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Victimization and perpetration of cyber dating abuse among adolescents in Metropolitan Lima: predictive evidence of emotional dependence, social skills, and sex

Victimización y perpetración de abuso cibernético en el noviazgo adolescente en Lima Metropolitana: evidencia predictiva de dependencia emocional, habilidades sociales y sexo

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Abstract

The objective was to analyze, in a differentiated manner, the victimization and perpetration of cyber abuse among adolescents in Metropolitan Lima, examining their relationship with emotional dependence, social skills, and sex. A quantitative, non-experimental, cross-sectional design with a correlational–predictive scope was employed, with a sample of 800 secondary school students (404 females, 396 males; aged 14–17 years). The Cyber Dating Abuse Questionnaire (CDAQ), the ACCA Emotional Dependence Scale, and the Social Skills Questionnaire (CHASO) were administered. Emotional dependence was found to be positively and significantly related to victimization (rho = .324; p < .001) and perpetration (rho = .343; p < .001). In the regression analysis for victimization, the model was significant (F(3, 796) = 64.89; p < .001) and explained 19.7% of the variance (R^2 = .197), with emotional dependence (β = .418; p < .001), social skills (β = .139; p < .001), and sex (β = .087; p = .007) emerging as significant predictors. For perpetration, the model explained 21.7% of the variance (F(3, 796) = 73.53; p < .001; R^2 = .217), with significant effects of emotional dependence (β = .442; p < .001), social skills (β = .140; p < .001), and sex (β = .087; p = .006). The emotional dependence × sex interaction term was not significant (p = .497), indicating the absence of moderation. Overall, the findings suggest that emotional dependence is a central predictor of cyber dating abuse in both roles, while social skills contribute additional variance in multivariate models, and sex is associated with mean differences without altering the psychological mechanisms evaluated.

Keywords: Cyber Dating Abuse, Interpersonal Dependency, Social Skills, Adolescence

Resumen

Se tuvo como objetivo analizar, de manera diferenciada, la victimización y la perpetración de abuso cibernético en adolescentes de Lima Metropolitana, evaluando su relación con la dependencia emocional, las habilidades sociales y el sexo. Se empleó un diseño cuantitativo, no experimental, transversal, de alcance correlacional–predictivo, con una muestra de 800 estudiantes de secundaria (404 mujeres, 396 varones; 14-17 años). Se aplicaron el Cyber Dating Abuse Questionnaire (CDAQ), la Escala de Dependencia Emocional ACCA y el Cuestionario de Habilidades Sociales (CHASO). Se evidenció que la dependencia emocional se relacionó positiva y significativamente con la victimización (rho = .324; p < .001) y la perpetración (rho = .343; p < .001). En la regresión para victimización, el modelo fue significativo (F(3, 796) = 64.89; p < .001) y explicó el 19.7% de la varianza (R^2 = .197), destacando la dependencia emocional (β = .418; p < .001), las habilidades sociales (β = .139; p < .001) y el sexo (β = .087; p = .007). En perpetración, el modelo explicó el 21.7% (F(3, 796) = 73.53; p < .001; R^2 = .217), con efectos significativos de dependencia emocional (β = .442; p < .001), habilidades sociales (β = .140; p < .001) y sexo (β = .087; p = .006). El término de interacción dependencia emocional × sexo no fue significativo (p = .497), indicando ausencia de moderación. En conjunto, los hallazgos sugieren que la dependencia emocional constituye un predictor central del abuso cibernético en ambos roles, mientras que las habilidades sociales aportan varianza adicional en modelos multivariados, y el sexo se asocia a diferencias promedio sin modificar los mecanismos psicológicos evaluados.

Palabras clave: Abuso cibernético en el noviazgo, dependencia interpersonal, habilidades sociales, adolescencia.

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INTRODUCTION

Adolescent dating violence constitutes a major public health and psychosocial welfare concern due to its high prevalence and the negative consequences it inflicts on the emotional, social, and relational development of young people (Dalouh & Soriano, 2020; González *et al.*, 2003). Various studies have pointed out that these violent dynamics are not confined to face-to-face environments; rather, they extend and transform through the intensive use of digital technologies, shaping new forms of abusive interaction that can go unnoticed or become normalized during adolescence (George & Odgers, 2015; Redondo *et al.*, 2024). Consequently, the digital environment has progressively consolidated into a critical arena where violent behaviors in adolescent dating relationships manifest, perpetuate, and intensify.

Within this landscape, cyber dating violence -also termed cyber partner abuse- emerges. This phenomenon is conceptualized as a series of actions carried out via technological resources, including social networks, instant messaging applications, and various digital platforms, aimed at controlling, monitoring, attacking, or harming a partner or ex-partner (Gámez-Guadix *et al.*, 2018; García & Villa Moral-Jiménez, 2024). These behaviors include persistent surveillance of digital activity, demanding access to passwords, sending hostile or intimidating messages, public or private humiliation, and the unauthorized disclosure of intimate information or images (Jaen-Cortés *et al.*, 2017; Borrajo *et al.*, 2015). Recent research highlights that cyber violence possesses unique characteristics inherent to the digital environment, such as temporal persistence, ease of amplifying harm, and the difficulty of escape, all of which increase its psychological impact on adolescents (Ferraresso & Kim, 2024; Taccini & Mannarini, 2024).

