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Victimization and cybervictimization: The role of school factors

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Abstract

Introduction: Victimization and cybervictimization can negatively affect the subjective experience of well-being. This effect can be mediated by school factors, even if a deep understanding of these factors still needs to be determined. The present study examined how peer network, teacher support, and school connectedness mediated the relationship between victimization, cybervictimization, and well-being. We developed two mediation models, considering victimization (Model 1) and cybervictimization (Model 2) as predictors, well-being as the outcome, peer network, teacher support, and school connectedness as parallel mediators, and gender as a covariate variable.

Methods: The sample comprised 563 Italian students (M_{age} = 11.5; 45% females). Students filled out a purpose-built questionnaire investigating victimization and cybervictimization, peer network, teacher support, school connectedness, and well-being. Two multiple mediation models were run using Process.

Results: The two models showed similar patterns [Model 1: $F(8, 169)$ = 34.35, $p \leq .001$, R^2 = .34; Model 2: $F(8, 169)$ = 40.13, $p \leq .001$, R^2 = .34]. Indeed, victimization (Model 1) and cybervictimization (Model 2) had negative significant effects on peer network, teacher support, and school connectedness. However, their direct effects on well-being were not significant, as peer network and school connectedness emerged as complete mediators between victimization (Model 1) and cybervictimization (Model 2) and well-being. Males displayed higher levels of well-being compared to females.

Conclusions: Peer network and school connectedness play a crucial role in mediating the impact of victimization and cybervictimization on well-being. Educators and policymakers should prioritize fostering supportive peer network and strengthening school connectedness to create an environment that mitigates the negative effects of victimization and cybervictimization, enhancing overall student well-being.

KEYWORDS
cybervictimization, mediation, peer, school, teachers, victimization

1 | INTRODUCTION

Bullying victimization refers to a specific type of peer abuse characterized by a power imbalance between the victim and the perpetrator(s), the persistence of the behavior over time, and the deliberate intent to cause harm (Olweus, 1992). Cyberbullying victimization shares most of the characteristics of traditional bullying (Smith et al., 2008) but includes some unique features like unlimited time and space, anonymity, and a potentially large audience that can result in widespread and continuing humiliation for the victim (Campbell & Bauman, 2018; Menesini & Nocentini, 2009). In the present study, for the sake of clarity, we use the term "victimization" specifically to indicate bullying victimization and "cybervictimization" in relation to cyberbullying victimization. In terms of gender differences, while certain studies have not found significant variations (Felipe-Castaño et al., 2019; Palermiti et al., 2022; Williams & Guerra, 2007) others have indicated that females are

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more likely to experience cyberbullying, but less likely to be victims of traditional bullying (Alrajeh et al., 2021; Li, 2007; Smith et al., 2019).

Over the years, research has highlighted the harmful effects of victimization and cybervictimization on students' well-being, considering negative outcomes such as the increase in symptoms of depression (Hawker & Boulton, 2000), alcohol and substance abuse (Rospenda et al., 2013, Tharp-Taylor et al., 2009) suicide attempts (Geoffroy ey al., 2016). By contrast, fewer studies have analyzed the effects of victimization on a comprehensive perspective of well-being by combining hedonic and eudaimonic components (Keyes, 2006). Hedonic well-being emphasizes immediate pleasure, happiness, positive mood, absence of negative mood, and life satisfaction (Ryan & Deci, 2001); while eudaimonic well-being encompasses personal growth, self-acceptance, autonomy, life purpose, and positive relationships (Keyes, 2006; Slee & Skrzypiec, 2016). Regarding gender, some studies have found no differences (Ronen et al., 2016), while others have suggested higher levels of well-being in males (Andreou et al., 2020; Sagone & Caroli, 2014) or in females (Iqbal et al., 2022).

In addition, there is less clarity regarding the underlying mechanisms related to the association between victimization and well-being, even if the school context plays a crucial role (Chai et al., 2020; Holfeld & Baitz, 2020). Specifically, several authors (e.g., Du et al., 2018; Jenkins et al., 2018) have argued that social relationships in school with peers and teachers can mediate the effects of victimization and cybervictimization on well-being. In addition, other authors (e.g., Carney et al., 2022) highlighted the need to consider school connectedness as a possible mediator. However, it is unclear how much these factors could mediate the relationship, if the weight is similar among factors and if similar trends can be described in victimization and cybervictimization (Holfeld & Baitz, 2020; Juvonen & Graham, 2014).

The present study sought to establish how the school context was associated with the positive conception of well-being of victimized and cybervictimized students by examining two multiple mediation models. Specifically, we explored the mediating effects of the peer network quality, the perceived teacher support, and the perceived school connectedness (we use the term "peer network," "teacher support," and "school connectedness" in the following sections) in the relationship between victimization and well-being (Model 1), and cybervictimization and well-being (Model 2) in a sample of Italian students.

