

The Relationship Between Self-Esteem and the Risk of Self-Harm Among High School Students

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Abstract

Adolescence is a developmental period characterized by various physical, cognitive, emotional, and social changes that can increase vulnerability to psychological distress. One issue requiring attention is self-harm, which can be associated with difficulties in emotional regulation, family problems, social pressure, and negative self-evaluation. Self-esteem is hypothesized to be an internal protective factor. This study aimed to determine the influence of self-esteem on the risk of self-harm among high school adolescents. A quantitative approach was employed, utilizing correlation analysis and simple linear regression. The study involved 29 respondents, using instruments comprising 10 items measuring self-esteem and 10 items assessing self-harm risk. The results indicated that the majority of respondents (62.1%) fell into the high self-esteem category, while the highest proportion of respondents (44.8%) fell into the moderate category for self-harm risk. Pearson correlation analysis revealed a significant negative relationship between self-esteem and self-harm risk ($r = -0.630$; $p < 0.001$). Simple linear regression analysis also yielded a significant model ($F(1,27) = 17.727$; $p < 0.001$) with an R^2 value of 0.396. The regression coefficient of -1.355 indicates that an increase in self-esteem is associated with a decrease in self-harm risk scores. Thus, self-esteem can be viewed as a protective factor with the potential to support promotive and preventive efforts regarding self-harm risk among adolescents in school settings. However, these findings should be interpreted with caution due to the relatively small sample size and the multifactorial nature of self-harm.

Keywords: Self-Esteem, Self-Harm, High School Adolescents

INTRODUCTION

Adolescence is a developmental period characterized by complex physical, cognitive, emotional, and social changes. At this stage, individuals begin to form their identities, increase their independence, build relationships with peers, and develop evaluations of themselves. These changes can become a source of positive development, but they can also lead to various psychological pressures when adolescents do not yet have adequate coping abilities. High school students, in particular, are in a phase when academic demands, social acceptance, friendships, family relationships, and expectations for the future can influence their psychological condition. (Ahkam et al., 2020).

One form of maladaptive behavior that has become a concern in adolescent development is self-harm behavior. Self-harm refers to behavior intentionally carried out to injure or harm oneself and, in the context of non-suicidal self-injury (NSSI), such actions are performed without the primary intention of ending one's life. (Malumbot et al. 2020) found that self-injury behavior among adolescents was associated with family problems, romantic relationships, psychological factors, personality, and the inability to regulate emotions. Meanwhile, (Zakaria and Theresa 2020)

found that the inability to regulate emotions, peer influence through bullying, and family disharmony were factors associated with NSSI behavior among adolescent girls.

The issue of self-harm among adolescents also cannot be separated from the quality of interpersonal relationships experienced by adolescents. Disharmonious family relationships, ineffective communication, and a lack of emotional support can make adolescents experience difficulties in expressing their feelings or seeking help when facing problems. (Afrianti 2020) found that parental communication patterns had a significant influence on self-injury intentions among adolescents. The study showed that ineffective communication between parents and adolescents could be one of the conditions associated with the emergence of self-harm intentions. Afrianti, R. (2020).

Lubis and Yudhaningrum (2020) described the presence of family loneliness, romantic loneliness, and social loneliness among adolescents who engaged in self-harm, with family loneliness emerging as one of the prominent themes. In addition to external factors, self-harm behavior is also associated with internal factors arising from how adolescents perceive and evaluate themselves. One important internal factor is self-esteem. Self-esteem refers to an individual's evaluation of their own worth, including how individuals accept, appreciate, and evaluate themselves.

Positive self-esteem can serve as a psychological resource because it helps individuals maintain a positive self-view when facing stressful experiences. Conversely, low self-esteem can make adolescents more vulnerable to feelings of worthlessness, inadequacy, rejection, or failure. (Hadori et al. 2020). Self-esteem becomes increasingly important when associated with the risk of self-harm behavior. Adolescents who have negative self-evaluations may experience difficulties in accepting their shortcomings, dealing with failure, and managing experiences of rejection. Under conditions of high emotional distress, self-harm behavior may be used as one maladaptive way to reduce or divert psychological pain (Putri and Nusantara 2020).

