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School Bullying Victimization and Suicidal Ideation in Adolescents: The Mediating Role of Internalizing Problems and Non-Suicidal Self-Injury and the Moderating Role of Resilience and Social Support

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ABSTRACT

Objective: This study examined the mediating roles of internalizing problems and non-suicidal self-injury (NSSI) and the moderating roles of resilience and social support in the relationship between school bullying victimization and adolescent suicidal ideation.

Methods: Using a descriptive-correlational structural equation modeling (SEM) design, 389 adolescents with suicidal ideation were recruited through convenience sampling from psychological clinics in Mashhad, Iran. Participants completed standardized questionnaires assessing bullying victimization (Olweus), suicidal ideation (BSSI), internalizing problems (DASS-21), self-harm (Sansone), resilience (CD-RISC), and social support (Vaux). Data were analyzed using SEM and bootstrapping in R.

Results: The model showed good fit (RMSEA = .039, CFI = .94). Bullying victimization significantly and directly predicted suicidal ideation, internalizing problems, and NSSI. Both internalizing problems (β = .376) and NSSI (β = .225) significantly mediated the link between victimization and suicidal ideation. Moreover, resilience and social support significantly buffered these pathways, supporting all six hypotheses. Whereas bullying victimization fosters suicidal ideation through heightened internalizing symptoms and self-harm, resilience and social support serve as protective factors that mitigate this risk.

Conclusions: The findings highlight the need for school-based interventions that strengthen psychological resilience and support systems to safeguard bullied adolescents.

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Introduction

School is one of the most important contexts for adolescents' social, cognitive, and emotional development; in this environment, students not only receive academic instruction but also have opportunities to test patterns of behavior and communication with their peers. In many cases, however, these everyday interactions become an arena for peer bullying, a repeated and intentional behavior that can take the form of verbal abuse, threats, social exclusion, rumor-spreading, or physical violence. In a systematic review, Agustiningsih et al. (2024) showed that the experience of bullying victimization is typically accompanied by feelings of insecurity, rejection, reduced self-esteem, and increased anxiety. Examining the effects of bullying on adolescent mental health, Bokhari et al. (2022) emphasized that these harms persist beyond the school years, and Al-Ketbi et al. (2024), in a cross-sectional study in the United Arab Emirates, reported a high prevalence of this phenomenon among schoolchildren. Ahmad and Smith (2022) likewise emphasized gender differences in the occurrence and consequences of bullying and noted that the phenomenon is associated with declines in adolescents' academic performance. These findings have intensified mental health researchers' attention to its long-term consequences and to the need for closer examination of the mechanisms through which bullying affects victims' mental health.

Suicidal ideation among adolescents is one of the most alarming, yet most preventable, potential consequences of this experience. Estévez-García et al. (2023) found that adolescent victims of bullying are more likely than their non-victimized peers to develop suicidal thoughts, particularly when they do not share the experience with their families. In a similar study, Galindo-Dominguez and Losada Iglesias (2023) emphasized that this risk intensifies in the absence of support from family, teachers, and peers, and Cuesta et al. (2021), in an international integrative review, identified bullying as one of the most important risk factors for adolescent suicide. Nevertheless, this association rarely operates directly; it is more often shaped by psychological mediating mechanisms, which highlights the need to examine carefully the mediators that explain this complex relationship.

One of the most important mediating pathways proposed in the literature involves internalizing problems such as depression, anxiety, and feelings of inadequacy, a state in which negative emotions, rather than being expressed outwardly, settle within the individual and become a hidden psychological burden. In a longitudinal study, Danneel et al. (2019) confirmed the link between

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loneliness, social anxiety, and depressive symptoms in adolescents, and Falgares et al. (2024) showed that childhood emotional maltreatment exacerbates internalizing problems in adolescence. Gómez-Tabares (2021) specifically showed that depression mediates the relationship between bullying victimization and suicidal behavior in children and adolescents, a finding that Wang et al. (2024) corroborated in Chinese adolescents by demonstrating the simultaneous mediating roles of internalizing problems and non-suicidal self-injury in the relationship between bullying victimization and suicidal ideation.