2 | VICTIMIZATION AND CYBERVICTIMIZATION: EFFECTS ON WELL-BEING

Meta-analyses, longitudinal and cross-sectional studies have consistently shown that victimization is linked to negative outcomes such as stomachaches, sleep problems, headaches, and muscle pains (Casper & Card, 2017; Gini & Pozzoli, 2013; Ttofi et al., 2011). Additionally, victimization is also associated with depression (Brunstein Klomek et al., 2019; Fredstrom et al., 2011; Vaillancourt et al., 2011), anxiety (Fredstrom et al., 2011), reduced self-esteem (Patchin & Hinduja, 2010), and academic performance decline (Nishina et al., 2005). Cybervictimization has similar consequences, with longitudinal studies confirming links to depression (Hemphill et al., 2015), anxiety (Martínez-Monteagudo et al., 2020), and life satisfaction (Moore et al., 2012). Moreover, experiencing victimization, whether in the school or online environment, has been recognized as a significant behavioral risk factor for behaviors such as increased alcohol and substance use (Fisher et al., 2016; Rospenda et al., 2013; Tharp-Taylor et al., 2009). Finally, in severe cases, being bullied or cyberbullied significantly increases the risk of suicide compared with those who are not victimized (Holt et al., 2015; Klomek et al., 2010; Kowalski et al., 2014).

Regarding the impact of bullying and cyberbullying on the positive concept of well-being, some studies have focused on specific dimensions such as life satisfaction, optimism, and self-esteem (e.g., Chen & Huang, 2015; Savahl et al., 2019). Few studies have assessed well-being more comprehensively, revealing an adverse effect of victimization and cybervictimization (e.g., Schunk et al., 2022; Víllora et al., 2020).

3 | VICTIMIZATION, CYBERVICTIMIZATION AND WELL-BEING: THE MEDIATING ROLE OF SCHOOL FACTORS

Social-ecological theory recognizes bullying and cyberbullying as social phenomena deeply embedded within larger social contexts (Baldry et al., 2019; Hong & Espelage, 2012; Swearer et al., 2010). This theoretical framework, rooted in Bronfenbrenner's ecological systems theory (1979), acknowledges that development is shaped by the dynamic interaction between individuals and the environments they encounter. Thus, the school environment emerges as a fundamental microsystem where bullying and cyberbullying frequently occur and can be reinforced, exerting negative impacts not only on well-being but also on the crucial social relationships that contribute to students' development, namely their interactions with peers and teachers (e.g., Chai et al., 2020). Furthermore, experiencing victimization or cybervictimization can also erode the sense of school connectedness, further exacerbating the negative consequences (Mishna et al., 2010; Vandebosch & Van Cleemput, 2009; Wegge et al., 2014). Other theories, including the frameworks of social attachment (Bowlby, 1982;

Shaver & Mikulincer, 2010) and the need-to-belong theory (Baumeister & Leary, 1995), further highlight the significance of social relationships and the sense of belonging within the school environment. Overall, these theories emphasize the essential role that healthy social connections and feelings of integration, membership, mutual trust, and safety play in adolescents' well-being and development. Thus, victimization and cybervictimization are associated with detrimental consequences for social relationships and school connectedness, further undermining well-being, as proposed by various authors (Carney et al., 2022; Du et al., 2018; Holfeld & Baitz, 2020). However, while bullying is conceptualized as "a ubiquitous international problem that demands attention in all schools" (Cornell & Shukla, 2018, p. 336), the relationship between cyberbullying and school factors is more complex (Williford & Depaolis, 2016). Indeed, although many episodes of cyberbullying originate from the offline social context between students who know each other (Mishna et al., 2010; Vandebosch & Van Cleemput, 2009), it usually happens beyond school borders and hours, raising inquiries about the impact of school-related factors (Cassidy et al., 2013; Von Marées & Petermann, 2012).

3.1 | The mediation effect of peer relationships

Positive peer relationships, intended as beneficial and supportive connections between individuals of similar age, have consistently been associated with positive outcomes, such as the development of high-quality friendships, well-being, and positive social adjustment, both in online and offline contexts (Hoferichter et al., 2015; Rathmann et al., 2018; Rubin et al., 2006). However, when individuals experience bullying or cyberbullying, they may encounter challenges in establishing and maintaining a positive peer network, as their experiences may lead others to perceive them as less desirable friends (Hodges et al., 1999; Nansel et al., 2001). This social exclusion can result in feelings of loneliness, isolation, and a lack of social support, which can have adverse effects on well-being (Holfeld & Baitz, 2020; Jenkins et al., 2018). In this vein, some studies have examined the role of peer support in mediating the relationship between victimization and negative outcomes. For instance, Du et al. (2018) found that peer support partially mediated the association between peer victimization and depression. Pouwelse et al. (2011) explored peer support as a mediator and moderator between victimization and depressive feelings, finding evidence of mediation but not moderation. In the context of cybervictimization, Ho et al. (2020) found that peer support partially mediated the relationship between cybervictimization and depression among university students. Similarly, Tian et al. (2018) confirmed a significant mediation effect of stressful peer relationships between cybervictimization and mental health. To our knowledge, no previous study has considered the mediation effect of peers in the relationship between victimization or cybervictimization and the positive conception of well-being.