This relationship also receives support from international research (Wang et al. 2020), which directly examined the role of self-esteem in the relationship between maltreatment experiences and NSSI among adolescents. The study, which involved 9,704 adolescents, showed that lower self-esteem was associated with a higher frequency of NSSI, and that self-esteem served as a mediator in the relationship between childhood maltreatment experiences and NSSI. These findings provide a strong basis that self-esteem is not only associated with adolescents' general psychological conditions but can also serve as a psychological mechanism explaining vulnerability to self-harm behavior. Therefore, increasing self-esteem can be considered one of the protective strategies in efforts to prevent the risk of NSSI among adolescents.

In the school environment, self-esteem also has an important position because students spend a significant portion of their time interacting with teachers and peers. Evaluations of academic abilities, peer acceptance, experiences of success and failure, as well as social treatment from the school environment can influence how students evaluate themselves (Rachmawati 2020). Low self-esteem among students should be viewed as a psychological condition that requires attention in educational and guidance and counseling services. Efforts to increase self-esteem among adolescents are also an important part of guidance and counseling services in schools. Naraswari et al. (2020) developed a Cognitive Behavior counseling guidebook to improve self-esteem among high school students and found that the guide met the eligibility criteria for use in counseling services.

Meanwhile, Palupi et al. (2020) showed that self-esteem is not an entirely fixed psychological characteristic but can become a target of intervention through psychological services

and guidance and counseling. Thus, if self-esteem is associated with a lower risk of self-harm, strengthening self-esteem can become one of the preventive approaches that can be developed within the school environment. Adolescent self-esteem is also influenced by the family environment. Hadori et al. (2020) showed that parent-adolescent communication and attachment were associated with adolescent self-esteem in both intact and single-parent families. This finding is important because the family is the first environment in which adolescents receive acceptance, appreciation, and validation of themselves.

When the need for acceptance and support is not fulfilled, adolescents may be more likely to develop negative self-evaluations. On the other hand, Andani's (2020) research on adolescents with divorced parents showed a relationship between self-acceptance and self-esteem. This indicates that acceptance of one's condition is one of the aspects associated with the development of self-esteem among adolescents.

Social factors such as bullying also need to be considered in understanding the relationship between self-esteem and self-harm. Bullying can provide negative experiences in the form of humiliation, rejection, threats, or aggressive treatment that may influence adolescents' evaluations of themselves. Amin (2020), through psychoeducation activities concerning the effects of bullying and the enhancement of self-esteem among adolescents, demonstrated the importance of helping adolescents understand the impact of bullying while simultaneously developing positive self-worth.

Amin, G. (2020). In addition to self-esteem, emotional regulation is a psychological factor closely associated with self-harm behavior. Adolescents who experience difficulties in identifying, accepting, and managing negative emotions may use maladaptive coping strategies to obtain temporary relief. Zakaria and Theresa (2020) found that the inability to regulate emotions was one of the factors associated with NSSI behavior among adolescent girls. Malumbot et al. (2020) also found that negative emotions and the inability to regulate emotions were part of the process associated with self-injury behavior. Thus, self-esteem can be understood within a broader framework as one of the internal resources that can help adolescents cope with negative experiences, while low self-esteem may increase vulnerability when emotional regulation abilities are also less than optimal.

Self-harm behavior among adolescents also demonstrates complex characteristics because it can provide a feeling of relief or temporary reduction of emotional distress, but at the same time can lead to psychological and physical consequences. Malumbot et al. (2020) Research on NSSI in Indonesia also indicates that this phenomenon needs to be understood multidimensionally. Arinda and Mansoer (2020), through a phenomenological study of NSSI among young adults in Jakarta, demonstrated the importance of understanding the subjective experiences of individuals who engage in NSSI.

