ISSN online 1688-4221

*Ciencias Psicológicas* January-June 2026; 20(1), e-4581
DOI: 10.22235/cp.v20i1.4581

# Relationship between Cybervictimization and Victimization with Severe Self-Injury: Mediating Role of Mild Self-Injury

## Relación de cibervictimización y victimización con la autolesión severa: rol mediador de la autolesión leve

## Relação entre cybervitimização e vitimização com a autolesão severa: Papel mediador da autolesão leve

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Received: 05/01/2025
Accepted: 12/15/2025

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**How to cite:** Duarte Tánori, K. G., Fregoso Borrego, D., & Vera Noriega, J. A. (2026). Relationship between Cybervictimization and Victimization with Severe Self-Injury: Mediating Role of Mild Self-Injury. *Ciencias Psicológicas*, *20*(1), e-4581. https://doi.org/10.22235/cp.v20i1.4581

**Data availability:** The data are not publicly available.

**Funding:** The authors acknowledge the Secretaría de Ciencia, Humanidades, Tecnología e Innovación (formerly CONACYT) for the financial support provided for this study.

**Conflicts of interest:** The authors declare no conflicts of interest.

**Abstract**: Non-suicidal self-injury, understood as the deliberate damage to one's own body tissue without suicidal intent, represents a growing problem among adolescents and has been linked to various forms of victimization, both in-person and digital. The present study aimed to examine the relationship between mild and severe self-injury and victimization and cybervictimization, positing that these forms of victimization condition severe self-injury when mediated by mild self-injury, with cybervictimization serving as a stronger explanatory predictor. Data were collected from 433 secondary school students who completed questionnaires measuring self-injury, in-person victimization, and cybervictimization. Descriptive analyses, correlations, and mediation models were conducted. The results revealed significant positive associations among all variables, highlighting that mild self-injury significantly mediated the relationship between in-person victimization and severe self-injury, while in the case of cybervictimization a robust direct relationship with severe self-injury was observed, evidencing a greater impact of digital aggression on the intensification of self-inflicted harm. These findings suggest that mild self-injury acts as a critical link in the progression toward more severe behaviors, underscoring the need for early and targeted interventions to prevent the escalation of harm and its pathological associations.

**Keywords:** adolescence; non-suicidal self-injury; cybervictimization; mediation; school victimization

**Resumen:** La autolesión no suicida, entendida como el daño deliberado al propio tejido corporal sin intención suicida, representa una problemática creciente en adolescentes, y se relaciona con diversas formas de victimización, tanto presencial como digital. Este estudio tuvo como objetivo relacionar la conducta de autolesión leve y severa con la victimización y cibervictimización, planteando que estas condicionan la autolesión severa cuando son mediadas por la autolesión leve, siendo la cibervictimización un predictor de mayor peso explicativo. Se obtuvo información de 433 estudiantes de secundaria, quienes completaron cuestionarios que midieron autolesión, victimización y cibervictimización. Se realizaron análisis descriptivos, correlaciones y modelos de mediación. Los resultados revelaron asociaciones positivas y significativas entre todas las variables, entre las que se destaca que la autolesión leve medió la relación entre la victimización presencial y la autolesión severa; mientras que en la cibervictimización se observó una relación directa robusta con la autolesión severa, lo que evidencia un mayor impacto de las agresiones digitales en la intensificación del daño autoinfligido. Estos hallazgos sugieren que la autolesión leve actúa como un eslabón crítico en la progresión hacia conductas graves, esto resalta

la necesidad de intervenciones tempranas y específicas para prevenir la escalada del daño y sus relaciones patológicas.
**Palabras clave:** adolescencia; autolesión no suicida; cibervictimización; mediación; victimización escolar

**Resumo**: A autolesão não suicida, entendida como o dano deliberado ao próprio corpo sem intenção suicida, representa uma problemática crescente em adolescentes e se relaciona com diversas formas de vitimização, tanto presencial quanto digital. Este estudo teve como objetivo relacionar comportamentos de autolesão leve e severa com a vitimização e a cybervitimização, propondo que estas condicionam a autolesão severa quando são mediadas pela autolesão leve, sendo a cybervitimização um preditor com maior peso explicativo. Participaram 433 estudantes do ensino fundamental que completaram questionários sobre autolesão, vitimização e cybervitimização. Foram realizadas análises descritivas, correlações e modelos de mediação. Os resultados revelaram associações positivas e significativas entre todas as variáveis, destacando-se que a autolesão leve mediou a relação entre a vitimização presencial e a autolesão severa, enquanto, no caso da cybervitimização, observou-se uma relação direta robusta com a autolesão severa, evidenciando um maior impacto das agressões digitais na intensificação do dano autoinfligido. Esses achados sugerem que a autolesão leve atua como um elo crítico na progressão para condutas graves, ressaltando a necessidade de intervenções precoces e específicas para prevenir a escalada do dano e suas relações patológicas.
**Palavras-chave:** adolescência; autolesão não suicida; cybervitimização; mediação; vitimização escolar

Non-suicidal self-injury, as defined by Nock (2010) and in accordance with Liu et al. (2022), is understood as the deliberate, direct, and socially unacceptable destruction or damage of one's own body tissue without suicidal intent. Although it has traditionally been considered a problem associated with clinical populations, its high prevalence in samples of adolescents from the general population has highlighted the need to more precisely define individual characteristics, as well as the contextual factors associated with this behavior (Esposito et al., 2019).