Another mediating pathway that has attracted researchers' attention in recent years is non-suicidal self-injury, a behavior that individuals engage in to reduce tension or regulate intense negative emotions without intending to end their lives. Che et al. (2022) showed that bullying victims are more likely to engage in such behaviors because they experience chronic psychological pressure and reduced perceived social support. Baiden et al. (2017) confirmed the mediating role of depressive symptoms in this pathway, and De Luca et al. (2023), in a Bayesian meta-analysis, mapped the developmental course of these behaviors during adolescence. Taking a functional approach, Nock and Prinstein (2004) showed that these behaviors typically serve to regulate emotions or influence interpersonal relationships and may, over time, pave the way for suicidal thoughts and attempts.

In contrast to these risk factors, certain psychological and social variables play a protective role and can moderate the strength of the harmful pathways described above. Resilience, the individual's capacity to maintain psychological balance and return to an adaptive state after exposure to stress, is one of the most important of these protective factors. In a sample of chronic bullying victims, Yubero et al. (2023) showed that resilience is associated with higher subjective well-being, and Ran et al. (2020) found that resilience mediates the relationship between bullying victimization and self-injury in Chinese adolescents. Fang et al. (2022) likewise showed that resilience mediates the reduction of anxiety resulting from bullying victimization, and Lin et al. (2022) confirmed the inverse relationship between resilience and depression resulting from bullying experiences.

Social support is recognized as the second major protective factor in this field. In their stress-buffering model of social support, Cohen and Wills (1985) proposed that having a network of supportive people, such as family, friends, and teachers, can reduce the adverse effects of stressful

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events on mental health. In a large study of high school students, Forster et al. (2020) showed that social support can weaken the link between childhood adversity and self-injurious behaviors; Eze et al. (2021), in a sample of African adolescents, confirmed the buffering hypothesis of social support against bullying-related suicidal ideation; and Zhang et al. (2024) found that emotional support from teachers and family moderates the relationship between bullying victimization and suicidal ideation among university students.

From a theoretical perspective, several frameworks can explain the complex relationships among these variables. In the interpersonal theory of suicide, Joiner et al. (2010) proposed that suicidal ideation emerges when an individual simultaneously experiences thwarted belongingness and perceived burdensomeness. In their cognitive account of depression and anxiety, Clark and Beck (2010) showed that negative cognitive distortions are an important link between stressful events and emotional disorders, and Johnson et al. (2011), in the resilience-to-suicide buffering hypothesis, proposed that high resilience can prevent distress from turning into suicidal ideation.

Despite the relatively extensive research on bullying and its consequences, a substantial proportion of these studies have examined each mediator or moderator separately. In their systematic review, Akbari et al. (2024) highlighted the lack of integrative research on suicide among Iranian adolescents, and Asadiyun and Daliri (2023), in a meta-analysis of suicide attempts and suicide deaths in Iran, emphasized the alarming trend of this phenomenon in recent years. This research gap, particularly in the Iranian cultural and social context, underscores the importance of designing and empirically testing a comprehensive and coherent model, because few studies have simultaneously tested the direct, indirect, and interactive effects of these four variables within a single framework in a clinical sample of adolescents attending counseling centers.

Based on the foregoing, the present study was designed to examine the mediating roles of internalizing problems and non-suicidal self-injury in the relationship between school bullying victimization and adolescent suicidal ideation, as well as the moderating roles of resilience and social support in these mediating pathways. The main research question is whether the proposed structural model, in which resilience and social support moderate the mediating pathways of internalizing problems and non-suicidal self-injury, fits the data well in explaining suicidal ideation among adolescent victims of school bullying.

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Materials and Methods

Participants and Procedure

The present study was fundamental in purpose and, in terms of data collection, used a descriptive-correlational design based on structural equation modeling (SEM). The design was cross-sectional; that is, data were collected from the sample within a specific time period without manipulating the variables. The statistical population comprised all adolescents with suicidal ideation who attended psychological clinics in Mashhad. Because the exact size of the population was unknown, the sample size was determined according to the methodological requirements of structural equation modeling (5 to 15 participants per observed variable), and data from 389 adolescents aged 12 to 18 years, selected through convenience sampling, were ultimately analyzed. The inclusion criteria were being 12 to 18 years old and providing informed consent from both the adolescent and a parent; the exclusion criteria were having a severe psychiatric disorder or cognitive impairment that prevented responding, and being unwilling to continue participation.