A fundamental element in analyzing cyber violence in dating relationships is the analytical distinction between victimization and perpetration. Victimization refers to the experience of receiving abusive behaviors from a partner, whereas perpetration involves actively directing such behaviors toward the other person (Hidalgo-Rasmussen *et al.*, 2020). Although both roles can coexist within the same relationship, recent empirical evidence indicates that they are not equivalent, nor do they necessarily respond to the same individual and relational processes. This makes a differentiated analysis methodologically necessary (Korchmaros *et al.*, 2013; Rey *et al.*, 2023; Rodríguez-de Arriba *et al.*, 2024).

Recent literature has documented that cyber dating violence is associated with various adverse repercussions on adolescent psychological well-being, including persistent depressive and anxious symptoms, emotional stress, deterioration of psychological well-being, and increased vulnerability to traumatic experiences, particularly when it co-occurs with face-to-face violence (Baker, 2016; Bae, 2024; Taccini & Mannarini, 2024). Furthermore, it has been observed that many digital monitoring behaviors are not always perceived by adolescents as negative experiences. In numerous cases, they are interpreted as routine expressions of interest or closeness within the relationship, which contributes to their normalization and hinders their recognition as forms of violence (Redondo *et al.*, 2024; García & Villa Moral-Jiménez, 2024). This normalization is especially significant during adolescence, a stage in which individuals begin to develop and define their ways of loving, bonding, and setting boundaries within a relationship.

Among the personal variables linked to dating violence, emotional dependency has been described as a form of bonding characterized by an intense need for affection, fear of abandonment, and difficulties in establishing autonomous, balanced affective relationships (Riso, 2008; Anicama, 2016). Available evidence indicates that higher emotional dependency is accompanied by greater tolerance for abuse and the justification of controlling and aggressive behaviors, especially when these occur in digital settings (García & Villa Moral-Jiménez, 2024; Rey *et al.*, 2023). Among the adolescent population, this type of dependency may encourage certain controlling behaviors to be accepted unquestioningly; concurrently, it may lead intrusive practices to be exerted in an attempt to sustain or protect the relationship (Redondo *et al.*, 2024).

On the other hand, social skills have traditionally been considered a protective element against violence in interpersonal relationships by fostering assertive communication, conflict management, and the establishment of appropriate boundaries (Caballo, 2005; Caballo *et al.*, 2017). However, when analyzed specifically within the context of adolescent cyber violence, recent empirical evidence shows inconsistent results. While some studies suggest that deficits in social skills

could increase vulnerability to abusive dynamics, others fail to identify significant correlations or report weak effects, particularly when interactions take place in digital environments (Estrada *et al.*, 2021; Redondo *et al.*, 2024). This lack of consensus suggests that social skills do not exert a uniform effect in the virtual realm, reinforcing the relevance of analyzing them distinctively according to the role the adolescent adopts within the dynamics of abuse.

Despite the growing interest in cyber dating violence, significant gaps remain in the literature. First, a major proportion of research continues to analyze either victimization or perpetration in isolation, without examining both roles distinctly, despite evidence pointing toward different explanatory patterns. Second, few studies use multivariate models capable of simultaneously evaluating the contribution of individual variables -such as emotional dependency and social skills- while controlling for relevant sociodemographic variables like sex. Finally, within the Peruvian context, and specifically among adolescents in Metropolitan Lima, recent empirical evidence addressing these factors in an integrated way remains limited.

In response to these gaps, the present study aimed to analyze cyber dating abuse victimization and perpetration in adolescent relationships in Metropolitan Lima, considering their relationship with emotional dependency and social skills, as well as the role of sex. To achieve this, correlational analyses and multiple regression models were used to examine the contribution of each variable and explore potential differences between both roles of cyber abuse. In doing so, this study provides updated and contextualized empirical evidence to better understand the dynamics of cyber abuse in adolescent dating relationships.

MATERIAL AND METHOD

Research type and design

This study is quantitative, oriented toward the statistical analysis of psychological variables assessed through standardized instruments. It uses a non-experimental design, as variables were observed as they naturally occur in their context, without deliberate manipulation by the researchers. It is also cross-sectional, given that data collection took place at a single point in time (Hernández-Sampieri & Mendoza, 2018). Regarding its scope, it is correlational and predictive, as it aims both to analyze the relationship between variables and to estimate the predictive capacity of specific individual factors (Ato et al., 2013).