Self-injury can manifest at different levels of severity, ranging from mild forms to more severe forms that involve significant damage to body tissue. Mild self-injury is characterized by being less invasive and may include behaviors such as superficial scratching, pinching, or hitting that do not result in permanent damage. Unlike severe self-injury, these behaviors do not always serve a clear function of escape or immediate emotional regulation but may instead represent an incipient form of coping with emotional or social distress (Hooley et al., 2020; Marín, 2013).

Evidence suggests that mild self-injury is not an isolated phenomenon but rather may progressively evolve into more severe forms of self-injury, in which a clear escape function in response to aversive emotions or highly distressing situations is observed (John et al., 2017). This process of intensification may be partly explained by behavioral and emotional sensitization, whereby the repetition of self-injurious behaviors leads to a reduction in the initial aversion to pain and a gradual learning of its function as a coping mechanism (Santo & Dell'Aglio, 2022).

It is important to recognize that self-injury can manifest in both mild and severe forms, which helps to understand the phenomenon accurately and to estimate its incidence and prevalence with greater precision. For example, the study by Duarte and Fregoso (2024), conducted with a generalizable non-clinical sample of adolescent students, showed that 8.08 % engaged in severe self-injurious behaviors. Although this percentage may appear low, given that severe self-injury refers to serious forms of bodily harm, it represents a meaningful and relevant proportion when properly interpreted.

According to Faura-García et al. (2015), severe self-injurious behaviors are considered pathological, whereas mild self-injury refers to behaviors that are not necessarily linked to an immediate need to escape distress. However, even when mild self-injury is not directly associated with negative emotional events, its repeated occurrence may constitute a risk factor for the development of severe self-injury (Hooley et al., 2020).

In this sense, mild self-injury may act as a link in the relationship between adverse experiences and severe self-injury, functioning as an intermediate element that facilitates the transition toward more dangerous behaviors. Therefore, understanding mild self-injury as a key risk factor in the progression toward severe self-injury is essential (Plener et al., 2015). This perspective is crucial for accurately understanding the phenomenon and for developing prevention and intervention strategies aimed at halting this process before it evolves into more severe forms of self-inflicted harm.

Authors such as Klonsky (2007), Nock and Prinstein (2005), and Liu et al. (2022) have found that individuals engage in self-injurious behaviors as a strategy to reduce negative stimuli.

Consequently, peer victimization constitutes an important factor in its development, as such behaviors may function as a means of regulating the distress generated by these negative experiences. As noted by Heilbron and Prinstein (2018), peer victimization is a problem that elicits a wide range of negative sensations and emotions among adolescents.

Resett and González (2020) reported that the association between self-injury and victimization is statistically significant and that peer school victimization significantly predicts self-injury ($p < .001$; $\beta = .33$). Similarly, Heilbron and Prinstein (2018) indicated that peer victimization constitutes a potential risk factor for the development of non-suicidal self-injury and suicide among adolescents, as interpersonal problems, such as peer rejection, and social isolation, are frequently cited as precipitating factors of self-directed violent behaviors. In their study, the authors identified significant differences between individuals who did not engage in self-injury and those who did, as a function of peer victimization, showing that adolescents who reported being victims were more likely to engage in self-injurious behaviors.

Along the same lines, an important variable to consider in the study of non-suicidal self-injury is interaction through digital media. For example, Duarte et al. (2023a) suggested that internet use may constitute a risk factor for non-suicidal self-injury, increasing its likelihood by 237 %.

It is evident that the internet has contributed to adolescent development by fostering personal identity formation, facilitating the establishment of interpersonal relationships, serving as a resource for obtaining social support, and providing access to a wide range of entertainment and leisure opportunities (Davis, 2013). However, it has also generated new risks, such as cyberbullying (Del Rey et al., 2016; Garaigordobil, 2017) and internet addiction.

The internet, as one of the most prevalent and rapidly expanding digital tools today, has transformed adolescents' relationships with primary attachment figures, as it has become an important channel of communication, affecting the way parent–child communication is established due to the intergenerational digital gap (Yubero et al., 2018). This, in turn, suggests that peer interactions may manifest in interpersonal problems such as cyberbullying.