METHOD

1. Research Design

This study uses a quantitative approach with a correlational design. The quantitative approach is used because this study processes data in the form of numerical scores obtained through research instruments, which are then analyzed using statistical techniques to determine the relationship between the variables under investigation. A correlational design is used to determine the relationship between self-esteem as the independent variable (X) and the risk of self-harm behavior as the dependent variable (Y) among high school adolescents.

This study is non-experimental in nature because the researcher does not provide treatment or manipulate the research variables. Data are obtained based on the actual conditions of the respondents at the time the study is conducted. Therefore, the results of the study are used to describe the relationship and predictive ability of self-esteem regarding the risk of self-harm behavior, rather than to establish a cause-and-effect relationship experimentally.

2. Research Subjects

The subjects in this study were 29 high school adolescent respondents. The selection of subjects was adjusted to the characteristics of the study, which focuses on the relationship between self-esteem and the risk of self-harm behavior among high school adolescents.

The number of respondents analyzed in the study was 29 individuals. Because the sample size was relatively small, the results of the study were interpreted within the limitations of the characteristics of the respondents studied and were not broadly generalized to the entire population of high school adolescents.

3. Research Variables

This study involved two variables, namely; (1) Independent variable (X): Self-esteem, namely an individual's evaluation or assessment of their own worth and self-acceptance. And (2) dependent variable (Y): Risk of self-harm behavior, namely the level of risk or tendency toward behavior that harms or injures oneself, as measured based on the scores obtained from the research instrument. The relationship between the two variables was analyzed to determine whether an increase in self-esteem was associated with a decrease in the risk of self-harm behavior.

4. Research Instrument

Data collection was conducted using an instrument in the form of a statement scale. The research instrument consisted of 20 statement items, divided into 10 items to measure self-esteem (X) and 10 items to measure the risk of self-harm behavior (Y). The scale used a score range of 1–5. In the self-esteem instrument, items 6, 7, and 8 were unfavorable statements; therefore, reverse scoring was performed before all scores were summed.

5. Instrument Validity Test

Item validity was tested using corrected item-total correlation at a significance level of 5% ($\alpha = 0.05$). The results of the analysis showed that, for the self-esteem variable, five items met the criteria based on statistical significance, namely items 2, 6, 7, 8, and 10, while items 1, 3, 4, 5, and 9 did not show statistical significance in this study sample.

Meanwhile, all 10 items of the risk of self-harm behavior variable showed significant corrected item-total correlations at $\alpha = 0.05$.

Because the validity test was conducted using the same sample as the research sample, the results should be regarded as an internal evaluation of the instrument and not as a substitute for instrument tryout using a separate sample.

6. Reliability Test

The reliability test was conducted using Cronbach's Alpha coefficient. The test results showed a Cronbach's Alpha value of 0.677 for the self-esteem variable and 0.909 for the risk of self-harm behavior variable. These values indicate that the reliability of the risk of self-harm behavior instrument was very strong, while the reliability of the self-esteem instrument was around

the 0.70 threshold and therefore needs to be interpreted cautiously by considering the characteristics of the sample and the source of the instrument.

7. Data Collection Technique

The research data were obtained through the completion of the research instrument by the respondents. Each respondent provided responses to the items measuring self-esteem and the risk of self-harm behavior. Subsequently, the respondents' answers were scored according to the scoring guidelines, including reverse scoring for the unfavorable items on the self-esteem variable.

The scores for each respondent were then summed to obtain the total self-esteem score and the total risk of self-harm behavior score. Based on these data, the self-esteem scores ranged from 29–49, while the risk of self-harm behavior scores ranged from 10–46.

8. Data Analysis Technique

Data analysis was conducted in stages using descriptive statistics and inferential statistics. First, descriptive statistical analysis was used to determine the minimum, maximum, mean, standard deviation, frequency, and percentage of categories for each variable. Score categorization used ideal scores for a 10-item scale with a score range of 1–5.