Six standardized questionnaires were used for data collection: the Olweus School Bullying Victimization Questionnaire (1996; 40 items; 5-point Likert scale; Cronbach's alpha for the victimization subscale, $\alpha = .84$); the Beck Scale for Suicidal Ideation (Beck, Steer, & Ranieri, 1988; 19 items; 3-point Likert scale; $\alpha = .87$ to .97); the Depression Anxiety Stress Scales (DASS-21; Lovibond & Lovibond, 1995; 21 items; 4-point Likert scale; $\alpha > .70$), used to measure internalizing problems; the Self-Harm Inventory of Sansone et al. (1998; 22 items; dichotomous yes/no format; $\alpha > .70$; test-retest reliability = .83); the Connor-Davidson Resilience Scale (2003; 25 items; 5-point Likert scale; $\alpha = .93$ in Iranian samples); and the Social Support Appraisals Scale of Vaux et al. (1986; 23 items; 5-point Likert scale; $\alpha = .66$ to .74 in Iranian studies). The content and construct validity of all instruments have been confirmed in previous Iranian and international studies.

Data analysis was conducted in two stages. First, descriptive statistics (mean, standard deviation, skewness, and kurtosis) and the frequency distributions of the demographic variables were computed in SPSS version 26. Statistical assumptions, including univariate normality (Jarque-Bera test) and multivariate normality (Mardia's test), were then examined. Second, structural equation modeling (SEM) in R was used to test the research hypotheses simultaneously, including the direct, indirect, and interaction effects. Before the interaction terms were constructed, continuous

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variables were mean-centered to reduce multicollinearity. The significance of the indirect and moderating effects was tested using bootstrapping with 5,000 resamples. Model fit was assessed using the CFI, TLI, RMSEA, SRMR, GFI, AGFI, and the chi-square to degrees of freedom ratio (χ^2/df).

Table 1. Summary of the Research Instruments

Instrument	Developer (Year)	No. of Items	Response Scale	Validity	Reliability (Cronbach's α)
School bullying victimization	Olweus (1996)	40	5-point Likert	Content validity confirmed	.84 (victimization subscale)
Suicidal ideation	Beck (1961)	19	3-point Likert (0-2)	Correlation with the Beck Depression Inventory and Beck Hopelessness Scale	.87-.97
Internalizing problems (DASS-21)	Lovibond and Lovibond (1995)	21	4-point Likert	Correlation with the BDI and the Eysenck anxiety measure	> .70
Non-suicidal self-injury (SHI)	Sansone et al. (1998)	22	Dichotomous (yes/no)	Construct and convergent validity confirmed	> .70
Resilience (CD-RISC)	Connor and Davidson (2003)	25	5-point Likert	Convergent validity with hope and self-efficacy	.93
Social support (SS-A)	Vaux et al. (1986)	23	5-point Likert	Correlation with the Zimet scale (r = .73)	.66-.74

Results

Before the research hypotheses were tested, the demographic characteristics of the sample were examined. The participants' mean age was 16.08 years (SD = 1.01), with a range of 13 to 19 years, which the authors report as consistent with the study's inclusion criteria (12 to 18 years). Of the 389 participants, the largest group was in Grade 12 (38.0%) and the smallest in Grade 7 (0.8%); girls made up 89.2% of the sample and boys 10.8%. Regarding parental education, 71.0% of parents held a high school diploma or less, and only 1.8% held a doctoral degree; 94.9% of parents were married and 5.1% were divorced. This distribution reflects a marked predominance of female participants and a concentration of the sample in upper secondary school, which should be considered when generalizing the results.

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Table 2. Frequency Distribution of the Sample's Demographic Characteristics (N = 389)

Variable	Level	Frequency	%
Gender	Female	347	89.2
	Male	42	10.8
Grade	Grades 7-9	30	7.7
	Grade 10	116	29.8
	Grade 11	95	24.4
	Grade 12	148	38.0
Parental education	High school diploma or less	278	71.0
	Bachelor's degree	86	22.1
	Master's or doctoral degree	27	6.9
Parental marital status	Married	369	94.9
	Divorced	20	5.1
Age (years)	*M* = 16.08, *SD* = 1.01, range = 13-19	-	-

This figure shows the distribution of the sample by age and grade. As noted in the discussion of Table 2, the age distribution curve is symmetric around the mean of 16.08 years and close to normal, whereas the grade bars clearly show that the sample is concentrated in Grades 10 to 12 (upper secondary school). This pattern indicates that the findings are most generalizable to upper secondary school adolescents.