According to the Instituto Federal de Telecomunicaciones (2019), adolescents aged 12 to 17 have an 88.3 % probability of using the internet, while students have a 92.9 % probability, making them, as noted by Hernández and Alcoceba (2015), the group with the highest level of internet access.

Authors such as Vondrácková and Gabrhelik (2016) have indicated that internet access is widely available among adolescents and, therefore, excessive use is more likely, which may lead to outcomes such as emotional and psychological disorders or impairments. Another potential consequence is non-suicidal self-injury, making the relationship between self-injury and internet use in adolescents particularly relevant for investigation. Internet use does not intrinsically cause negative emotional outcomes; however, it increases the likelihood of engaging in interactions that may do so. Thus, digitally mediated interactions, such as cybervictimization, defined by Nocentini et al. (2010) as peer aggression occurring through the internet or mobile phones, manifested as written-verbal aggression, exclusion, and impersonation, also become highly relevant in the study of non-suicidal self-injury.

Based on the above, it is pertinent to consider theoretical frameworks that help explain how experiences of digital victimization may translate into self-injurious behaviors, particularly as these behaviors increase in severity. In this regard, the Barlett and Gentile Cyberbullying Model (BGCM; Barlett et al., 2021) proposes that repeated exposure to digital aggression reinforces beliefs such as perceived anonymity and the irrelevance of physical power, thereby facilitating the normalization of hostile online environments. Although the BGCM has primarily focused on explaining perpetration, its principles of social learning and emotional sensitization can be extrapolated to understand how sustained cybervictimization may erode psychological barriers to physical harm, promoting the emergence of self-injury as a coping strategy.

The BGCM (Barlett et al., 2021) is useful for the study of victimization, as its core mechanisms, such as social learning, repeated exposure, and the normalization of hostile environments, also operate from the perspective of those who receive aggression. Continuous immersion in such environments can lead to emotional desensitization, thereby increasing the likelihood of psychological impairment. For this reason, extrapolating this model to the victim's perspective is theoretically reasonable when the shared conceptual bridges between perpetrator and victim are made explicit. As noted by Fawson et al. (2018), it is possible to observe role transitions (from aggressor to victim or from victim to aggressor),

with such transitions representing one of the potential effects of aggression; for example, a victim may become an aggressor as an emotional or psychological mechanism to adapt to their environment.

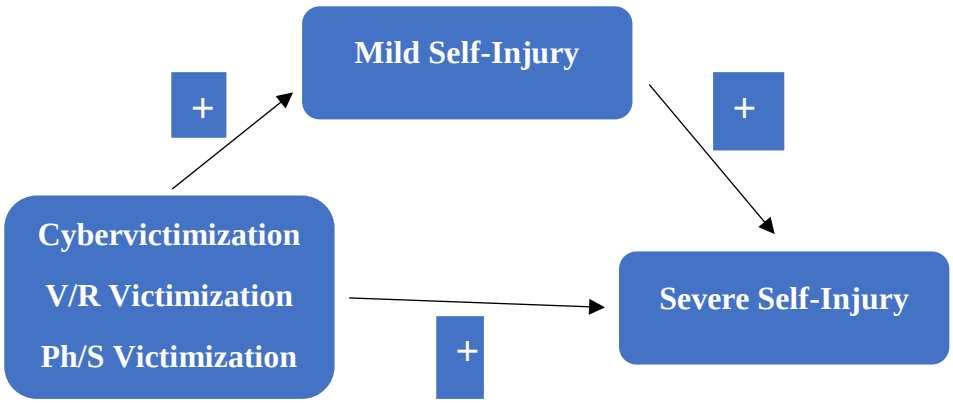
Accordingly, authors such as Liu et al. (2023), Drubina et al. (2023), and Lin et al. (2023), among others, have demonstrated through structural equation modeling that cybervictimization significantly predicts non-suicidal self-injury. In addition, the systematic review conducted by Predescu et al. (2024), which included 20 studies that empirically and explanatorily examined the relationship between cybervictimization and non-suicidal self-injury, concluded that cybervictimization constitutes an important risk factor when studying non-suicidal self-injury among children and adolescents.

These findings are highly relevant, as the prevalence rates of both cybervictimization and in-person victimization are concerning. For example, the meta-analysis conducted by Domínguez-Alonso et al. (2023) reported a cybervictimization prevalence of 22.18 % among adolescents who use the internet. In a similar population, Degue et al. (2024) reported that the prevalence of in-person victimization was 34.6 %. Likewise, Vega-Cauich (2018) analyzed a sample of 18,839 youth aged 12 to 29 years and found that the prevalence of cybervictimization among high school students (adolescents aged 15 to 17 years) was 26 %. Taken together, these figures indicate a substantial presence of victimization and cybervictimization among adolescents.