Second, statistical assumption tests were conducted, including tests of normality and linearity. The normality test used the Shapiro-Wilk test. The results showed that the self-esteem data, risk of self-harm behavior data, and regression residuals met the assumption of normality because the significance values were each above 0.05. The deviation from linearity test also showed a significance value of 0.477 (>0.05), indicating that the relationship between self-esteem and the risk of self-harm behavior could be treated as linear.

Third, the Pearson correlation test was used to determine the direction and strength of the relationship between self-esteem and the risk of self-harm behavior. The analysis showed a correlation coefficient of $r = -0.630$ with $p < 0.001$, indicating a significant negative relationship.

As an additional analysis, Spearman correlation was used to examine the consistency of the relationship using a nonparametric approach. The results showed a coefficient of $\rho = -0.604$ with $p = 0.001$, indicating that the direction of the relationship remained negative and significant.

Fourth, simple linear regression analysis was used to determine the ability of self-esteem to predict variation in the risk of self-harm behavior. The regression model obtained was:

$$Y = 78.023 - 1.355X$$

The model was significant with $F(1,27) = 17.727$; $p < 0.001$ and produced an R^2 value of 0.396. This means that self-esteem explained approximately 39.6% of the variation in risk of self-harm behavior scores in the research sample, while approximately 60.4% of the remaining variation was associated with other factors that were not included in the model.

9. Hypothesis Testing

The research hypothesis was tested using the results of the Pearson correlation and simple linear regression analyses at a significance level of $\alpha = 0.05$. The research hypotheses can be formulated as follows:

H_0 : There is no significant relationship between self-esteem and the risk of self-harm behavior among high school adolescents.

H₁: There is a significant relationship between self-esteem and the risk of self-harm behavior among high school adolescents.

FINDINGS AND DISCUSSIONS

Findings

This study analyzed data from 29 respondents. The instrument consisted of 20 statement items, namely 10 items for the self-esteem variable (X) and 10 items for the risk of self-harm behavior variable (Y). Self-esteem items 6, 7, and 8 were unfavorable statements; therefore, reverse scoring was performed before the total scores were calculated.

1. Descriptive Statistics

Self-esteem had a minimum score of 29 and a maximum score of 49, with a mean of 38.59 and a standard deviation of 4.40. The risk of self-harm behavior had a minimum score of 10 and a maximum score of 46, with a mean of 25.72 and a standard deviation of 9.46.

Tabel 1. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Self-Esteem	29	29	49	38.586	4.396
Risk of Self-Harm Behavior	29	10	46	25.724	9.464

2. Variable Categorization

The following categorization uses ideal scores for a 10-item scale rated 1–5: ideal minimum score 10, ideal maximum score 50, ideal mean 30, and ideal standard deviation 6.67. Category boundaries: low <23.33; moderate 23.33–36.67; high >36.67.

Tabel 2. Variable Categorization

Variable	Category	Frequency	Percentage
Self-Esteem	Low	0	0.000
Self-Esteem	Moderate	11	37.931
Self-Esteem	High	18	62.069
Risk of Self-Harm Behavior	Low	12	41.379
Risk of Self-Harm Behavior	Moderate	13	44.828
Risk of Self-Harm Behavior	High	4	13.793

For self-esteem, 18 respondents (62.1%) were in the high category and 11 respondents (37.9%) were in the moderate category. For the risk of self-harm behavior, 12 respondents (41.4%) were in the low category, 13 (44.8%) in the moderate category, and 4 (13.8%) in the high category.