Participants

The sample consisted of 800 adolescents (Females = 404; Males = 396), who were fourth- or fifth-year high school students aged 14 to 17 (M = 15.65; SD = .851), from public and private educational institutions in Metropolitan Lima.

Non-probability convenience sampling was employed, based on accessibility to the educational institutions and the students' willingness to participate. The inclusion criteria were: (a) being a high school student (3rd, 4th, or 5th year) of a public or private educational institution in Metropolitan Lima; (b) being between 14 and 17 years old at the time of data collection; (c) having been in or currently maintaining a dating relationship within the last 12 months; and (d) having active access to social networks or digital messaging applications. The exclusion criteria included not having dating experiences within the specified period and presenting incomplete responses on the instruments.

The sample size was considered appropriate for the objectives of the study. Given the use of non-probability convenience sampling, a statistical power sensitivity analysis was conducted to evaluate the ability to detect effects with the available sample. Assuming multiple regression models with three main predictors (emotional dependency, social skills, and sex), a significance level of $\alpha = .05$ and a sample size of N = 800, the sample allows for the detection of small effects ($f^2 = .02$, according to Cohen, 1988) with a statistical power equal to or greater than .80. For small-to-moderate effects ($f^2 \geq .03$-$.05$), the power exceeds .90, which supports the stability of the obtained estimates. Additionally, the sample size substantially exceeds the minimum criteria proposed for predictive studies with multiple explanatory variables (Green, 1991), reinforcing the robustness of the conducted analyses.

Instruments

Cyber Dating Abuse Questionnaire, CDAQ (Borrajo *et al.*, 2015)

This questionnaire aims to evaluate cyber abuse in adolescent dating relationships, considering its bidirectional nature, that is, both the victimization and perpetration of abusive behaviors mediated by digital technologies. The instrument consists of 40 items organized into two parallel scales: Victimization (20 items) and Perpetration (20 items). Each of these scales is structured into two correlated dimensions: Direct Aggression and Control/Monitoring. Items are answered using a six-point Likert-type scale evaluating the frequency of occurrence of the behaviors during the past year (1 = Never; 6 = Almost always).

The instrument was translated into Spanish by Hidalgo-Rasmussen et al. (2020) using a sample of 534 Mexican adolescents. The structure of the questionnaire remained identical to the original version. In the study by Hidalgo-Rasmussen et al. (2020), the model fit was found to be adequate, with comparative indices (CFI = 0.970; TLI = 0.968), absolute indices (RMSEA = 0.031), and a Cronbach's alpha of 0.97.

For its application in the present study, a linguistic and conceptual equivalence process of the CDAQ was conducted for the population of adolescents from Lima. Since the instrument is originally in Spanish and had a prior adaptation in a Mexican adolescent population (Hidalgo-Rasmussen et al., 2020), a semantic and contextual review of the items was performed instead of a translation process. Content validity was evaluated via expert judgment by a panel of five specialists in psychometrics and developmental psychology, who analyzed the clarity, relevance, and cultural appropriateness of each item. The degree of agreement among judges was quantified using Aiken's V coefficient, yielding values considered optimal for all items. The coefficients ranged from V = 0.82 y V = 0.94, exceeding the minimum recommended criterion in the psychometric literature; thus, no modifications to the wording or structure of the instrument were necessary.

The internal structure of the CDAQ was evaluated through confirmatory factor analysis (CFA) in a pilot sample of 320 adolescents, separately analyzing the victimization and perpetration scales according to the theoretical model of two correlated factors (Direct Aggression and Control/Monitoring). Given the ordinal nature of the items, the CFA was estimated from a polychoric correlation matrix using the WLSMV estimator. For the victimization scale, the model exhibited an adequate fit (CFI = 0.964; TLI = 0.961; RMSEA = 0.034; 90% CI = 0.029–0.039); the robust χ^2 statistic was significant, an expected result given the sample size. The standardized factor loadings were significant ($p < .001$), with values ranging between 0.58 and 0.84 for Direct Aggression, and between 0.55 and 0.81 for Control/Monitoring.

For the perpetration scale, the CFA also demonstrated a good model fit (CFI = 0.958; TLI = 0.955; RMSEA = 0.037; 90% CI = 0.032–0.041), with significant and consistent factor loadings ranging from 0.56 to 0.82 for Direct Aggression, and from 0.52 to 0.79 for Control/Monitoring. Likewise, a positive and moderate correlation was observed between the Direct Aggression and Control/Monitoring factors in both victimization and perpetration (r = 0.58 y r = 0.61, respectively), consistent with the theoretical framework of cyber dating abuse in adolescence.

Instrument reliability was estimated using Cronbach's alpha and McDonald's omega coefficients. In the victimization scale, adequate values were obtained for Direct Aggression (α = 0.93; ω = 0.89) and Control/Monitoring (α = 0.90; ω = 0.86). In the perpetration scale, the coefficients were also satisfactory for Direct Aggression (α = 0.92; ω = 0.88) and Control/Monitoring (α = 0.89; ω = 0.84), exceeding the minimum recommended criteria in the psychometric literature.