Considering the reviewed background, the aim of this study is to examine the relationship between non-suicidal self-injury and both in-person victimization and cybervictimization. It is hypothesized that cybervictimization and victimization influence severe self-injurious behaviors when mediated by mild self-injurious behaviors. It is also hypothesized that cybervictimization has greater explanatory power than in-person victimization in predicting self-injurious behaviors (Figure 1).

**Figure 1**

*Conceptual model for the mediation analysis, in which cybervictimization, verbal/relational victimization, and physical/social victimization are specified as independent variables, mild self-injury as the mediating variable, and severe self-injury as the dependent variable.*




## Method

### Participants

The sample was selected using cluster random sampling and consisted of 433 adolescents enrolled in 19 public secondary schools located in the city of Hermosillo, Sonora. Of the total sample, 184 adolescents (42.5 %) were in the second grade and 249 (57.5 %) were in the third grade; 211 (48.7 %) were male and 222 (52.3 %) were female. Regarding school shift, 358 students (82.7 %) attended the morning shift and 75 (17.3 %) attended the afternoon shift. It should be noted that schools were randomly selected until 10 % of the schools in the region were included to obtain a representative sample, ~~a~~ minimum of 384 students were required to achieve a 95 % confidence level and a 5 % margin of error, based on a known population of 130,044 students in the region.

Regarding inclusion criteria, participants were required to be enrolled in the selected schools. Exclusion criteria included having a diagnosis related to neurodivergence, completing less than 90 % of the questionnaire items, and the presence of random response patterns.

## Instruments

*Self-Injury Inventory* (SII): This questionnaire was developed by Marín (2013) and consists of 12 items designed to detect and temporally measure both mild and severe self-injurious behaviors. Responses are rated on a five-point Likert-type scale (0 *= never,* 1 *= once, 2–4 times, 5–9 times, and 10 times or more*). For the population of Sonora, an Exploratory Factor Analysis (EFA) was conducted, yielding a Kaiser–Meyer–Olkin (KMO) value of .93, a total variance explained (TVE) of 48.27 %, factor loadings ranging from .61 to .78, and a Cronbach's alpha of .89. Seven items correspond to mild self-injury and five items to severe self-injury. In turn, the Confirmatory Factor Analysis (CFA) yielded adequate fit indices (CFI = .93; RMSEA = .07; SRMR = .04) (Duarte et al., 2023b).

*Cyberbullying Test:* This scale was developed by Garaigordobil (2017) to assess the phenomenon of cyberaggression and consists of 45 items distributed across three dimensions. For the present study, the adaptation by Navarro-Rodríguez et al. (2023) was used, and only the cybervictimization dimension, composed of 12 items, was included. This adaptation was conducted with a sample of secondary school students in Sonora using Rasch analysis and Confirmatory Factor Analysis (CFA), yielding infit values ranging from .75 to 1.42, outfit values ranging from .58 to 1.44, and adequate model fit indices (CFI = .94; RMSEA = .04; SRMR = .03), as well as high internal consistency (Cronbach's alpha = .92). These statistics indicate a good fit of the instrument.

*Aggressors and Victims Scale:* This scale was developed by Del Rey and Ortega (2007) to assess peer aggressive behavior and comprises two dimensions: aggression and victimization. For the present study, the version adapted by González et al. (2017) was used, which tailored the instrument for secondary school students in Sonora. The two victimization dimensions were included: verbal/relational victimization and physical/social victimization, consisting of seven and five items, respectively, rated on a five-point Likert scale. Rasch analysis yielded infit values ranging from .54 to 1.35 and outfit values ranging from .75 to 1.24, while Confirmatory Factor Analysis (CFA) produced acceptable fit indices (CFI = .90; RMSEA = .08; SRMR = .05), indicating an adequate fit of the instrument for measuring victimization.

## Procedures

To collect the data, authorization was obtained from the Ministry of Public Education, which granted access to the participating educational institutions. Following this approval, visits were made to the selected secondary schools, and permission was requested to enter the classrooms. Within the classrooms, a trained survey administrator, who was a psychologist affiliated with a research project, provided informed consent to explain the objectives of the study, ensure data confidentiality, and clarify that participants' names would not be disclosed, as analyses would be conducted at a group level. Likewise, the educational institutions were responsible for informing parents and guardians in advance. The survey administrator also conducted the data collection by providing students with a booklet containing the questions and response options, along with a separate answer sheet on which participants could indicate their selected responses. Instructions on how to complete the questionnaire were given, and any questions from the students were addressed. The administration time was approximately 50 minutes per group.

## Data Analysis

First, univariate descriptive analyses were conducted to obtain measures of central tendency. Subsequently, Pearson correlation analyses were performed among the study variables to identify relevant bivariate associations and to provide an initial approximation to the proposed model.