3. Item Validity Analysis

The item validity below was calculated using corrected item-total correlation at a significance level of 0.05. Because this analysis used the same research sample, the results should be treated as an internal evaluation of the instrument, not as a substitute for a separate instrument tryout.

a. Self-Esteem

Tabel 3. Self-Esteem

Item	Corrected item-total r	Sig.	Decision
1	0.166	0.388	Invalid
2	0.410	0.027	Valid
3	0.268	0.159	Invalid
4	0.336	0.075	Invalid
5	0.301	0.112	Invalid
6	0.488	0.007	Valid
7	0.443	0.016	Valid
8	0.416	0.025	Valid
9	0.095	0.623	Invalid
10	0.462	0.012	Valid

For the self-esteem variable, items 2, 6, 7, 8, and 10 showed significant corrected item-total correlations at $\alpha=0.05$, while items 1, 3, 4, 5, and 9 were not significant. This finding should be considered in evaluating the quality of the instrument.

b. Risk of Self-Harm Behavior

Tabel 4. Risk of Self-Harm Behavior

Item	Corrected item-total r	Sig.	Decision
11	0.739	0.000	Valid
12	0.646	0.000	Valid
13	0.733	0.000	Valid
14	0.576	0.001	Valid
15	0.787	0.000	Valid
16	0.494	0.006	Valid
17	0.735	0.000	Valid
18	0.552	0.002	Valid
19	0.728	0.000	Valid
20	0.754	0.000	Valid

All 10 items of the risk of self-harm behavior variable showed significant corrected item-total correlations at $\alpha=0.05$.

4. Reliability Test

Tabel 5. Reliability Test

Variable	Cronbach's Alpha
Self-Esteem	0.677
Risk of Self-Harm Behavior	0.909

The Cronbach's Alpha coefficient for self-esteem was 0.677, while that for the risk of self-harm behavior variable was 0.909. The reliability of the risk variable was very strong. The self-esteem value was around the 0.70 threshold and therefore needs to be interpreted cautiously and considered in relation to the source of the instrument and sample characteristics.

5. Assumption Tests

Tabel 6. Assumption Tests

Statistical Test	Sig.	Conclusion
Normality of Self-Esteem (Shapiro-Wilk)	0.563	Normal
Normality of Risk (Shapiro-Wilk)	0.726	Normal
Normality of Residuals (Shapiro-Wilk)	0.086	Normal
Deviation from Linearity	0.477	Linear

The Shapiro–Wilk test of regression residuals produced $p=0.086$ (>0.05), indicating no evidence of deviation of the residuals from a normal distribution. The deviation from linearity test produced $p=0.477$ (>0.05), indicating that the relationship between X and Y could be treated as linear for simple regression analysis.

6. Correlation Test

Tabel 7. Correlation Test

Test	Coefficient	Sig.
Pearson	-0.630	0.000
Spearman	-0.604	0.001

The Pearson correlation between self-esteem and the risk of self-harm behavior was $r=-0.630$ with $p<0.001$. The negative coefficient indicates that higher self-esteem scores were associated with lower risk scores for self-harm behavior.

7. Simple Linear Regression Test

Tabel 8. Simple Linear Regression Test

Measure	Value
R	0.630

R Square	0.396
Adjusted R Square	0.374
Std. Error of Estimate	7.488
F	17.727
Sig. F	0.000
Pearson r	-0.630
Pearson Sig.	0.000
Spearman rho	-0.604
Spearman Sig.	0.001

Model	B	Std. Error	t	Sig.	95% CI Lower	95% CI Upper
Constant	78.023	12.499	6.242	0.000	52.377	103.670
Self-Esteem	-1.355	0.322	-4.210	0.000	-2.016	-0.695

The regression model was significant, $F(1,27)=17.727$, $p<0.001$, with $R^2=0.396$. Thus, self-esteem explained approximately 39.6% of the variation in risk of self-harm behavior scores in the sample. The regression equation was $Y = 78.023 - 1.355X$. The self-esteem coefficient was $B=-1.355$, $t=-4.210$, $p<0.001$, indicating a statistically negative direction of the effect.

Based on the results of simple linear regression, the hypothesis stating that there is an influence of self-esteem on the risk of self-harm behavior was supported by the research data. Statistically, the higher the self-esteem, the lower the risk score for self-harm behavior. This conclusion indicates a predictive association within the quantitative research design used and does not by itself establish a cause-and-effect relationship.