Emotional Dependency Scale, ACCA
(Anicama *et al.*, 2013)

This scale aims to evaluate emotional dependency from a behavioral-cognitive approach, conceptualizing it as a class of learned response that manifests across distinct levels of an individual's interaction with their environment. The scale consists of 42 items distributed across the nine aforementioned dimensions, and additionally includes a five-item social desirability subscale. A dichotomous response format, which allows for the identification of the presence or absence of behaviors, thoughts, or emotions characteristic of emotional dependency is used.

In the original study, the construct validity was examined through exploratory factor analysis in two independent samples of university students from Lima (n = 150 and n = 450). The factor analysis identified a nine-factor structure,

consistent with the proposed theoretical model, which explained approximately 52.6% of the total variance. Furthermore, it demonstrated evidence of convergent validity by correlating positively and significantly with other measures of emotional dependency ($r = 0.715$, $p < .001$) and with the neuroticism dimension of the Eysenck Personality Inventory ($r = 0.653$, $p < .001$). Regarding reliability, the instrument exhibited adequate internal consistency, with an overall Cronbach's alpha of 0.786, dimensional alpha coefficients ranging between 0.730 and 0.779, as well as adequate stability indices via Guttman split-half (0.826) and Spearman-Brown (0.833) coefficients (Anicama et al., 2016).

Although the Emotional Dependency Scale ACCA was originally developed and validated in a university population, its theoretical framework, item content, and evaluated dimensions are conceptually relevant for application in adolescent populations, particularly within the context of early romantic relationships. Therefore, to ensure the age and contextual appropriateness of the instrument, an evaluation of the use of the ACCA in adolescents was conducted in the present study via expert judgment. This panel was comprised of five specialists in psychometrics and developmental psychology. The judges evaluated the conceptual adequacy, semantic clarity, and developmental relevance of the items for adolescents, and the degree of agreement was quantified using Aiken's V coefficient. The results yielded values $V \geq 0.80$ for all items ($V = 0.81$-0.93), exceeding the minimum recommended criterion in the psychometric literature. This supports adequate content validity for its application in this age group and indicates that substantive modifications to the wording of the instrument were unnecessary.

Additionally, the ACCA underwent an empirical evaluation of its psychometric properties in a sample of 320 adolescents. The internal structure validity was examined via confirmatory factor analysis (CFA), taking into account the categorical nature of the items and using an appropriate estimator for categorical data. The results showed an adequate overall model fit, as evidenced by high comparative indices (CFI = 0.996; TLI = 0.994) and an absolute index within acceptable ranges (RMSEA = 0.053; 90% CI = 0.047–0.059). The χ^2 goodness-of-fit statistic was significant ($\chi^2 = 1124.60$; $gl = 804$; $p < .001$) a result to be expected given the sensitivity of this test to sample size and model complexity; therefore, the interpretation of the fit was primarily based on the complementary fit indices.

The standardized factor loadings of the items were statistically significant ($p < .001$) and of adequate magnitude, ranging approximately from 0.49 to 0.78 across the distinct dimensions of the instrument, indicating that the items consistently represent the evaluated constructs. Furthermore, inter-factor correlations showed low-to-moderate magnitudes, consistent with the theoretical differentiation of the dimensions of emotional dependency.

Regarding reliability, the instrument presented adequate levels of internal consistency in the adolescent sample, with an overall Cronbach's alpha of 0.81 and a McDonald's omega of 0.85. These values exceed the minimum recommended criteria and support the stability and precision of the scores obtained in this population.

Social Skills Questionnaire, CHASO (Caballo *et al.*, 2017)

The CHASO aims to evaluate social skills in adolescent populations using a multidimensional self-report instrument. The questionnaire consists of 40 items organized into 10 dimensions that encompass distinct behavioral and cognitive repertoires linked to social competence, such as expressing opinions, defending one's rights, interacting with authority figures, and managing difficult social situations. Items are answered using a five-point Likert-type scale ranging from *very uncharacteristic of me* to *very characteristic of me*, where higher scores indicate a higher level of social skills.

In the original validation study, the CHASO was administered to a sample of 826 Spanish participants, yielding a clear and stable factor structure through exploratory factor analysis that explained approximately 50% of the total variance. The internal consistency of the instrument was adequate, with a Cronbach's alpha of 0.88 for the total score and a Guttman split-half reliability coefficient of 0.86. At the dimensional level, alpha coefficients ranged between 0.64 and 0.90, demonstrating acceptable-to-high reliability levels in most subscales, which supports the multidimensional nature of the evaluated construct (Caballo *et al.*, 2017).