To evaluate the mediating role of mild self-injury in the relationship between offline victimization and cybervictimization and severe self-injury, mediation models were conducted using a regression-based approach. Specifically, Model 4 (simple mediation) from Hayes (2022) was employed. This model is designed to determine whether the effect of an independent variable (X) on a dependent variable (Y) occurs directly or whether this effect is explained by a third variable, the mediator (M), that is, whether an indirect effect is present. The indirect effect refers to the effect of X on Y through M. Model adequacy was evaluated using the regression coefficients (β) for X → M, M → Y, and X → Y (direct effect); the product β (X → M) * β (M → Y) (indirect effect); and the total effect. Statistical significance ($p < .05$) and $R^2$ (proportion of explained variance) were also examined. A mediation model was considered acceptable when the M → Y effect was larger than the X → M effect, the total effect exceeded the direct

effect, and the indirect effect was present. All effects were required to be statistically significant. Additionally, assumptions of normality were not required, as bootstrapping-based estimates do not rely on this assumption (Hayes, 2022).

It is important to note that prior to conducting the mediation analyses, the assumptions associated with regression models were examined. Linearity between the variables was verified, as no curvilinear patterns were observed. Independence of errors was assessed using the Durbin–Watson statistic, which fell within the acceptable range for each model (1.50–2.50). The absence of multicollinearity was confirmed by variance inflation factor (VIF) values below 5 and tolerance values above .20. In addition, homoscedasticity was evaluated through residual analysis (Hayes, 2022).

To conduct the analyses described above, SPSS version 25 with the PROCESS macro version 3.5 was used. Additionally, RStudio version 4.0.3 was employed for the descriptive and correlational analyses.

## Results

First, descriptive analyses of the study variables are presented in terms of mean (*M*), standard deviation (*SD*), minimum, maximum, as well as skewness and kurtosis. It is important to note that, according to the criteria proposed by Kim (2013), the variables can be considered to approximate normality, as their skewness and kurtosis values do not exceed ±7 (Table 1).

***Table*** ***1***

*Descriptive analyses of the study variables*

| Variable | *M* | *DE* | Minimum | Maximum | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| Severe Self-Injury | 1.07 | .23 | 0 | 4 | 4.1 | 1.5 |
| Mild Self-Injury | 1.22 | .37 | 0 | 4 | 2.11 | 4.66 |
| Cybervictimization | 1.16 | .37 | 1 | 4 | 3.08 | 1.34 |
| V/R Victimization | 1.73 | .73 | 1 | 5 | 1.26 | 1.49 |
| Ph/S Victimization | 1.27 | .53 | 1 | 5 | 3.06 | 1.11 |

*Note. N* = 433. *M*: Mean; *SD*: Standard deviation.

Subsequently, correlation analyses were conducted among the study variables (Table 2). The correlation analyses revealed positive and statistically significant associations among all variables examined. A moderate correlation was observed between mild and severe self-injury ($r = .46$, $p < .01$), as well as weaker but consistent associations between cybervictimization and mild self-injury ($r = .23$, $p < .01$) and severe self-injury ($r = .26$, $p < .01$). Physical/social victimization showed the strongest correlation with verbal/relational victimization ($r = .64$, $p < .01$), suggesting an overlap between these forms of aggression.

**Table 2**

*Correlations among the study variables*

| | Mild Self-Injury | Severe Self-Injury | Cybervictimization | V/R Victimization |
|---|---|---|---|---|
| Mild Self-Injury | - | | | |
| Severe Self-Injury | .46** | - | | |
| Cybervictimization | .23** | .26** | - | |
| V/R Victimization | .24** | .15** | .24** | - |
| Ph/S Victimization | .24** | .19** | .26** | .64** |

*Note. N* = 433. ***p* < .001

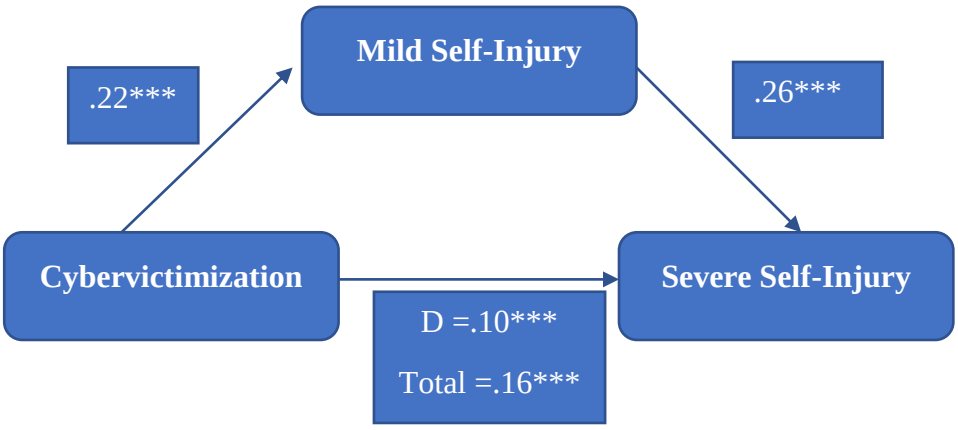
Subsequently, in order to fulfill the stated objective and test the proposed hypotheses, three mediation analyses were conducted using the different model configurations, as illustrated in Figure 1.