3.2 | The mediation effects of teacher support

Teacher support, which encompasses various aspects, including emotional support, instructional support, and organizational support (Hamre & Pianta, 2001), has consistently been associated with enhanced school engagement, academic achievement, and overall well-being (Forster et al., 2020; Hoferichter et al., 2021). In addition, studies that have examined the joint impact of teacher support and peer relationships on well-being consistently demonstrated positive associations (Chen et al., 2023; Tennant et al., 2015). However, when individuals experience victimization, both in traditional bullying and cyberbullying, they may perceive neglect or lack of support from teachers, further exacerbating the negative consequences on well-being (see Mazzone et al., 2021). While, to our knowledge, no study has examined the role of teacher support as the only mediator, research comparing the mediating role of peer and teacher support has yielded mixed findings. In terms of victimization and negative outcomes, Jenkins et al. (2018) found that peer support, but not teacher support, significantly mediated the relationship between peer victimization and adverse outcomes. Considering the positive well-being, Villalobos-Parada et al. (2016) found that teacher support had a greater impact than peer support on the relationship between victimization and life satisfaction, while Flaspohler et al. (2009) demonstrated that both teacher and peer support equally mediated the relationship between victimization and quality of life. Similarly, Hu et al. (2022) investigated the relationship between victimization, well-being, and the mediating roles of family, teacher, and peer support, finding significant partial mediation for all variables. Regarding cybervictimization, Hellfeldt et al. (2019) examined the relationship between cybervictimization, anxiety symptoms, depressive symptoms, well-being, and the mediating effect of perceived social support from friends and teachers. They found that teacher support partially mediated all three outcomes, while peer support only mediated the relationship between anxiety and depression. To date, limited research has explored how both peer and teacher support mediate the relationship between victimization, cybervictimization, and well-being. Chai et al. (2020) investigated the self-rated health and life satisfaction of Chinese adolescents, finding partial mediation for both variables in both victimization and cybervictimization. However, this study focused on a specific cultural context and did not consider the potential effects of school connectedness and the overall well-being.

3.3 | The mediation effects of school connectedness

School connectedness, defined as the feeling of being psychologically attached to one's school or identifying with the school environment (Loukas et al., 2006), is another important construct for adolescents' well-being (Carney et al., 2022). When students feel connected to their school, it fulfills their need for belongingness, leading to positive social interactions, increased academic engagement and even lower suicidal thoughts and behaviors (Marraccini & Brier, 2017). However, victimization can disrupt the sense of school connectedness (Carney et al., 2022). Indeed, when students experience victimization, they may perceive the environment as unsafe or unsupportive, which can diminish their overall well-being (Xu & Fang, 2021). In recent years, school connectedness has started to assume more importance in the study of victimization, showing overall that a strong sense of school connectedness was associated with a low level of victimization (Acosta et al., 2019; Arango et al., 2019; Dorio et al., 2019). Nevertheless, questions about the mediating mechanisms underlying this relationship remain largely unanswered (Eugene et al., 2021). In particular, while Hong and Espelage (2012) proposed considering school connectedness as a mediator in the relationship between victimization and well-being, few studies have moved in that direction, especially regarding cybervictimization. Liu and colleagues (2020) found that school connectedness and feelings of hope partially mediated the relationship between victimization and emotional difficulties and life satisfaction. Similarly, Carney et al. (2022) discovered that school connectedness partially mediated the association between victimization and life satisfaction. Regarding cybervictimization, only Holfeld and Baitz (2020) have taken into account the school connectedness, finding that it partially mediated the association between cybervictimization and internalizing symptoms. As far as we know, no previous studies delved the relationship between cybervictimization and a comprehensive evaluation of well-being, employing school connectedness as a mediator.

4 | THE PRESENT STUDY

In the present study, we sought to fill two gaps in the literature. First, it is necessary to understand if school factors can mediate the association between victimization and adolescent well-being. To the best of our knowledge, no previous studies had considered together peer relationships, teacher support and school connectedness as possible mediators. Second, it is still unclear whether school factors may have different weights in mediating the relationship between victimization and well-being and cybervictimization and well-being. Thus, two mediation models were postulated (Models 1 and 2).

In the Model (1) we analyzed if peer network, teacher support, and school connectedness mediate the association between victimization and well-being, testing also different weights in mediation.

We hypothesized that each school-related factor (peer network, teacher support, and school connectedness) mediate the relationship between traditional victimization and adolescent well-being. Indeed, victimization could trigger additional negative events, such as poor relationships with peers, perceptions of perceived support from teachers, and a lack of school connectedness, and that part of the association between victimization and well-being might be, therefore, attributable to these secondary relational stressors. In addition, we hypothesized that each of the three school factors would exhibit a similar weight in their mediating effect. However, this hypothesis considers the mixed results from previous studies, noting the lack of comprehensive research integrating all these mediators.