For its application in the present study, a process to evaluate the linguistic and conceptual appropriateness of the CHASO in adolescents was conducted, given that the instrument was originally developed in a Spanish population. This process was carried out via expert judgment by a panel of five specialists in psychometrics and adolescent developmental psychology, who evaluated the semantic clarity, conceptual relevance, and developmental adequacy of the items within the sociocultural context of the study. The degree of agreement among the judges was quantified using Aiken's V coefficient, yielding values considered adequate for all items. The coefficients ranged from V = 0.83 to V = 0.95, exceeding the minimum recommended criterion; thus, substantive modifications to the wording of the instrument were not necessary.

The internal structure of the CHASO was evaluated via confirmatory factor analysis (CFA) in a sample of 320 adolescents to test the theoretical structure of ten correlated factors proposed by the original authors. Considering the ordinal nature of the responses, the analysis was estimated from a polychoric correlation matrix using the WLSMV estimator.

The results demonstrated an excellent overall model fit, with high comparative indices (CFI = 0.995; TLI = 0.993) and a low absolute index (RMSEA = 0.033; 90% CI = 0.028–0.037), indicating an adequate representation of the empirical data by the proposed factor structure. The robust χ^2 statistic was significant (χ^2 = 1,086.40; gl = 702; $p < .001$), which is an expected result given the sensitivity of this test to sample size and the number of estimated parameters.

The standardized factor loadings were statistically significant ($p < .001$) and of adequate magnitude, ranging between 0.51 and 0.83 across the distinct dimensions of the questionnaire, which shows that the items consistently contribute to the measurement of their respective latent factors. The inter-factor correlations were positive and of low-to-moderate magnitude ($r \approx 0.30$-0.55), supporting the conceptual differentiation of the evaluated dimensions without excessive redundancy.

The reliability of the CHASO was estimated separately by dimension and globally using Cronbach's alpha (α) and McDonald's omega (ω) coefficients. The overall internal consistency of the instrument was high ($\alpha = 0.874$; $\omega = 0.870$). At the dimensional level, alpha coefficients ranged between 0.68 and 0.89, while omega coefficients fell within similar ranges ($\omega = 0.70$-0.91). These values exceed the minimum recommended criteria and demonstrate adequate score stability.

Data Analysis

Data analysis was performed using IBM SPSS Statistics version 27. Descriptive statistics (mean, standard deviation, minimum, and maximum values) were calculated for the variables. The evaluation of normality showed significant deviations from a normal distribution; thus, correlations were estimated using the Spearman's rho coefficient. For the predictive analysis, independent multiple linear regression models were estimated for cyber dating abuse, victimization and perpetration using the ordinary least squares (OLS) method. It should be noted that linear regression does not require the observed variables to be normally distributed, but rather that the model's residuals be appropriately distributed; given the large sample size (N = 800), the estimate is considered robust against possible deviations from normality. The models included emotional dependency, social skills, and gender as predictor variables, with gender coded as a dichotomous variable (0 = male, 1 = female). Unstandardized and standardized coefficients, 95% confidence intervals, and model fit measures were reported. Model adequacy was verified through collinearity diagnostics (VIF) and the independency of residuals (Durbin–Watson). Finally, a moderated regression model was estimated to explore the effect of gender on the relationship between emotional dependency and victimization, incorporating the corresponding interaction term.

Ethical Considerations

The study was reviewed and approved by the Ethics Committee of the Universidad Nacional Federico Villarreal. Since the sample was comprised of adolescents, informed consent was obtained from parents or legal guardians, along with informed assent from the participants, guaranteeing the voluntary nature of their participation and the right to withdraw from the study at any time without consequences. Prior to administering the instruments, the purpose of the study was explained, emphasizing that the information would be used exclusively for academic

purposes and that the collected data would remain confidential. The data were anonymized through questionnaire coding, avoiding the collection of personally identifiable information.

Given that the research addressed experiences linked to dating violence, measures were implemented to minimize potential psychological risks. Participants were informed that they could skip any question that caused discomfort, and they were provided with contact information for psychological counseling services available at the educational institution, as well as helplines and support centers, for potential access in the event of emotional distress. The study was conducted in accordance with the ethical principles for research with human subjects established by the American Psychological Association (APA) and in compliance with the JARS–Ethical guidelines for research with vulnerable populations.

RESULTS

Overall, the mean levels of adolescent cyber dating abuse victimization were moderate (M = 29.74; SD = 13.96), with the control/monitoring dimension (M = 16.52; SD = 8.56) exhibiting slightly higher values than direct aggression (M = 13.22; SD = 6.48). A similar pattern was observed for perpetration, which had an overall mean of 27.25 (SD = 11.92), with a greater presence of behaviors linked to control/monitoring (M = 15.04; SD = 7.34) compared to direct aggression (M = 12.20; SD = 5.45). Regarding the psychological variables, emotional dependency showed a mean of 10.98 (SD = 6.12), whereas social skills presented a mean of 110.24 (SD = 25.77), reflecting a wide dispersion of scores across the sample. Taken together, the observed ranges of the analyzed variables demonstrate sufficient variability, supporting the relevance of exploring distinct relationships and predictive models for both victimization and perpetration of cyber dating abuse in adolescents.