Figure 2 presents the mediation model of cybervictimization on severe self-injury through mild self-injury. The results showed that cybervictimization had a statistically significant effect on mild self-injury (β = .22, *SD* = .04, $p < .001$, 95 % CI [.13, .32]), and that mild self-injury, in turn, had a statistically significant effect on severe self-injury (β = .26, *SD* = .02, $p < .001$, 95 % CI [.20, .31]). The total effect of

cybervictimization on severe self-injury, mediated by mild self-injury, was significant (β = .16, *SD* = .02, *p* < .001, 95 % CI [.10, .22]). Moreover, the direct effect of cybervictimization on severe self-injury was smaller (β = .10, *SD* = .02, *p* < .001, 95 % CI [.05, .15]) than the total effect. The indirect effect of cybervictimization through mild self-injury was also significant, with β = .06 (*SD* = .02), 95 % CI [.01, .12]. The variance explained by the model was $R^2$ = .26. Considering the magnitude of the indirect and total effects relative to the direct effect, the results confirm the presence of a mediation effect.

**Figure 2**

*Mediation model for cybervictimization, mild self-injury, and severe self-injury*



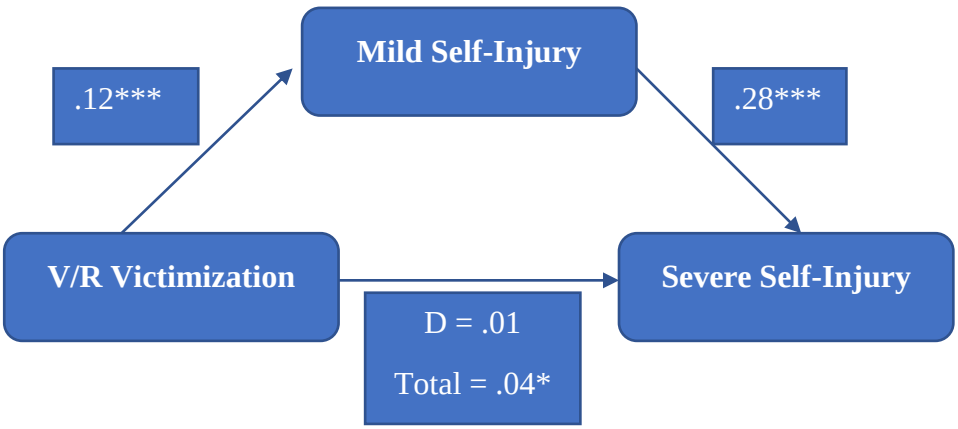

*Note.* SI: Self-Injury; D: Direct effect.

*** *p* < .001

Figure 3 presents the mediation model of verbal/relational victimization on severe self-injury through mild self-injury. The results showed that verbal/relational victimization had a statistically significant effect on mild self-injury (β = .12, *SD* = .02, *p* < .001, 95 % CI [.07, .16]), and that mild self-injury, in turn, had a statistically significant effect on severe self-injury (β = .28, *SD* = .02, *p* < .001, 95 % CI [.22, .33]). The total effect of verbal/relational victimization on severe self-injury mediated by mild self-injury was significant (β = .04, *SD* = .01, *p* < .05, 95 % CI [.02, .07]). However, the direct effect of verbal/relational victimization on severe self-injury was smaller and non-significant (β = .01, *SD* = .01, *p* = .27, 95 % CI [−.01, .04]) compared to the total effect. The indirect effect of verbal/relational victimization through mild self-injury was also significant, with β = .03 (*SD* = .01), 95 % CI [.01, .06]. The variance explained by the model was $R^2$ = .21. Considering the magnitude of the indirect and total effects relative to the direct effect, the results indicate the presence of a mediation effect. However, it is important to note that, although statistically significant, the total effect size was small.