Table 3 Presents the Descriptive Statistics for the Main Study Variables. School Bullying Victimization Had a Mean of 1.54 (SD = 0.38), and Suicidal Ideation Had a Mean of 0.44 (SD = 0.45) With Positive Skewness, Indicating a Predominance of Low Scores in the Sample and a Small Subgroup with Higher Scores. Resilience (M = 3.50) and Social Support (M = 3.31) Were at Relatively Favorable Levels, Whereas Internalizing Problems (M = 0.96) and Non-Suicidal Self-Injury (M = 0.18) Had Right-Skewed Distributions, Indicating a Subgroup with More Severe Symptoms

Table 3. Descriptive Statistics for the Main Study Variables

Variable	*M*	*SD*	Skewness	Kurtosis
School bullying victimization	1.54	0.38	-0.45	0.44
Suicidal ideation	0.44	0.45	1.10	1.09
Resilience	3.50	0.74	-0.42	0.45
Social support	3.31	0.37	-0.36	0.06
Internalizing problems	0.96	0.64	0.42	0.43
Non-suicidal self-injury	0.18	0.19	1.26	1.15

Before the structural equation model was fitted, the assumption of normality was examined. The Jarque-Bera test yielded *p* values greater than .05 for all variables (range = .312 to .792), supporting

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univariate normality; skewness and kurtosis coefficients also fell within the acceptable range of -2 to 2. In addition, Mardia's test of multivariate normality showed that multivariate skewness (5.23, $p = .342$) and multivariate kurtosis (42.15, $p = .128$) were not significant at the .05 level; therefore, the assumption of multivariate normality required for maximum likelihood (ML) estimation in structural equation modeling was met.

Table 4. Results of the Univariate and Multivariate Normality Tests

Variable	Jarque-Bera p	Skewness	Kurtosis
School bullying victimization	.627	-0.45	0.44
Suicidal ideation	.366	1.10	1.09
Resilience	.639	-0.42	0.45
Social support	.792	-0.36	0.06
Internalizing problems	.633	0.42	0.43
Non-suicidal self-injury	.312	1.26	1.15
Mardia's test (multivariate skewness)	.342	Statistic = 5.23	-
Mardia's test (multivariate kurtosis)	.128	Statistic = 42.15	-

Before the main hypotheses were tested, a Pearson correlation matrix of the study variables was computed to examine the pattern of bivariate relationships. As shown in Table 5, school bullying victimization was significantly and positively correlated with suicidal ideation ($r = .224$), internalizing problems ($r = .403$), and non-suicidal self-injury ($r = .398$), and significantly and negatively correlated with resilience ($r = -.119$) and social support ($r = -.110$). In addition, suicidal ideation showed strong positive correlations with internalizing problems ($r = .671$) and self-injury ($r = .462$) and strong negative correlations with resilience ($r = -.583$) and social support ($r = -.419$).

Table 5. Pearson Correlation Matrix of the Study Variables

Variable	1	2	3	4	5	6
1. School bullying victimization	1					
2. Suicidal ideation	.224**	1				
3. Resilience	-.119*	-.583**	1			
4. Social support	-.110*	-.419**	.530**	1		
5. Internalizing problems	.403**	.671**	-.597**	-.461**	1	
6. Non-suicidal self-injury	.398**	.462**	-.317**	-.237**	.517**	1

*p < .05. **p < .01.

To test the research hypotheses simultaneously, a structural equation model including the direct, mediating, and interaction paths was fitted. The model fit indices, namely χ^2/df (1.29), RMSEA

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(.039), SRMR (.015), CFI (.94), TLI (.96), GFI (.95), and AGFI (.92), all fell within acceptable ranges; the conceptual model therefore fit the observed data well.

Table 6. Fit Indices of the Structural Model

Index	χ^2	*df*	χ^2/df	RMSEA	TLI	CFI	SRMR	NFI	GFI	AGFI
Research model	1296.55	-	1.29	.039	.96	.94	.015	.95	.95	.92
Acceptable value	-	-	< 4	< .08	> .90	> .90	< .08	> .90	> .90	> .90

