesion, Expressiveness, and Conflict). In general, the results of this study indicate that 14.7% of the sample states that they are or have been victims of DV in the last year. This coincides with the latest studies on DV, where a prevalence between 1% and 61% has been obtained (Hérbert et al., 2017; Leen et al., 2013; Wincentak et al., 2017).

When examining DV victimization from a multidimensional perspective, our analyses showed that adolescent boys and girls who were victims of DV reported greater PSNSU than non-victimized participants, coinciding with the findings of previous studies on the potential harm of excessive use of SNS (Oberst et al., 2017) and the negative psychosocial consequences for interpersonal relationships and emotional well-being (Anderson et al., 2017; Balderas et al., 2016).

Something similar was observed in the variable loneliness. The results of our analyses show that adolescent boys and girls who were victims of DV reported greater levels of loneliness than non-victimized participants. These results are in line with previous research that observed that adolescent boys and girls who suffer situations of DV have high levels of depressive mood and feelings of loneliness (Carrascosa et al., 2016; Exner-Cortens et al., 2013; Povedano et al., 2015). Hence, loneliness can be a cognitive (through comparison of the desired and real social relationships) and an affective reaction (through the negative emotional experiences of isolation, sadness, and longing) to the threat of loss of the victim's social and affective bonds. In addition, DV victims sometimes try to escape from the feeling of loneliness through the use of ICTs, not realizing that the time spent on the network and technological devices can aggravate the state of isolation from which they are trying to escape, while enhancing their addiction to them (Guo et al., 2018).

With regard to the family environment, the results show that adolescent boys and girls who are victims of DV have more conflicts in the family context and poorer family cohesion. These results are consistent with those found in previous research where a close link was found between the quality of family relationships and risk behaviors such as bullying (Moral & Ovejero, 2015), intimate partner violence, or being a victim of it (Muñiz-Rivas et al., 2020; Iranzo et al., 2019). Therefore, a family environment in which there are bonds of affective cohesion, where adolescents can openly express their opinions, emotions, and behaviors to their parents without being judged, and where there are no major sources of conflict favors social well-being and can prevent this type of behavior.

The results obtained in gender analysis are another relevant aspect for the variables under study. This study revealed significant differences between adolescent boys and girls, with the girls presenting less adaptive profiles than the boys. It is interesting to note that in the results obtained in the study the girls had a poorer family adjustment in general, which implies a poorer social adjustment than the boys, and they also felt more loneliness and presented higher PSNSU.

This contrasts with the results of previous research, which highlights the link between positive family relationships in adolescent girls and good psychosocial adjustment, compared to boys (Estévez et al., 2018). At this stage of development, girls perceive their parents as learning models and support figures in whom to confide to a greater extent than do boys (Gracia-Leiva et al., 2019). Adolescent boys tend to depend less on their parents than do girls, so they tend to communicate less with their parents than girls do. In this sense, the different socialization styles used by parents according to their children's sex (Garaigordobil & Ali, 2012) could contribute to explaining our results and the greater influence of the family context on girls with poor psychosocial adjustment.

Significant interactions have been observed in the present study. They point in the same direction as recent research on the online context: girls show a higher propensity to dependence and PSNSU and mobile phone addiction, frequently using ICTs as an element of affective bonding, to strengthen friendships (Martínez-Ferrer et al., 2018; Navarro-Pérez et al., 2020), and as an instrument to cope with unpleasant emotional states and seek support (Alonso & Romero, 2019; Polo et al., 2017).

Although in previous studies, there are no differences between boys and girls in the feelings of loneliness (Carrascosa et al., 2016; Cava et al., 2010), our results show that female victims of DV feel more loneliness than do male victims. This difference could be related to less support from the social environment and the victim's greater isolation as a result of gender stereotypes in the education of adolescents (Povedano et al., 2015). These stereotypes allow adolescent boys to exert greater control over their partner, a form of violence that they do not always identify as such (Díaz-Aguado & Carvajal, 2011).

Limitations of the Study

In general, this work provides new data to previous works on the psychological and social adjustment of adolescent victims of DV (Carrascosa et al., 2016; Rojas-Solis & Carpintero, 2011; Rubio-Garay et al., 2015), especially in the association between online and offline socialization contexts. However, this research has some limitations that advise interpreting these results with caution. The first limitation involves the cross-sectional nature of the design, so it is not possible to establish causal relationships. Secondly, we must bear in mind that the present study on DV victimization in adolescence did not include online victimization, an emerging problem that materializes in various ways, including cyberbullying, sexual blackmail, violence, and/or virtual con-
trol. Future works should contemplate the possible differences or similarities in the variables studied with this type of victimization.

Despite these limitations, some practical implications are derived from the results of this study, especially relevant in the field of intervention and family education programs. The results highlight the potential problematic relationship between DV victimization in adolescents, PSNSU, the feeling of loneliness, and family environment. It can also be inferred from the data that this relationship affects people differently depending on the victim's gender. This study contributes to a better understanding of adolescent victims of DV. Its findings are particularly important, given that research on this type of victimization and adjustment problems related to online environments is scarce. Educational programs aiming to strengthen the bond between adolescents and their families as well as Internet and social networking sites good practices education could be necessary to solve this problem in a stage of vital importance such as adolescence period. Therefore, the information offered in this work could be taken into account in the design of plans to prevent risky behaviors such as PSNSU, DV in adolescence, and its consequences for the victims.

Conflict of interest: The authors of this article declare no conflict of interest.

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