Discussion

The present study identified a statistically significant inverse association between self-esteem and scores on the self-harm risk questionnaire among 29 high school students (Pearson's $r = -0.630$, $p < 0.001$). The direction of the finding was similar in the rank-based sensitivity analysis (Spearman's $\rho = -0.604$, $p = 0.001$). In the single-predictor regression, each additional point on the self-esteem scale was associated with a 1.355-point lower expected self-harm risk score ($B = -1.355$, 95% CI $[-2.016, -0.695]$); the model accounted for 39.6% of the observed variance ($R^2 = 0.396$). These findings indicate a substantial association within this particular sample rather than demonstrating that changes in self-esteem cause changes in self-harm. The regression equation also describes association in the observed score range; it has not been validated as a tool for predicting an individual student's future behavior.

The inverse relationship is broadly consistent with Indonesian evidence linking self-esteem with tendencies toward self-injury among secondary-school students (Putri & Nusantara, 2020) and with a much larger adolescent study in which self-esteem statistically mediated the association between childhood maltreatment and nonsuicidal self-injury (NSSI; Wang, S., et al., 2020). Developmental research characterizes self-esteem as relatively stable but modifiable across the life course, making it relevant to adolescence without assuming that it operates independently of context (Orth & Robins, 2014). Importantly, the relationship may also work in the opposite

direction. In a three-wave study of 1,265 adolescents, Lei et al. (2024) reported evidence of prospective associations in both directions between self-esteem and self-injury, with depressive symptoms playing an intermediary role; not every cross-lagged pathway was significant at every interval. Related longitudinal research among young adults found that NSSI prospectively predicted greater self-criticism, whereas the reverse prospective pathway was not supported in that sample (Daly & Willoughby, 2019). Consequently, the present cross-sectional results are compatible with a potentially reciprocal relationship, but cannot determine its temporal direction or underlying mechanism.

One possible explanation concerns the functions that self-injury can serve when adolescents experience difficult emotions or negative self-evaluations. Nock and Prinstein (2005) identified both intrapersonal and interpersonal reinforcement functions in an adolescent clinical sample, while Klonsky's (2007) review found consistent evidence that affect regulation is a commonly reported function of self-injury, alongside evidence for self-punishment. Low self-worth or harsh self-criticism might therefore coexist with attempts to manage distress, but neither self-punishment motives nor emotional regulation skills were measured in the present study. This distinction matters because the observed correlation cannot establish that self-esteem acts through any specific psychological pathway. A meta-analysis covering 49 independent samples found a robust association between emotion dysregulation and NSSI, particularly for difficulties accepting emotions and accessing effective regulation strategies (Wolff et al., 2019). Indonesian qualitative studies have likewise described emotional dysregulation and other contextual difficulties among adolescents reporting self-injury (Malumbot et al., 2020; Zakaria & Theresa, 2020). Taken together, these sources justify testing emotion regulation, depressive symptoms, self-criticism, and coping strategies as possible mediators in future studies rather than treating them as mechanisms already demonstrated by these data.

The school and family environment offers another important interpretive context. Prior Indonesian studies have linked adolescent self-injury intentions with parent-child communication (Afrianti, 2020), described loneliness among adolescents who self-harm (Lubis & Yudhaningrum, 2020), and associated adolescent self-esteem with parental communication and attachment (Hadori et al., 2020). Longitudinal and cross-sectional research by Yates et al. (2008) further connected perceived parental criticism with NSSI, in part through adolescents' alienation from parents. In a diverse longitudinal cohort of 4,115 adolescents, Baker et al. (2023) found that family connectedness was associated with lower subsequent NSSI both directly and through earlier bullying victimization and depressive symptoms; school connectedness was associated indirectly through those intervening variables. Peer victimization has also been examined among clinically depressed adolescents who report NSSI (Vergara et al., 2019), and longitudinal research suggests that specific emotion-regulation difficulties may shape associations between peer victimization and subsequent NSSI (Li et al., 2024). More recent three-wave data on cyberbullying, depression, and NSSI suggest potentially reciprocal, but not uniformly consistent, pathways (Calvete et al., 2026). Although none of these interpersonal variables was included in the present regression, the literature indicates why school-level and family-level factors merit direct measurement in a larger model.