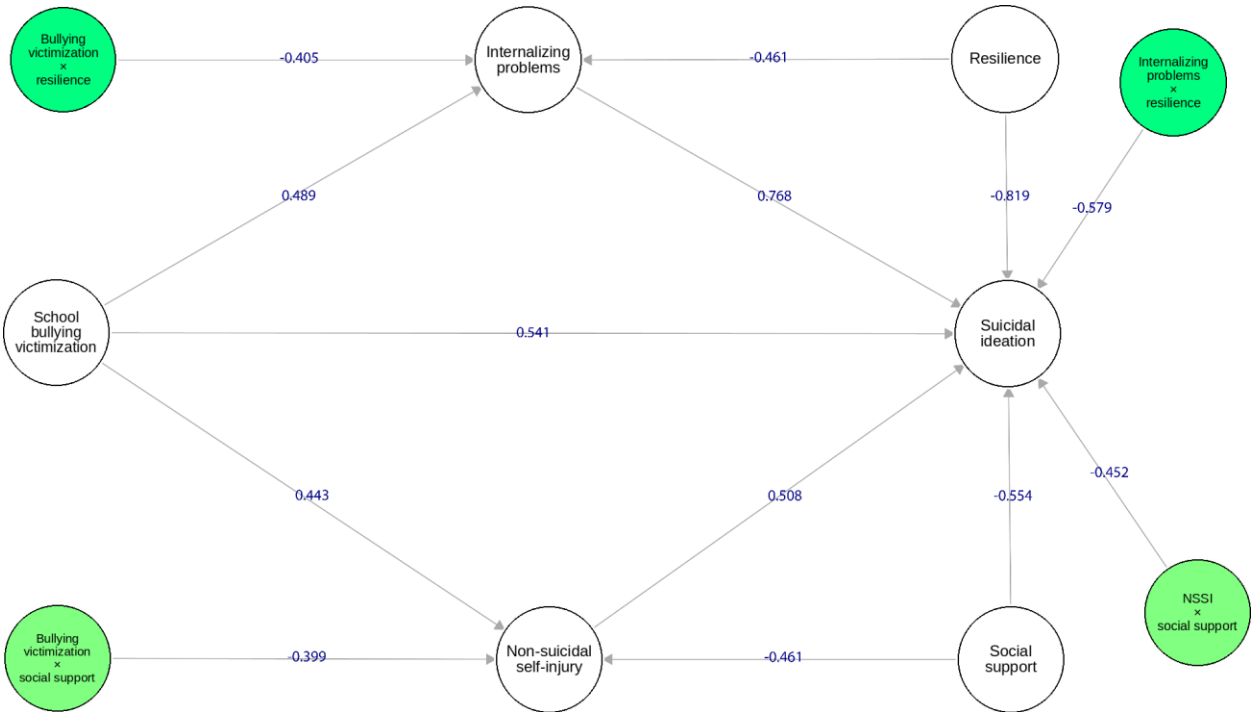


Figure 2. Path Diagram of Standardized Coefficients for the Structural Model

This figure presents the complete structure of the conceptual model. Latent and observed variables are shown as ellipses and rectangles, respectively, and the standardized path coefficient (β) is shown on each arrow. The arrows indicate the hypothesized direction of influence from school bullying victimization to the mediators (internalizing problems and non-suicidal self-injury) and from these to suicidal ideation; the arrows for resilience and social support enter as interaction effects on the mediating paths and on the final path. The absolute magnitude of each coefficient indicates the strength of the relationship between the two variables connected by that arrow. In this figure, the path from resilience to suicidal ideation (β = -.819) is the strongest coefficient in

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the model, and the path from bullying victimization to self-injury (β = .443) falls in the middle of the range of coefficients.