**Figure 3**

*Mediation model for verbal/relational victimization, mild self-injury, and severe self-injury*

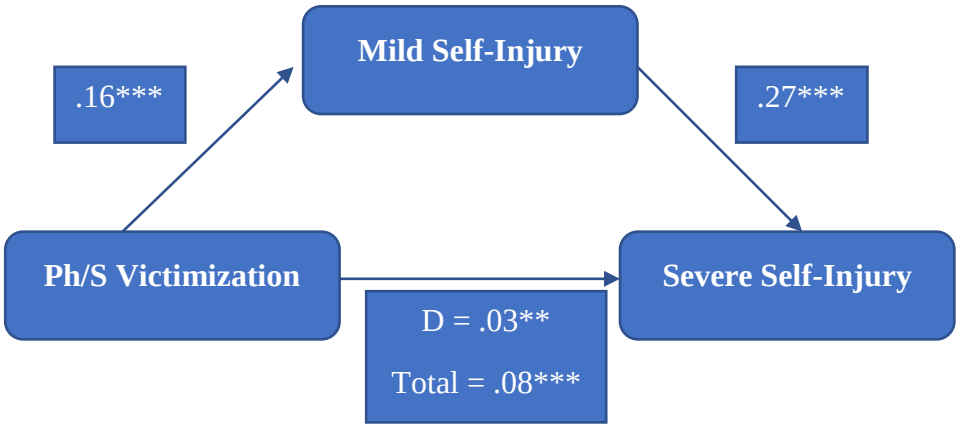



*Note.* SI: Self-Injury; D: Direct effect; VR: Verbal/Relational. *** *p* < .001; **p* < .05

Figure 4 presents the mediation model of physical/social victimization on severe self-injury through mild self-injury. The results showed that physical/social victimization had a statistically significant effect on mild self-injury (β = .16, *SD* = .03, *p* < .001, 95 % CI [.10, .23]), and that mild self-injury, in turn, had a statistically significant effect on severe self-injury (β = .27, *SD* = .02, *p* < .001, 95 % CI [.21, .32]). The total effect of physical/social victimization on severe self-injury mediated by mild self-injury was significant (β = .08, *SD* = .02, *p* < .001, 95 % CI [.04, .12]). In addition, the direct effect of physical/social victimization on severe self-injury was smaller but statistically significant (β = .03, *SD* = .01, *p* < .05, 95 % CI [.002, .07]) compared to the total effect. The indirect effect of physical/social victimization through mild self-injury was also significant, with β = .04 (SD = .01), 95 % CI [.01, .08]. The variance explained by the model was $R^2$ = .21. Considering the magnitude of the indirect and total effects relative to the direct effect, the results confirm the presence of a mediation effect. However, it should be noted that, although statistically significant, the total effect size of the model was small.

**Figure 4**

*Mediation model for physical/social victimization, mild self-injury, and severe self-injury*




*Note.* SI: Self-Injury; D: Direct effect; Ph/S: Physical/Social.

*** *p* < .001; ** *p* < .01

## Discussion

The results obtained in this study indicate that the stated objective was achieved, namely, to examine the relationship between non-suicidal self-injury and various forms of victimization, both offline and digital, mediated by mild self-injury. In addition, the findings allow for the testing and confirmation of the two proposed hypotheses. On the one hand, the proposed mediation models show that both offline victimization (physical/social and verbal/relational) and cybervictimization are associated with severe self-injurious behaviors through the mediating role of mild self-injury. On the other hand, cybervictimization exhibited greater explanatory power for severe self-injury compared to offline victimization, suggesting, consistent with Garaigordobil (2017), that digital environments represent particularly salient contexts for the generation of profound emotional distress during adolescence.

These findings are consistent with theoretical frameworks that conceptualize non-suicidal self-injury as a functional behavior aimed at regulating intense affective states or alleviating emotional distress, as suggested by Klonsky (2007), Nock and Prinstein (2005), and Liu et al. (2022). In this regard, exposure to adverse experiences such as peer victimization or digital harassment becomes a salient trigger for this type of behavior, particularly when individuals lack adaptive coping resources.

Furthermore, the finding that mild self-injury mediates the relationship between victimization and severe self-injury provides empirical support for the notion that self-injurious behaviors may occur in a stepped, progressive, and functionally differentiated manner.

As argued in the introduction, mild self-injury often lacks a clear escape or emotional regulation function in its initial manifestations; however, it may represent an early stage in which individuals explore behaviors that, although not initially intended to alleviate distress, may eventually fulfill that function as they are reinforced by their effects on psychological discomfort (Faura-García et al., 2015;

Hooley et al., 2020). This process may help explain how mild self-injury becomes a mediating factor leading to severe self-injury, particularly when distress derived from victimization is sustained over time or intensifies.

Empirically, and in line with what Faura-García et al. (2015) suggested regarding the association between severe self-injury and pathological factors, Duarte et al. (2023a) demonstrated that pathological variables such as depression and internet addiction are strong predictors of severe self-injury; however, none of these variables were significant predictors of mild self-injury.

From this perspective, the proposed mediation models aim to substantiate the points discussed above by conceptualizing mild self-injury not only as a less severe form of physical harm, but also as a relevant phenomenon that may signal trajectories of increased risk. The finding that mild self-injury consistently mediates the effects of different forms of victimization on severe self-injury suggests that it may play a crucial role in the escalation process of self-injurious behavior, functioning as an early predictor that warrants attention.