Table 1

Descriptive statistics for the variables

	M	SD	Mín.	Máx.
Victimization	29.74	13.962	20	104
Direct aggression victimization	13.22	6.479	10	52
Control/monitoring victimization	16.52	8.562	10	58
Perpetration	27.25	11.924	20	97
Direct aggression perpetration	12.20	5.445	10	51
Control/monitoring perpetration	15.04	7.343	10	48
Emotional dependency	10.98	6.120	1	32
Social skills	110.24	25.771	40	196

Table 2 presents the correlations between victimization and perpetration of cyberbullying in adolescent dating relationships, emotional dependency, and social skills. The results show that emotional dependency is positively and significantly related to both victimization (rho = .324; p < .001) and perpetration (rho = .343; p < .001), with moderate effect sizes in both cases, suggesting that higher levels of emotional dependency are associated with greater involvement in cyberbullying dynamics in both roles. In contrast, no statistically significant correlations were observed between social skills and victimization (rho = .069; p = .053), nor between social skills and perpetration (rho = .037; p = .291), indicating that, at the bivariate

level, this construct does not have a direct relationship with the behaviors assessed. Finally, a weak but significant negative correlation was identified between emotional dependency and social skills (rho = −.094; p = .008), suggesting that higher levels of emotional dependency are associated with slightly lower levels of social skills in the sample studied.

Table 2

Measures of correlation among variables

	rho [95% CI]	*p*
Victimization - Emotional Dependency	.324 [.258, .386]	< .001
Victimization - Social Skills	.069 [-.003, .139]	.053
Perpetration - Emotional Dependency	.343 [.278, .404]	< .001
Perpetration - Social Skills	.037 [-.034, .108]	.291
Emotional Dependency - Social Skills	-.094 [-.164, -.023]	.008

Table 3 shows the multiple regression analysis conducted to explain cyberbullying victimization in adolescent dating relationships; the results indicated that the overall model exhibited a statistically significant fit ($F(3, 796) = 64.89$; $p < .001$). In terms of explanatory power, the set of predictors accounted for 19.7% of the total variance in victimization ($R^2 = .197$; adjusted $R^2 = .193$), indicating moderate explanatory power. Furthermore, the diagnostic indicators showed that the model performed adequately, with no issues of multicollinearity (VIF ≈ 1) or significant autocorrelation of the residuals (Durbin–Watson = 1.796).

When examining the individual contributions of the predictors, emotional dependency emerged as the factor with the greatest explanatory power ($B = 0.95$; $\beta = .418$; $p < .001$; 95% CI [0.81, 1.10]), indicating that increases in this construct are associated with higher levels of cyberbullying victimization, even after controlling for the effects of gender and social skills. Similarly, social skills also showed a positive and significant relationship with victimization ($B = 0.08$; $\beta = .139$; $p < .001$; 95% CI [0.04, 0.11]), although with a smaller effect size. Finally, sex had a significant effect ($B = 1.71$; $\beta = .087$; $p = .007$; 95% CI [0.48, 2.95]), indicating that, on average, women report higher levels of victimization than men, once the other variables in the model are controlled for.

Table 3

Multiple Regression Analysis of Cyberabuse Victimization in Adolescent Dating Relationships

Predictor	B	SE	β	t	p	95% CI B	VIF
Constant	9.13	2.24		4.07	< .001	[4.72, 13.53]	
Emotional dependency	0.95	0.07	.418	13.11	< .001	[0.81, 1.10]	1.01
Social skills	0.08	0.02	.139	4.35	< .001	[0.04, 0.11]	1.01
Gender	1.71	0.63	.087	2.72	.007	[0.48, 2.95]	1.00

Note. $R = .443$; $R^2 = .197$; R^2 adjusted $R^2 = .193$; $F(3, 796) = 64.89$; $p < .001$; Durbin–Watson = 1.796; SE = standard error; CI = confidence interval; VIF = variance inflation factor.

In Table 4, the multiple regression model estimated for the perpetration of cyberbullying in adolescent dating relationships achieved a statistically significant fit ($F(3, 796) = 73.53$; $p < .001$). In terms of explanatory power, the included variables explained 21.7% of the total variance in perpetration ($R^2 = .217$; adjusted $R^2 = .214$), indicating a moderate level of explanation that was slightly higher than that observed in the victimization model. The diagnostic indicators confirmed the model's adequacy, showing no evidence of multicollinearity (VIF ≈ 1) or substantial autocorrelation of the residuals (Durbin–Watson = 1.826).