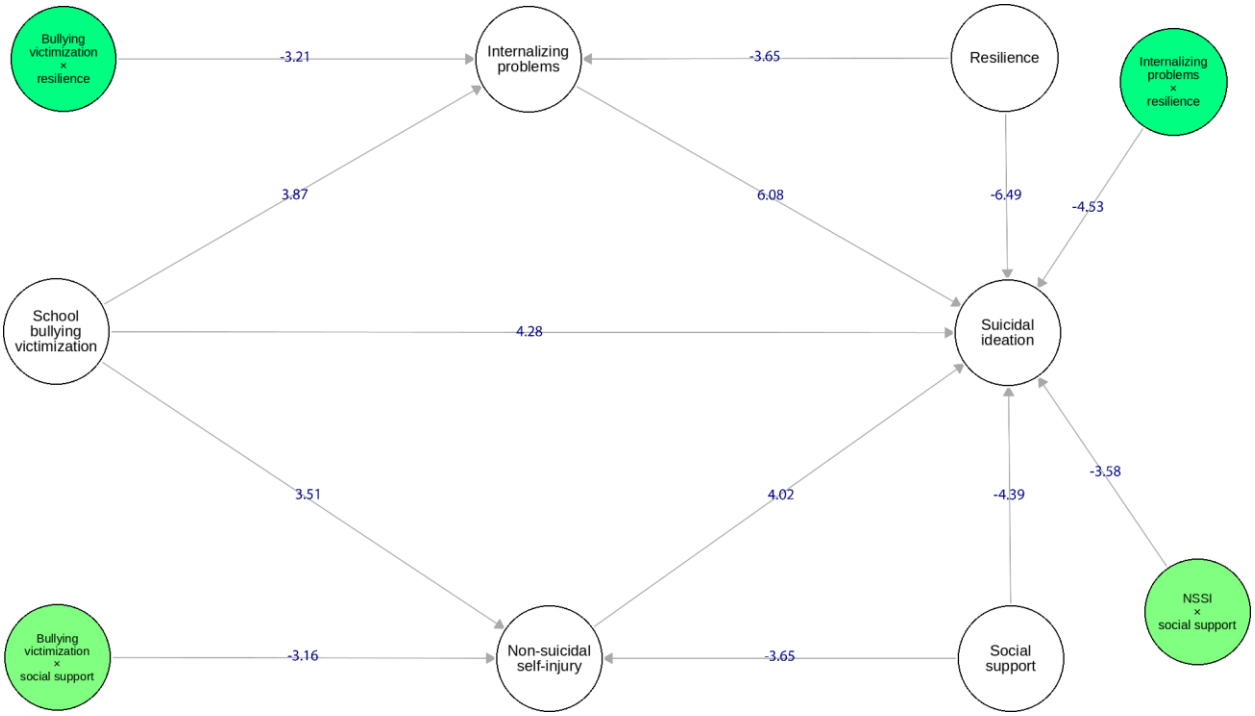


Figure 3. Path Diagram of Z Statistics for the Structural Model

This figure shows the same model structure, except that the *z* statistic for each path (the critical ratio used to test significance) is shown on the arrows instead of the standardized coefficients. Absolute values greater than 1.96 indicate statistical significance at the .05 level, and values greater than 2.58 indicate significance at the .01 level. Accordingly, as detailed in Table 7, all paths in this figure, including the direct and interaction paths, had significant *z* statistics (absolute values greater than 1.96), providing empirical support for all research hypotheses at the level of the structural model.

The results for the direct paths (Table 7) showed that school bullying victimization had significant, direct, and positive effects on suicidal ideation (β = .541, *z* = 4.28, *p* < .001), non-suicidal self-injury (β = .443, *z* = 3.51, *p* < .01), and internalizing problems (β = .489, *z* = 3.87, *p* < .001). Social support had direct negative effects on self-injury (β = -.461) and suicidal ideation (β = -.554), and resilience had significant negative effects on suicidal ideation (β = -.819) and internalizing problems (β = -.461). More importantly, the interaction effects were also significant: bullying

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victimization × social support on self-injury (β = -.339, $p < .01$), self-injury × social support on suicidal ideation (β = -.452, $p < .001$), resilience × internalizing problems on suicidal ideation (β = -.579, $p < .001$), and resilience × bullying victimization on internalizing problems (β = -.405, $p < .01$). Together, these results support the moderating roles of resilience and social support proposed in Hypotheses 1 to 4.

Table 7. Results for the Direct and Interaction Paths of the Structural Model

Path	Standardized coefficient (β)	*z*	*p*
School bullying victimization → Suicidal ideation	.541	4.28	< .001
School bullying victimization → Non-suicidal self-injury	.443	3.51	.001
School bullying victimization → Internalizing problems	.489	3.87	< .001
Social support → Non-suicidal self-injury	-.461	-3.65	< .001
Social support → Suicidal ideation	-.554	-4.39	< .001
Resilience → Suicidal ideation	-.819	-6.49	< .001
Resilience → Internalizing problems	-.461	-3.65	< .001
Non-suicidal self-injury → Suicidal ideation	.508	4.02	< .001
Internalizing problems → Suicidal ideation	.768	6.08	< .001
Bullying victimization × Social support → Self-injury	-.339	-3.16	.002
Self-injury × Social support → Suicidal ideation	-.452	-3.58	< .001
Resilience × Internalizing problems → Suicidal ideation	-.579	-4.53	< .001
Resilience × Bullying victimization → Internalizing problems	-.405	-3.21	.001

Finally, bootstrapping with 5,000 resamples was used to test Hypotheses 5 and 6, which concerned the mediating roles of internalizing problems and non-suicidal self-injury. As shown in Table 8, both the indirect path school bullying victimization → internalizing problems → suicidal ideation (indirect effect = .376, $p < .001$) and the indirect path school bullying victimization → non-suicidal self-injury → suicidal ideation (indirect effect = .225, $p < .001$) were significant. Thus, both internalizing problems and non-suicidal self-injury significantly mediated the relationship between school bullying victimization and suicidal ideation; overall, all six research hypotheses were supported.