In the Model 2 we analyzed if school-related factors (peer network, teacher support, and school connectedness) mediate the relationship between cybervictimization and well-being, testing which of the three factors exhibits a stronger mediating effect.

We hypothesized that the impact of cybervictimization on well-being is mediated by these school factors. However, while the impact of victimization on all the school factors is well-documented in the literature, the effects of cybervictimization on the school factors have been less investigated due to its occurrence in the online environment. In addition, we also hypothesized that the mediating roles of peer network, teacher support, and school connectedness in cybervictimization might be equally significant. Again, due to the scarcity of focused research in the online context, our exploration into this area is more exploratory in nature.

Additionally, it is essential to recognize that gender differences were also identified concerning the mediating variables. Adolescent girls tend to place greater importance on their interpersonal relationships (Ma & Huebner, 2008) and generally express stronger feelings of school belonging, a stronger sense of connection with their teachers, and more positive perceptions of teacher support compared to boys (Rueger et al., 2010). As a result, when faced with limited or absent social support, adolescent girls may be more vulnerable to negative outcomes. For instance, studies have indicated that low levels of support from classmates are associated with increased internalizing symptoms, particularly among adolescent girls (Attar-Schwartz et al., 2019). Therefore, considering the gender differences described for all the variables of the present study, gender was included as a covariate in both Models.

5 | MATERIALS AND METHODS

5.1 | Participants and procedure

Seven middle schools located in the Emilia-Romagna region, in the North-Centre of Italy, participated in the study as part of a larger research to prevent bullying and cyberbullying. The study was conducted with the consent of the school principals, who were contacted via email and confirmed school participation. Subsequently, the consent of students' families was collected by school staff. Data collection involved an online Qualtrics survey administered during school hours in each classroom, with the presence of the teachers and at least one person from the research team to provide necessary assistance to students. Of the 667 students who completed the questionnaire, 104 were excluded due to incomplete responses, resulting in a final sample of 563 students (308 males, 55%; 255 females, 45%) aged 10–14 ($M = 11.50$, SD = 0.63). Additional details about the procedure and demographic composition can be found in Supporting Information: Appendix A.

5.2 | Measures

Students were asked to answer a questionnaire consisting of six sections. Descriptive analyses and correlations for studied variables are presented in Table 1. Additional details about the measures can be found in Supporting Information: Appendix A.

5.2.1 | Victimization

The Italian version of the "European Bullying Intervention Project Questionnaire" (EBIP-Q; Brighi et al., 2012) was used to assess involvement in peer victimization in the last 2 months. Good overall reliability was obtained (Cronbach's $\alpha = .78$).

5.2.2 | Cybervictimization

The Italian version of the "European Cyberbullying Intervention Project Questionnaire" (ECIP-Q; Del Rey et al., 2015) was used to assess involvement in cybervictimization in the last 2 months. The overall reliability was good (Cronbach's $\alpha = .80$).

5.2.3 | Well-being

The "Stirling Children's Well-being Scale" (SCWBS; Liddle & Carter, 2015) was used to assess the level of well-being. Good overall reliability was obtained (Cronbach's $\alpha = .88$).

5.2.4 | Peer network

The subscale "Peer Network" from the School-wide Climate Scale (SCS; Muñoz et al., 2018) was used to assess the quality of the peer social network microsystem in terms of the personal and socio-emotional development of students. Good overall reliability was obtained (Cronbach's $\alpha = .85$).

5.2.5 | Teacher support

To assess student–teacher connectedness, the subscale "Teacher Support" from the scale "Teacher-Student Connectedness" was employed (García-Moya et al., 2021). Good overall reliability was obtained (Cronbach's $\alpha = .87$).

5.2.6 | School connectedness

To assess school connectedness, participants answered five items from the Add Health School Connectedness scale included in the "California Healthy Kids Survey" (CHKS, Furlong et al., 2011). Similar to the results from previous research (Furlong et al., 2011), good internal reliability for the measure was found in the present study (Cronbach's $\alpha = .80$).

5.3 | Data analysis

To evaluate the mediators in the relationship between victimization, cybervictimization and well-being, two multiple mediation models using Process macro were run (Hayes, 2013). We used victimization (Model 1, Figure 1) and cybervictimization (Model 2, Figure 2) as predictors, with well-being as the outcome and peer social network, teacher support and school connectedness as multiple parallel mediators. In addition, a contrast analysis was conducted to determine whether one mediator has a stronger indirect effect than the other (Hayes, 2013; Preacher & Hayes 2008). Finally, we examined the effects of gender as a covariate on all the variables in the model, including predictors, mediators, and the outcome.

The two models ran 500 bootstrap samples and 95% confidence intervals. All analyses included a correction for heteroscedasticity (HC3) and the standardized effects, in line with the recommendations of Hayes and Cai (2007). The independent and mediating variables were centered at a mean of 0 to make the effects interpretable (Hayes, 2017). Additional details about the data analysis can be found in Supporting Information: Appendix A.