The above is consistent with the findings of Zhou et al. (2024), who suggest that the manifestation of stressful events, combined with difficulties in emotion regulation, could be reflected in minor self-injury, and that these may evolve into more severe manifestations when there is no intervention. In this sense, the inclusion of mild self-injury as a mediator allows for the capturing of this dynamic escalation process, as it operates as an intermediate mechanism connecting exposure to victimization with severe self-injury, reinforcing the importance of early detection and the longitudinal analysis of risk trajectories.

Additionally, the finding that mild self-injury functions as a mediator opens avenues for preventive intervention in the initial stages of emotional deterioration. Failing to address the emotional factors that drive these behaviors could escalate to suicidal ideation (De Neve-Enthoven et al., 2024); thus, mild self-injury could even function as a clinical warning marker, serving as a strategic point for early intervention.

Regarding the differences found between in-person and digital victimization, the data indicate that cybervictimization carries greater weight in predicting severe self-injury. It is necessary to mention the nature of adolescent interaction in digital media, as events such as cybervictimization could amplify their emotional impact, given that these situations are not limited to a specific physical environment or schedule, but can persist constantly through digital platforms (Kowalski et al., 2014). In addition to this, anonymity and the rapid dissemination of content on social media tend to generate a sense of helplessness and public exposure that can be particularly overwhelming during developmental stages such as adolescence, characterized by high sensitivity to social acceptance and group identity (Zhang, 2023).

On the other hand, it is important to mention that studies such as those by Carvalho (2021) and Resett and Gamez-Guadix (2017) have demonstrated that cybervictimization is related to negative behaviors or effects, such as substance use, social rejection, or well-being. Thus, the findings coincide with previous research indicating that cybervictimization can be a more relevant predictor for the issue of self-injury, which is linked to negative outcomes, than in-person or traditional victimization.

## Conclusions

We recognize that digital technology, while offering multiple opportunities for interaction, also opens new avenues for peer violence that require addressing with specific intervention strategies.

An important aspect to consider in the interpretation of these results is the role that the availability of emotional and social resources may play in how adolescents cope with victimization experiences. It is possible that those with less access to support networks or with more precarious emotion regulation skills are more prone to using self-injury as a coping mechanism for distress.

The expressive or communicative function of mild self-injury could be interpreted as a way of asking for help or making distress visible when other channels are not available. Over time, if these behaviors are not recognized and intervened upon, they could escalate in intensity until becoming more severe forms of bodily harm.

In this sense, understanding the observed mediating process between victimization and severe self-injury through mild self-injury has relevant clinical and preventive implications. First, it highlights the importance of timely detection of mild self-injurious behaviors, which often go unnoticed or are minimized by both adults and peers, and which could constitute early signs of a progressive process of

emotional deterioration. Second, it emphasizes the need for intervention programs that not only work on reducing victimization behaviors but also promote emotional skills and alternative coping strategies that prevent the use of self-injury as the sole means of emotional release.

Furthermore, the present study provides evidence for the discussion surrounding different types of in-person victimization and their link to self-injury. The intensity of the effect was lower than in the case of cybervictimization. This could be related to the evolution of social environments in today's adolescence, where digital social networks carry increasing weight in the construction of identity, group belonging, and personal validation. In this context, digital victimization might be perceived as more threatening, leading to more intense emotional consequences.

As limitations of this study, it must be considered that it is a cross-sectional study; therefore, with the analyses performed, causality cannot be proven, and inferences regarding causal direction should be taken with caution. Another important element is that victimization overlap was not considered; it is recommended that future research determine whether types of victimization overlap. Although the effects obtained in the in-person victimization models differ from the cybervictimization model, there would be greater clarity and less error if overlap were eliminated. Likewise, it would be pertinent to delve into aspects such as the intensity or duration of harassment experiences, as these could have a modulating effect. Additionally, other variables that could be relevant are age and sex; it is suggested to address them in future research as moderators, as the phenomenon could vary based on these factors.

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**Authors' contribution (CRediT Taxonomy):** 1. Conceptualization; 2. Data curation; 3. Formal Analysis; 4. Funding acquisition; 5. Investigation; 6. Methodology; 7. Project administration; 8. Resources; 9. Software; 10. Supervision; 11. Validation; 12. Visualization; 13. Writing: original draft; 14. Writing: review & editing.

K. G. D.T. has contributed in 1, 2, 3, 5, 6, 10, 11, 12, 13, 14; D. F. B. in 2, 3, 6, 9, 11, 12, 13; J. A. V. N. in 4, 5, 6, 7, 8, 14.

**Scientific editor in charge:** Dra. Cecilia Cracco.