Table 8. Bootstrap Results for the Indirect (Mediating) Effects

Indirect path	Indirect effect	*p*
School bullying victimization → Internalizing problems → Suicidal ideation	.376	< .001
School bullying victimization → Non-suicidal self-injury → Suicidal ideation	.225	< .001

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Discussion

The present study was designed and conducted to examine the mediating roles of internalizing problems and non-suicidal self-injury in the relationship between school bullying victimization and adolescent suicidal ideation, as well as the moderating roles of resilience and social support in these pathways. The results of the structural equation model, which also showed good fit, supported all six research hypotheses. Below, the findings for each hypothesis are presented in turn and then discussed in light of previous research and the relevant theoretical foundations.

The results for the first hypothesis showed that resilience significantly moderated the relationship between school bullying victimization and suicidal ideation through the internalizing problems pathway; as resilience increased, the positive effect of bullying victimization on internalizing problems (depression, anxiety, and stress) was markedly weakened. This finding is fully consistent with Fang et al. (2022), who confirmed the mediating role of resilience in reducing bullying-related anxiety in a sample of Chinese adolescents, and with Yubero et al. (2023), who reported a positive link between resilience and psychological well-being among chronic bullying victims. From a theoretical perspective, resilience strengthens adaptive coping strategies, problem-solving ability, and more realistic cognitive appraisal of threatening situations, thereby preventing a catastrophic interpretation of the bullying experience. In their cognitive account of negative emotions, Clark and Beck (2010) showed that cognitive distortions (such as overgeneralization or catastrophizing) are the main link between stressful events and the onset of depression and anxiety. Accordingly, resilient adolescents, owing to their greater cognitive flexibility, are less prone to these distortions and appraise victimization as a transient, manageable situation rather than as a lasting threat to their self-worth; it is this difference in cognitive appraisal style that ultimately determines the severity of internalizing problems following bullying.

The second hypothesis, which proposed that social support moderates the same pathway (bullying victimization → internalizing problems), was also supported. This result is consistent with Zhang et al. (2024), who showed that emotional support from teachers and family moderates the relationship between bullying victimization and suicidal ideation among Chinese university students, and with Jiang and Chai (2025) regarding the moderating role of social support in the psychological consequences of bullying. In their classic stress-buffering model of social support, Cohen and Wills (1985) explained that a network of supportive people operates through two

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pathways: first, by altering the individual's primary appraisal of the stressful event (the perceived threat decreases because the individual knows they are not alone), and second, by providing an opportunity for emotional release and reprocessing of the distressing experience. Conversely, the absence of such a network increases the likelihood of social isolation and the gradual accumulation of negative emotions, which sets the stage for internalizing symptoms. Notably, in the present study, the moderating coefficient of social support was slightly weaker than that of resilience, which may indicate that intrapersonal resources play a more prominent role than external resources in this clinical sample of adolescents.

The third hypothesis, concerning the moderating role of resilience in the pathway leading to non-suicidal self-injury, was supported. This finding is clearly consistent with Ran et al. (2020), who showed that resilience mediates the relationship between bullying victimization and self-injury in a large sample of Chinese adolescents. It should be noted, however, that Ran et al. tested the mediating role of resilience, whereas the present study tested its moderating role, suggesting that resilience may operate through both pathways simultaneously (as an independent mediator and as a moderator of effect strength). In the resilience-to-suicide buffering hypothesis, Johnson et al. (2011) explained that resilience, by improving distress tolerance, prevents helplessness and hopelessness from turning into self-injurious behaviors. From a functional perspective, Nock and Prinstein (2004) showed that non-suicidal self-injury typically serves an intrapersonal emotion-regulation function (rapid tension reduction); therefore, resilient adolescents who have more adaptive emotion-regulation strategies (such as cognitive reappraisal or problem-solving) feel less need to resort to this high-risk strategy to manage their negative emotions.