When considering the specific effect of the predictors, emotional dependency once again emerged as the primary explanatory factor for perpetration (B = 0.86; β = .442; $p < .001$; 95% CI [0.74, 0.98]), suggesting that higher levels of this construct are associated with a greater likelihood of engaging in abusive behavior via digital media. Second, social skills showed a positive and significant relationship with perpetration (B = 0.07; β = .140; $p < .001$; 95% CI [0.04, 0.09]), although with a smaller effect size. Finally, gender had a statistically significant effect (B = 1.48; β = .087; $p = .006$; 95% CI [0.43, 2.52]), indicating that, once psychological variables were controlled for, women reported higher average levels of perpetration compared to men in the sample.

Table 4

Multiple Regression Analysis of Cyberabuse Perpetration in Adolescent Dating Relationships

Predictor	B	SE	β	t	p	95% CI B	VIF
Constant	9.04	1.89		4.78	< .001	[5.33, 12.75]	
Emotional dependency	0.86	0.06	.442	14.03	< .001	[0.74, 0.98]	1.01
Social skills	0.07	0.02	.140	4.46	< .001	[0.04, 0.09]	1.01
Gender	1.48	0.53	.087	2.78	.006	[0.43, 2.52]	1.00

Note. R = .466, $R^2 = .217$, adjusted $R^2 = .214$, $F(3, 796) = 73.53$, $p < .001$; Durbin–Watson = 1.826; SE = standard error; CI = confidence interval; VIF = variance inflation factor.

To examine a possible moderating effect of gender, a regression model was estimated that included the interaction term between emotional dependency (centered) and gender, while maintaining social skills as an additional control predictor (Table 5). The overall model showed a statistically significant fit ($F(4, 795) = 48.75$; $p < .001$). However, the interaction effect did not reach statistical significance ($p = .497$), indicating that gender does not moderate the relationship between emotional dependency and cyberbullying victimization in adolescent dating relationships. In contrast, both emotional dependency and social skills maintained significant main effects on victimization, suggesting that both constructs independently contribute to explaining the phenomenon, regardless of gender.

Table 5

Regression Model with Gender as a Moderator in Predicting Cyberabuse Victimization

Predictor	B	EE	β	t	p
Emotional dependency (focused)	0.80	0.24	.352	.001	[0.34, 1.26]
Gender	1.70	0.63	.086	.007	[0.46, 2.94]
Social skills	0.08	0.02	.139	< .001	[0.04, 0.11]
Emotional dependency × Gender	0.10	0.15	.070	.497	[−0.19, 0.39]

Note. $R^2 = .197$; $F(4, 795) = 48.75$; $p < .001$; SE = standard error; CI = confidence interval; VIF = variance inflation factor.

DISCUSSION

The purpose of the present study was to analyze victimization and perpetration of cyber dating abuse among adolescents in Metropolitan Lima, considering its relationship with emotional dependency, social skills, and gender, using a correlational and predictive approach. Taken together, the findings provide a deeper understanding of the individual mechanisms underlying adolescents' involvement in digital abuse dynamics, differentiating between both roles and providing contextualized empirical evidence in a Latin American setting where this phenomenon remains under-explored (Borrajo *et al.*, 2015; Hidalgo-Rasmussen *et al.*, 2022).

From a descriptive perspective, the findings demonstrate that cyber violence manifests significantly in adolescent dating relationships, both in terms of victimization and perpetration, with a greater presence of behaviors associated with digital control and monitoring compared to direct aggression. This pattern has been consistently documented in previous studies, which indicate that cyber control constitutes one of the most frequent and normalized expressions of abuse in adolescent dating, as it is often interpreted as a sign of interest, care, or emotional commitment (Borrajo *et al.*, 2015; Cava *et al.*, 2020; García & Villa Moral-Jiménez, 2024). Furthermore, recent research reports high prevalence rates of cyber violence and cyber victimization, exceeding 50% of participants, which reinforces the notion that these behaviors are part of relational dynamics widely prevalent among adolescents and young people (de los Reyes Mera & Jaureguizar, 2024). Moreover, the digital environment fosters persistent surveillance practices that are difficult to evade, increasing their psychological and relational impact during this developmental stage (Redondo *et al.*, 2024; Taccini & Mannarini, 2024).

Regarding the psychological variables, emotional dependency showed positive and significant associations with both victimization and perpetration, with moderate effect sizes. This result is consistent with the literature that conceptualizes emotional dependency -and related constructs such as anxious attachment- as a relational pattern characterized by fear of abandonment, an intense need for closeness, and difficulty establishing healthy emotional boundaries (Riso, 2008; Anicama, 2016). Recent studies, including those with dyadic and longitudinal designs, have shown that this type of attachment simultaneously increases the probability of tolerating abusive behaviors and engaging in controlling or monitoring behaviors toward the partner, especially in digital contexts where permanent connection amplifies such dynamics (Laforte *et al.*, 2022; Rey *et al.*, 2023; Bae, 2024). In this sense, the findings of the present study support the notion that emotional dependency operates as a cross-cutting vulnerability factor that spans both roles of cyber abuse (Ferraresso & Kim, 2024; Taccini & Mannarini, 2024).