6 | RESULTS

6.1 | Victimization and well-being

The first model involved victimization as a predictor (Figure 1). The model was significant, $F(8, 169) = 34.35$, $p \leq .001$, $R^2 = 0.34$, indicating that approximately 34% of the variance in the dependent variable was accounted by the predictor and mediators in the model. As a control variable, gender did not affect the predictor as showed by the preliminary analysis of variance $F(1, 561) = 0.012$, $p = .913$. In addition, within the model, it was not associated with any of the mediators (peer network: $b = 0.041$, $p = .326$; teacher support: $b = 0.055$, $p = .267$; school connectedness: $b = 0.035$, $p = .400$) but it significantly affected well-being ($b = -0.141$, $p = .010$), with females experiencing a lower level of well-being than males.

Victimization was not found to have a significant and direct association with well-being ($b = -0.045$, $p = .372$, Figure 1 and Table 2). However, while accounting for very little of the data variance, victimization showed a significant and negative direct association with the peer network [$F(8, 169) = 10.70$, $b = -0.195$, $p \leq .001$, $R^2 = .04$], teacher support [$F(8, 169) = 8.32$, $b = -0.167$, $p \leq .001$, $R^2 = .03$], and school connectedness [$F(8, 169) = 8.38$, $b = -0.176$, $p \leq .001$, $R^2 = .03$, Figure 1 and Table 2]. In terms of mediation with well-being, victimization showed a significant relationship through the peer network and school connectedness ($b = -0.087$, 95% confidence interval [CI]: −0.133, −0.047; $b = -0.024$, 95% CI: −0.048, −0.006, respectively, Figure 1 and Table 2), while teacher support did not mediate the relationship ($b = -0.010$, 95% CI: −0.027, 0.004, Figure 1 and Table 2). The findings show that the relationship between victimization and well-being was fully mediated by the effect of the peer network and school connectedness. Finally, significant contrasts between peer network and school connectedness revealed peer network as the strongest mediator (*Effect* = 0.070, *Boot lower level confidence interval (LLCI)* = −0.113, *Boot upper level confidence interval (ULCI)* = −0.250).
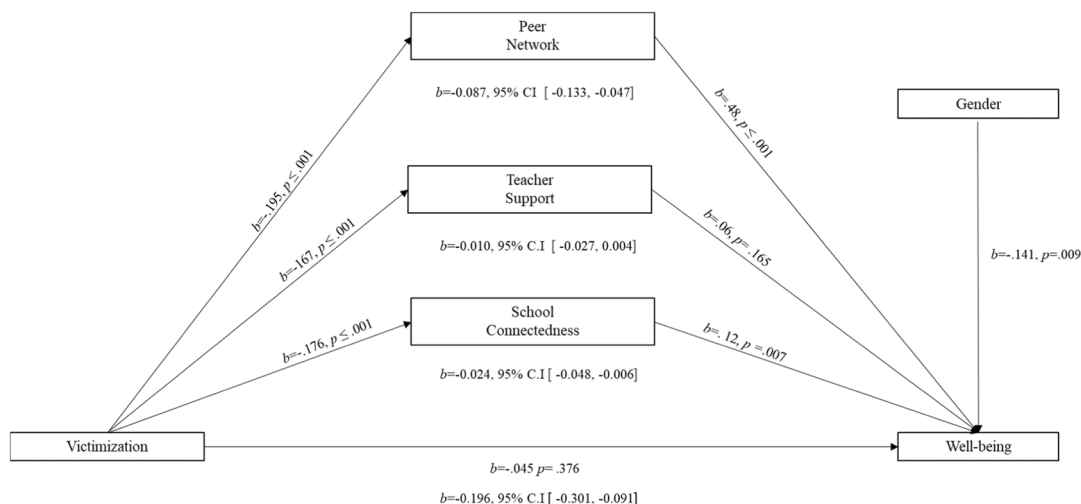