The R^2 value of 0.396 should be understood as the proportion of sample variance statistically accounted for by one predictor, not as the proportion of self-harm that is caused or prevented by self-esteem. The remaining 60.4% is unexplained variance in this model; it cannot be apportioned to particular omitted factors without measuring them. A meta-analysis of prospective and other risk-factor studies found that most individual predictors of NSSI had limited

predictive utility even when their statistical associations were significant (Fox et al., 2015). A separate adolescent meta-analysis identified associations spanning mental-health conditions, bullying, adverse childhood experiences, and other domains (Wang, Y.-J., et al., 2022). An umbrella review likewise emphasized the multilevel nature of risks and protective factors across adolescent self-harm and suicidality, while highlighting differences in the underlying definitions and study populations (Richardson et al., 2024). The relatively large bivariate association in this small sample therefore should not be interpreted as evidence that self-esteem alone is sufficient to explain, identify, or prevent self-harm.

The descriptive results reinforce the importance of avoiding an overly simple protective-factor interpretation. Although 18 respondents (62.1%) scored in the study-defined high self-esteem category and none scored in the low category, 13 students (44.8%) were classified as having moderate self-harm risk scores and four (13.8%) as having high risk scores. The coexistence of generally favorable self-esteem ratings and elevated scores on another questionnaire suggests that these measures capture related but nonidentical dimensions of students' experiences. However, these categories were based on ideal-score cutoffs for this particular 10-item scale; without demonstrated clinical thresholds or behavioral assessment, they are not estimates of the prevalence of actual self-harm or NSSI. Methodological differences in definitions, recall periods, and assessment formats substantially affect prevalence estimates in adolescent self-injury research (Muehlenkamp et al., 2012; Swannell et al., 2014). Moreover, because no participant was classified as having low self-esteem, the restricted range may affect the observed correlation and limits comparisons across the full spectrum of self-esteem.

Conceptual precision is especially necessary because the present questionnaire is described as measuring 'risk of self-harm behavior,' whereas much of the comparative literature specifically investigates NSSI, defined by tissue-damaging self-injury without suicidal intent. Broader self-harm research may include acts irrespective of suicidal intent; findings from these literatures should not be assumed interchangeable (Hawton et al., 2012; Plener et al., 2015). The manuscript does not establish from the reported instrument description whether the scale distinguishes thoughts from acts, lifetime from recent experiences, or suicidal from nonsuicidal intent. This limits direct comparison with behavioral NSSI studies. It also limits clinical interpretation: a meta-analysis among people who had self-injured identified suicidal ideation and aspects of NSSI history as correlates of suicide-attempt history, underscoring the need for individualized assessment rather than inference from a general score (Victor & Klonsky, 2014). Consistent with this, the National Institute for Health and Care Excellence (2022) advises against using risk scales or broad low/moderate/high categories to predict future self-harm or to determine access to care. The categories in the present study should be understood as descriptive research groupings, not clinical classifications of individual students.

For school practice, the results support attention to students' self-evaluation within a broader, confidential, and non-stigmatizing mental-health approach rather than a stand-alone self-esteem intervention as an established self-harm prevention method. Existing Indonesian school-counseling work indicates that cognitive-behavioral counseling materials and stress-inoculation group counseling may be useful avenues for addressing students' self-esteem (Naraswari et al., 2020; Palupi et al., 2020); these studies do not, by themselves, demonstrate reduced self-harm. Reviews of youth self-harm treatments describe a developing but heterogeneous evidence base (Glenn et al., 2015; Ougrin et al., 2015). In a randomized clinical trial involving adolescents with repeated self-harm, dialectical behavior therapy for adolescents reduced self-harm relative to enhanced usual care, although a clinical treatment trial cannot be generalized directly to universal

school programming (Mehlum et al., 2014). Schools can reasonably use the current association to motivate further research on supportive teacher-student relationships, anti-bullying measures, emotional-regulation education, accessible counseling, and referral pathways, while ensuring that students who disclose self-harm receive an appropriate individualized assessment (National Institute for Health and Care Excellence, 2022). These are literature-informed implications, not intervention effects tested in this study.