The fourth hypothesis, concerning the moderating role of social support in the pathway leading to non-suicidal self-injury, was supported. This result is fully consistent with Che et al. (2022), who found that perceived social support weakens the relationship between bullying and self-harm in a sample of Chinese children and adolescents, and with Jiang and Chai (2025). It is worth noting, however, that some studies have reported a smaller effect of social support on self-injurious behaviors than on internalizing symptoms. This difference may arise because self-injury, unlike rumination or worry, often occurs secretly and out of sight of others and is therefore less amenable to being directly targeted by overt social support. Despite this relative limitation, the present results

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showed that social support, by providing an alternative outlet for emotional expression and release, still significantly reduces adolescents' need to resort to self-injury as a hidden coping strategy.

The fifth hypothesis, concerning the mediating role of internalizing problems in the relationship between school bullying victimization and suicidal ideation, was supported, and this indirect effect (.376) was the larger of the two mediating pathways. This finding is fully consistent with Gómez-Tabares (2021) regarding the mediating role of depression in the relationship between bullying and suicidal behavior in children and adolescents and, in particular, with Wang et al. (2024), who, in a study with a conceptual design very similar to the present one, confirmed the simultaneous mediating roles of internalizing problems and non-suicidal self-injury in Chinese adolescents. In the interpersonal theory of suicide, Joiner et al. (2010) would explain this finding as follows: bullying victimization simultaneously reinforces two dangerous perceptions in adolescents, namely thwarted belongingness (owing to the rejection and social isolation caused by bullying) and perceived burdensomeness (owing to reduced self-esteem and feelings of worthlessness). When these two perceptions are experienced persistently and together, the psychological conditions for the development of a desire for death are in place. The greater prominence of this mediating pathway relative to the self-injury pathway further suggests that, in the present clinical sample, internalized emotional burden played a more central role than overt externalizing behaviors in the development of suicidal ideation.

The sixth hypothesis, concerning the mediating role of non-suicidal self-injury in the same relationship, was also supported, a finding that, as noted earlier, is consistent with Wang et al. (2024). Drawing on the functional account of self-injury (Nock & Prinstein, 2004) and on the acquired capability component of the interpersonal theory of suicide (Joiner et al., 2010), this finding can be interpreted as follows: through habituation, repeated self-injurious behaviors gradually reduce the individual's sensitivity to physical pain and fear of death. This desensitization, which Joiner termed "acquired capability," is a necessary psychological precondition for the transition from thinking about suicide to acting on it. In other words, whereas internalizing problems mainly supply the "motivation" for suicidal thoughts, non-suicidal self-injury may build the "capability" needed to translate these thoughts into action; taken together, these two mediating pathways provide a more compelling explanation of the full mechanism leading to suicide among adolescent victims of bullying.

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Overall, the six findings together present a coherent, multilayered picture of a causal chain: school bullying victimization first gives rise to suicidal ideation through two distinct but related pathways, namely increased internalized emotional problems (motivation) and the emergence of self-injurious behaviors (capability), whereas individual resilience and adequate social support can weaken these effects at every point in the chain. The good fit of the tested structural model (RMSEA = .039, CFI = .94) and the significance of all direct, mediating, and interaction paths support the empirical validity of this integrated model. Nevertheless, several limitations should be noted, including the cross-sectional design, which limits definitive inferences about the causal direction of the relationships; convenience sampling, which reduces the generalizability of the results to the broader adolescent population; and the exclusive reliance on self-report instruments, which may be subject to response biases.

In light of these findings, it is recommended that a regular mental health screening system be designed and implemented in schools, focusing on the simultaneous identification of bullying experiences, internalizing symptoms, and hidden self-injurious behaviors, so that early intervention is possible before suicidal ideation escalates. Resilience-building workshops focusing on emotion regulation, cognitive reappraisal, and problem-solving skills should be implemented in schools alongside and concurrently with structured programs that expand family, teacher, and peer social support networks, because the present findings showed that these two protective factors operate through relatively distinct pathways. School counselors and psychologists should also receive specialized training in identifying hidden signs of self-injury, and evidence-based treatment protocols, particularly cognitive-behavioral therapy and emotion regulation-focused approaches, should be used for high-risk students. Finally, future research using longitudinal designs that permit causal inference, larger random samples, and tests of this integrated model in more diverse cultural and demographic contexts could provide a more precise and generalizable picture of the complex mechanisms leading to suicidal ideation among adolescent victims of bullying.

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Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Islamic Azad University.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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