FIGURE 1 The Figure 1 illustrates the theoretical model and the path coefficients of the multiple mediation Model 1 (victimization).
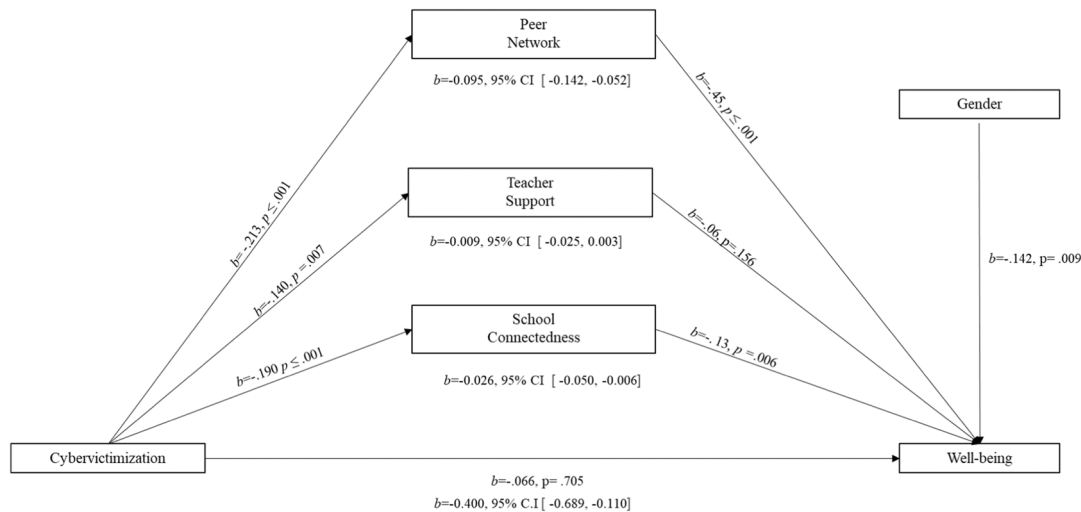
FIGURE 2 The Figure 2 illustrates the theoretical model and the path coefficients of the multiple mediation Model 2 (cybervictimization).

TABLE 1 Descriptive analyses and correlations for studied variables.

Variable	M	SD	1	2	3	4	5	6	7
1. Victimization	0.59	0.64	-						
2. Cybervictimization	0.16	0.31	0.465***	-					
3. Peer Network	2.65	0.73	−0.220**	−0.194**	-				
4. Teacher Support	2.00	0.75	−0.163**	−0.096*	0.409**	-			
5. School Connectedness	2.75	0.89	−0.151**	−0.143**	0.539**	0.441**	-		
6. Well-being	2.38	0.79	−0.191**	−0.205**	0.524**	0.317*	0.427**	-	
7. Gender	-	-	−0.014	−0.039	0.047	0.053	0.041	−0.062	-

Note: Cell entries are zero-order Spearman's correlation coefficients.

*$p < .05$; **$p < .01$; ***$p < .001$.

TABLE 2 Results of the multiple mediation Model 1.

	Path	Estimate	SE	95% CI LL	95% CI UL
Total effect	Victimization → Well-being	−0.196	0.053	−0.301	−0.091
Direct effects	Victimization → Well-being	−0.045	0.050	−0.144	0.054
	Victimization → Peer network	−0.195	0.050	−0.323	−0.125
	Victimization → Teacher Support	−0.167	0.052	−0.295	−0.089
	Victimization → School Connectedness	−0.176	0.062	−0.368	−0.123
	Victimization → Peer network → Well-being	−0.087	0.022	−0.133	−0.047
Indirect effects	Victimization → Teacher Support → Well-being	−0.010	0.008	−0.027	0.004
	Victimization → School Connectedness → Well-being	−0.024	0.010	−0.048	−0.006

Note: The total effect, the direct effects, and the indirect effects of the predictor (victimization) on the outcomes are illustrated.

Abbreviations: CI, confidence interval; LL, lower level; UL, upper level.

6.2 | Cybervictimization and well-being

The second model used cybervictimization as the predictor. Similar to peer victimization, the model was significant, $F(8, 169) = 40.13$, $p \leq .001$, $R^2 = .34$, and explained 34% of the variability in the data. Similar to Model 1, gender did not significantly affect the predictor, $F(1, 561) = 0.204$, $p = .651$ and the mediators (peer network: $b = 0.032$, $p = .362$; teacher

TABLE 3 Results of the multiple mediation Model 2.

	Path	Estimate	SE	95% CI LL	95% CI UL
Total effect	Cybervictimization → Well-being	−0.400	0.147	−0.689	−0.110
Direct effects	Cybervictimization → Well-being	−0.066	0.174	−0.408	0.276
	Cybervictimization → Peer network	−0.213	0.116	−0.733	−0.277
	Cybervictimization → Teacher Support	−0.140	0.123	−0.575	−0.090
	Cybervictimization → School Connectedness	−0.190	0.143	−0.830	−0.264
	Cybervictimization → Peer network → Well-being	−0.095	0.023	−0.142	−0.052
Indirect effects	Cybervictimization → Teacher Support → Well-being	−0.009	0.007	−0.025	0.003
	Cybervictimization → School Connectedness → Well-being	−0.026	0.014	−0.050	−0.006

Note: The total effect, the direct effects, and the indirect effects of the predictor (cybervictimization) on the outcomes are illustrated.

Abbreviations: CI, confidence interval; LL, lower level; UL, upper level.

support: $b = 0.061$, $p = .288$; school connectedness: $b = 0.035$, $p = .380$) but it was significantly associated with well-being ($b = −0.142$, $p = .009$) as females, again, showed a lower level.