On the contrary, social skills did not show significant associations with either victimization or perpetration in the bivariate analyses. This finding is consistent with research cautioning that traditional social skill repertoires, developed primarily for face-to-face interactions, do not always translate into effective strategies for conflict management, boundary negotiation, or abuse prevention in digital environments (Caballo, 2005; Caballo *et al.*, 2017; Estrada *et al.*, 2021). Recent studies indicate that the normalization of cyber control and the ambiguity of online relational norms can neutralize the expected protective effect of social skills, even in adolescents with adequate levels of interpersonal competence (Redondo et al., 2024; Jaureguizar *et al.*, 2025).

Nonetheless, when considering the variables simultaneously in multiple regression models, social skills showed a statistically significant contribution to both victimization and perpetration, albeit with small effect sizes. This apparent discrepancy between the bivariate and multivariate analyses is not contradictory; rather, it highlights the complexity of the phenomenon, suggesting that social skills do not act as a direct protective factor, but do contribute additional explanatory variance when analyzed alongside weightier affective variables, such as emotional dependency (Estrada *et al.*, 2021; Redondo *et al.*, 2024).

From a predictive perspective, emotional dependency established itself as the predictor with the greatest explanatory weight for both victimization and perpetration. This finding aligns with recent research emphasizing the centrality of affective attachment styles in explaining cyber abuse in adolescent couples, highlighting that digital control and monitoring behaviors often

emerge as maladaptive strategies to manage emotional insecurity and fear of losing the bond (Laforte *et al.*, 2022; Bae, 2024; Ferraresso & Kim, 2024). Within this framework, the results support the need to incorporate affective variables into explanatory models of cyber abuse, moving beyond approaches focused exclusively on behavioral deficits.

Regarding gender, the results indicated that females reported higher average levels of both victimization and perpetration of cyber dating abuse, once the psychological variables included in the models were controlled. This finding should be interpreted as an average descriptive difference, rather than evidence of a deterministic effect of gender on involvement in cyber abuse dynamics. Previous studies have noted that these differences may be influenced by contextual and relational factors, such as affective socialization patterns, cultural norms regarding technology use in dating relationships, and a greater willingness to report experiences of control or aggression in the digital realm, rather than structural differences in underlying psychological processes (Borrajo *et al.*, 2015; Rey *et al.*, 2023; de los Reyes Mera & Jaureguizar, 2024).

Likewise, moderation analysis demonstrated that gender does not moderate the relationship between emotional dependency and cyber abuse victimization, indicating that the association between both constructs remains similar for both male and female adolescents. This result suggests that emotional dependency constitutes a cross-cutting vulnerability factor whose effects on involvement in digital abuse dynamics operate comparably regardless of gender. From an applied perspective, this finding implies that prevention and intervention strategies should not focus exclusively on gender as a differentiating criterion, but should instead prioritize addressing affective attachment styles, managing emotional insecurity, and fostering critical reflection on control practices in technology use within adolescent dating relationships.

CONCLUSIONS

Taken together, the results of this study show that cyber abuse is part of the relationship dynamics of a significant group of adolescents in Metropolitan Lima, particularly through digital control and monitoring behaviors, both in terms of victimization and perpetration. In this context, emotional dependency was consistently related to greater involvement in both forms of abuse, suggesting that difficulties in establishing autonomous and balanced affective bonds may be linked to the normalization or execution of intrusive practices in the digital environment. Social skills, although showing a statistically significant contribution in the multivariate models, presented lower explanatory weight, indicating that their influence is neither direct nor sufficient on its own to understand these behaviors.

Likewise, while average differences by gender were observed, the moderation analysis showed that gender does not alter the relationship between emotional dependency and victimization, suggesting that the psychological processes involved operate similarly in both male and female adolescents. Collectively, these findings reinforce the need to address cyber dating abuse from a relational and emotional perspective, prioritizing reflection on affective bonds and control dynamics in technology use, rather than relying on unidimensional or exclusively sociodemographic explanations.

LIMITATIONS

The results of the present study should be interpreted in light of several relevant limitations. First of all, the use of non-probability convenience sampling limits the generalizability of the findings to the broader adolescent population of Metropolitan Lima. Second, although the instruments employed exhibited adequate psychometric properties, some were originally developed in different cultural contexts, which, despite the evaluation processes conducted, could influence the interpretation of certain items. Furthermore, the absence of contextual variables, such as family climate, parental regulation of technology use, or perceived relational norms, restricts a comprehensive understanding of the phenomenon.

Finally, the cross-sectional design of the study precludes establishing causal relationships among the analyzed variables. Future research could incorporate longitudinal designs to examine

the directionality of the observed associations, as well as broader explanatory models that integrate individual, relational, and contextual variables. Likewise, it would be pertinent to explore these models in representative samples and across different sociocultural contexts in order to strengthen the empirical evidence about cyber violence in adolescent dating.

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