Several limitations qualify the interpretation. The sample contained only 29 respondents, and the report does not provide a sampling frame, recruitment approach, or sufficient demographic detail to assess representativeness or subgroup differences. Both variables were collected by self-report at one time point, making common-method effects, social-desirability bias, residual confounding, and reverse causation possible. The self-esteem scale showed modest internal consistency (Cronbach's $\alpha = 0.677$), and five of its ten items did not show statistically significant corrected item-total correlations in the same sample. Although the self-harm risk scale had higher internal consistency ($\alpha = 0.909$), internal consistency alone does not demonstrate construct validity or clinical predictive performance. Neither a nonsignificant Shapiro-Wilk test nor a nonsignificant deviation-from-linearity test confirms that all modeling assumptions are satisfied; the consistent negative Spearman correlation is reassuring about direction but cannot rule out influential observations. With such a small sample, the regression coefficient and R^2 may be unstable and should be re-estimated in an independent sample before substantive predictive claims are made.

Future research should recruit a substantially larger, preferably multisite adolescent sample and report sampling, age, sex, and other relevant contextual characteristics transparently. It should use culturally adapted, independently validated measures of self-esteem and clearly specified instruments that distinguish self-harm thoughts, actual episodes, recency, frequency, and suicidal intent when appropriate. Prospective studies should assess depression, emotion-regulation difficulties, bullying and cyberbullying, family support, and school connectedness alongside self-esteem, then evaluate temporal ordering, confounding, and potential mediation rather than relying solely on bivariate regression. The longitudinal evidence summarized by Lei et al. (2024), Baker et al. (2023), and Plener et al. (2015) illustrates both the feasibility and the importance of this approach. Overall, the current study contributes preliminary school-based evidence of an inverse self-esteem/self-harm-risk score association in a small adolescent sample. Its practical value lies in identifying an association worthy of careful replication and multidimensional investigation, not in establishing self-esteem as a causal protective factor or an individual screening threshold.

CONCLUSION

Based on the results of the study concerning self-esteem as a protective factor against the risk of self-harm behavior among high school adolescents, it can be concluded that there is a significant negative relationship between self-esteem and the risk of self-harm behavior. The Pearson correlation analysis showed a coefficient of -0.630 with a significance level of $p < 0.001$. This indicates that the higher the level of self-esteem possessed by adolescents, the lower the tendency or risk of self-harm behavior. Conversely, low self-esteem is associated with an increased risk of self-harm behavior.

The simple linear regression results also showed that the research model was significant, with $F(1,27) = 17.727$ and $p < 0.001$. The R^2 value of 0.396 indicates that self-esteem can explain approximately 39.6% of the variation in the risk of self-harm behavior among the research respondents. The regression coefficient of -1.355 indicates a negative direction of the relationship,

so that each one-point increase in self-esteem score is associated with a 1.355-point decrease in the predicted risk score for self-harm behavior.

Thus, self-esteem can be viewed as one important protective factor in promotive and preventive efforts regarding self-harm risk among adolescents in school settings. Strengthening self-esteem can be one part of guidance and counseling services, particularly in helping adolescents develop self-acceptance, self-appreciation, and the ability to cope with pressure more adaptively. However, self-esteem is not the only factor determining self-harm behavior. As much as 60.4% of the variation in risk in this study remains unexplained in detail; therefore, other factors such as emotional regulation, social support, family relationships, bullying experiences, stress, and other psychosocial factors still need to be considered.

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