No significant direct effect was found between cybervictimization and well-being ($b = 0.066$, $p = .705$, Figure 2 and Table 3). However, cybervictimization, while accounting for only a small amount of the variability in the data, presented a significant negative direct effect on the peer network [$F(8, 169) = 9.83$, $b = −0.213$, $p ≤ .001$, $R^2 = .05$], teacher support [$F(8, 169) = 4.35$, $b = −0.140$, $p = .007$, $R^2 = .02$,] and school connectedness [$F(8, 169) = 7.86$, $b = −0.190$, $p ≤ .001$, $R^2 = .04$, Figure 2 and Table 3]. Cybervictimization was found to have a significant indirect effect on well-being through the peer network and school connectedness ($b = −0.095$, 95% CI: −0.142, −0.052; $b = −0.026$, 95% CI: −0.050, −0.006, respectively, Figure 2 and Table 3), while teacher support did not mediate the relationship ($b = −0.009$, 95% CI: −0.025, 0.003, Figure 2 and Table 3). Similar to the victimization model, the relationship between cybervictimization and well-being was fully mediated by the effect of the peer network and school connectedness. Contrast comparisons showed that, again, the peer network represented the strongest mediator (*Effect* = −0.19, *Boot LLCI* = −0.121, *Boot ULLCI* = −0.025).

7 | DISCUSSION

The present study investigated the influence of school factors on the relationship between victimization and cybervictimization and well-being in a group of Italian pre-adolescents, adding new consideration on the underlying processes.

Results confirm the importance of school factors in fully mediating the impact of victimization on well-being, with the peer network showing the most robust mediation effect. Notably, the importance of school-related factors extends also to cybervictimization. Indeed, although the majority of cybervictimization episodes do not directly happen in the school, still being a cybervictim was adversely associated with the relationships with peers, the support from teachers, and the sense of connection with school, with a cascade effect on well-being.

While gender was not associated with the mediators, findings showed that females experienced lower levels of well-being than males. This result is in line with other studies (Andreou et al., 2020; Attar-Schwartz et al., 2019; Holfeld & Baitz, 2020) and it suggests a greater susceptibility of young girls to experience poorer well-being than males even in early adolescence.

7.1 | Direct effects

The relationship between victimization, cybervictimization, and well-being represents a complex and dynamic interplay. This complexity aligns with Bronfenbrenner's socio-ecological theory (1979), which posits that individual well-being is the product of interactions across multiple levels. Our study highlights this complexity, revealing that the impact of victimization and cybervictimization on well-being is fully mediated through the effects of peer network and school connectedness, rather than being a result of direct effects. One potential reason for the absence of significant direct impacts may be the research focus in existing literature, which primarily centers on the adverse effects of victimization and cybervictimization, particularly their roles in fostering negative outcomes such as depression and anxiety (e.g., Bowes et al., 2015; Hemphill et al., 2015). In

contrast, comprehensive evaluations of well-being, encompassing both eudaimonic and hedonic components, have been less explored (e.g., Schunk et al., 2022; Víllora et al., 2020). As a result, the factors we identified might correlate more with specific negative symptoms than with a holistic sense of well-being, which is also influenced by numerous other aspects.

In addition, it is important to acknowledge that, as described in the introduction, previous studies have typically incorporated only one or two mediators when examining the relationship between victimization or cybervictimization and well-being. By limiting the number of mediators, these studies may not have fully captured the complexity of the underlying processes between the phenomena (see Agler & De Boeck, 2017 about the mediation analysis). In contrast, but as expected, a significant negative effect of the predictors on all three mediators was found.

Regarding the peer network, students who experience victimization by their peers may encounter challenges in their relationships, as victims often face social rejection and unpopularity (Pouwels & Garandeau, 2021; Scholte et al., 2007; Sheppard et al., 2019). However, it is essential to consider that the phenomenon of victimization and its effects on peer relationships may also be cyclical. For instance, D'Urso et al. (2022) found that caring peers in classrooms played a vital protective role in whether a child was victimized. This suggests that positive peer relationships can break the cycle of victimization and foster a supportive environment for adolescents prone to victimization; likely, a similar effect could be possible also in cybervictimization. Regarding teacher support, the negative relationship with victimization and cybervictimization has also been found by other researchers. A study involving nearly 8000 students by Bjereld et al. (2017) found that victimized children had poorer relationships with their teachers (and parents), inhibiting efforts to help students cope. Furthermore, a large volume of research has shown that teachers struggle with intervening (see Mazzone et al., 2021). Finally, it is essential to take into account the Italian context, where teachers may handle classrooms with 28 students, as outlined by the Italian Ministry of Education, Universities, and Research (MIUR). Given the task of managing a large number of students, it is plausible that pre-adolescents who are being victimized might perceive a higher level of unintentional detachment from teachers.

Concerning the negative association with school connectedness, it may be that victimization and cybervictimization hinder students' feelings of school safety and satisfaction at school, which may weaken their feelings of belonging at the school, in line with previous research (Carney et al., 2022; Cunningham, 2007; Goldstein et al., 2008; Loukas et al., 2012).

7.2 | Indirect effects

As highlighted by several authors (Bukowski et al., 1994; Rubin et al., 2006), the quality of the peer network plays a fundamental role in students' daily lives, facilitating the exploration of new skills and providing a protective buffer against negative influences. Consequently, issues arising from victimization, such as rejection or not being perceived as desirable friends, can profoundly impact an individual's peer network, which, in turn, further affects their overall well-being. Our results provide evidence of this consideration, showing that the peer network was the stronger mediator of victimization and cybervictimization on well-being. In addition, victimization or cybervictimization can lead to mistrust and fear of others, making it challenging for the individual to develop and maintain healthy peer connections, contributing to a diminished sense of well-being.

Concerning school connectedness, it is assumed to increase well-being because it provides a sense of identity, emotional safety, coping efficacy, and positive relationships (Prezza & Costantini, 1998; Wandersman & Florin, 2000), which satisfy psychological needs relating to belonging and membership (Nowell & Boyd, 2014). Being a victim or a cybervictim can disrupt this connection, leading to feelings of isolation and mistrust within the school community as highlighted in our results. The negative impact of victimization or cybervictimization may hinder a student's ability to fully engage in school activities, form positive relationships, and seek support, further diminishing their overall well-being. Moreover, the perception of the school environment as unsafe and unsupportive may perpetuate the cycle of violence, making it challenging for students to overcome the negative experiences and fully benefit from the positive aspects of school connectedness.

Interestingly, we did not find a significant effect of teacher support on well-being in contrast with previous studies (Flashpoler et al., 2009; Villalobos-Parada et al., 2016) and our hypothesis. However, our results align with other research that found that teacher support was not a significant mediator (Jenkins et al., 2018) or was significantly weaker than peer relationships (Chen et al., 2021). A possible explanation for this finding is that students who seek independence from adults place a greater value on peers (Bokhorst et al., 2010), or may feel that teachers are less likely to understand them (Bjereld et al., 2017).

7.3 | Limitations

The current research provided important suggestions regarding victimization and cybervictimization in pre-adolescence. There are, however, some limitations that should be considered. First, the present research relied on a cross-sectional

method. Future research should integrate these results with longitudinal studies to understand possible cascading effects among variables. Indeed, the relationships described in this study might be unidirectional, cyclical, or even inverse. For instance, it is plausible that experiencing victimization could lead to changes in individuals' attitudes, behaviors, or coping mechanisms, which may, in turn, influence their likelihood of being victimized again or affect other factors under investigation. As a result, future research should consider exploring these alternative possibilities to gain a more comprehensive understanding of the complex dynamics between victimization, school factors and well-being. Second, the current study utilized only student self-report measures. Due to individuals' tendency to provide socially desirable responses, the levels of victimization and cybervictimization may be underestimated. Third, future research may include other variables at individual and social levels such as the use of adaptive coping strategies, parental support, resilience, or self-esteem. For example, Schunk et al. (2022) pointed out the mediation role of emotional self-efficacy in the relationship between cybervictimization and well-being. Finally, the present findings are limited in external validity because sample data comprised only Italian students aged 10 to 13 years old. In the future, it could be interesting to compare students' data from different countries and to evaluate the theoretical models among upper secondary school students since cyberbullying is more typical among older students (DeSmet et al., 2018).

8 | CONCLUSION

The present study underscores the significance of peer network and school connectedness as vital mediators in shaping the complex relationship between victimization, cybervictimization, and adolescents' well-being. Beyond theoretical insights, these findings have substantial implications for the daily lives of students.

First, nurturing a positive peer network emerges as the crucial strategy to enhance adolescents' well-being. In practical terms, this can be achieved through initiatives like peer mentoring programs and cooperative learning activities. Such programs can foster inclusivity and mutual support among students, directly mitigating the isolating effects of victimization (Van Ryzin & Roseth, 2018).

School connectedness is another crucial area for intervention. Schools can promote this by encouraging student participation in extracurricular activities and fostering stronger links between the school, families, and the wider community. Such efforts can transform the school into a supportive hub that extends beyond academic learning, offering students a sense of identity and security within their educational environment (Bills, 2020; Clark, 2011).

While teacher support was not identified as a significant mediator in our study, its role in the broader context of student well-being should not be underestimated. Training for teachers, focusing on recognizing bullying and cyberbullying episodes and supporting victims, remains essential. Such training can equip teachers with the skills and confidence to act decisively and supportively (Mazzone et al., 2021; Marzano & Lizut, 2019).

In conclusion, while the significance of school-related factors in both preventing and addressing bullying is widely recognized, our research indicates that these factors not only play a crucial role in mediating the connection with overall well-being but also hold fundamental importance in the context of cyberbullying, where the incidents unfold in the digital realm. By prioritizing these factors, educators and policymakers can create nurturing school environments that positively influence adolescents' mental health and social development.

CONFLICT OF INTEREST STATEMENT
The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT
The study protocol met the ethical guidelines for the protection of human participants, including adherence to the legal requirements of Italy, and received formal approval from the Bioethics Committee, at the first author's University.

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