

A School-based Suicide Prevention Programme with Peer Support to Prevent Suicidal Ideation in Adolescents: A Cross-Sectional Study

Faizatur Rohmi^{1*}, Nia Agustiningsih², Arik Agung Setiawan³, Supriono⁴

^{1,2} Universitas Kepanjen

³ Puskesmas Sumbermanjing Wetan

⁴ MTSN 2 Malang

*Corresponding author: faizaturrohmi1@gmail.com

ABSTRACT

Background: Suicide is a significant public health concern among school-aged adolescents. Suicidal ideation (SI) in adolescents are robustly associated with greater risk of concurrent and succeeding suicide attempts. Evidence suggests that suicidal ideation in adolescents is influenced by peer support at school.

Purpose: Our aim was to investigate the influence of peer support on school-based suicidal ideation in adolescents.

Methods: A cross-sectional study was conducted in Malang, Indonesia. A total of 179 Adolescents aged 13-15 years were recruited from six classes at junior high schools in Malang by stratified random sampling. An anonymous self-report questionnaire was used to collect demographic characteristics, suicidal ideation, and peer support. Logistic regression was used to test the hypotheses.

Results: The results of the multiple logistic regression showed that peer support and protection against suicidal ideation had a significance value of 0.008. This means that peer support influences protection against suicidal ideation. The results also showed that peer support and suicide vulnerability had a significance value of 0.840. This means that peer support did not influence vulnerability to suicidal ideation.

Conclusions: Suicide vulnerability is a risk factor for suicidal ideation. Peer support can enhance protective factors against suicidal ideation. Public health nurses can collaborate with school nurses to regularly detect symptoms of suicidal ideation and provide early intervention. Educating peers and teachers about methods to enhance protective factors in adolescents can be beneficial in reducing suicidal ideation.

Keywords: adolescents, peer, suicidal ideation, support

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BACKGROUND

Suicidal ideation refers to a person's cognitive thoughts or desire to end their life without taking action (Li & Kwok, 2023). Suicidal ideation is considered as one of the best predictors of suicidal behavior among several risk variables (Franklin et al., 2017). Suicidal ideation among adolescents is a crucial public health issue with a relatively high prevalence of suicidal ideation in the adolescent population (Kang et al., 2021). Suicide is a significant public health problem among school-aged adolescents (Nadeem Parpio et al., 2025; Zhou et al., 2022). The prevalence of suicidal ideation among adolescents aged <15 years is 8.0% while those aged between 15-18 years is 13.5% and those older than 19 years is 22.5% (Chinawa et al., 2023). Suicidal ideation among adolescents has hardly decreased despite prevention efforts (Zheng et al., 2023).

Adolescent suicidal behavior is a major public health problem and evidence-based prevention programmers are urgently needed (Wasserman et al., 2015). Suicide prevention in adolescents is becoming one of the most pressing mental health issues in Indonesia and the world. Based on data from the World Health Organization (WHO), more than 720,000 people die by suicide each year and there are an estimated 20 suicide attempts (World Health Organization, 2025). One effective approach to youth suicide prevention is through school-based peer support programmers (Li et al., 2024). With a holistic approach and involving various parties, it can create a more supportive environment for adolescent mental health and reduce suicide rates (Wasserman et al., 2015). Peer support functions as a social safety net that provides a space for adolescents to share feelings, reduce stigma, and obtain positive emotional support. However, to date, there has been limited research integrating the two, despite the fact that peers and schools play an important role in detecting early signs of suicide. However, research integrating both of them is still limited, even though peer support and school play a crucial role in detecting early signs of suicide.

OBJECTIVE

We aimed to identify the influence of peer support and suicidal ideation in adolescents.

METHODS

Design and sample

This study applied cross-sectional design. Stratified random sampling method was used in the study. Students in the selected classes were invited to participate in the study. Of the 182 selected students, 179 (98.3%) completed the questionnaire. Based on a small effect size for multiple linear regression ($f^2 = 0.15$) with an alpha level of 0.05, a power of 0.95, and 14 predictors, 179 participants were deemed to be sufficient to test the hypothesis (Cohen, 1988). The sample of 179 participants was thus determined as adequate.

Measures

Self-report questionnaire was used to collect demographic characteristics, suicidal ideation, and peer support. Data were entered into Microsoft Excel software, and statistical analyses were performed using SPSS version 25.0. Descriptive statistics from the raw data are presented as frequencies and percentages. To test the influence of peer support and suicidal ideation variables, we used multiple logistic regression.

Suicidal ideation

Positive and Negative Suicide Ideation (PANSI) Inventory was used to assess the suicidal ideation among adolescent (Aloba et al., 2018). This scale has subscales of suicide-related vulnerability (eight items), protective factors of suicidal ideation (eight items). Each

item is rated from “strongly disagree” (1 point) to “strongly agree” (5 points). The total possible score ranges from 14 to 70, with high scores indicating the lowest levels of suicidal ideation.

Peer Support

Mental Health Peer Support Questionnaire was used to assess the Peer Support among adolescent (Ma et al., 2022). This scale has subscales of discerning stigma (four items), Personal mastery (eight items) and interpersonal skills (four items). The total possible score ranges from 16 to 80, with high scores indicating the highest levels of Peer Support.

Demographic characteristics

Information on the age, gender, suffering from illness, smokers, alcoholism, participation in school organizations, bullying experience, and Unpleasant Past Experiences of the participants was collected.

RESULTS

Table 1. Distribution of demographic factors of peer support on suicidal ideation (n = 179)

Variable	mean (SD)	range	frequency	p value
Age				
12			25 (14.0)	
13	13.51 (0.944)	12-15	53 (29.6)	0.001
14			68 (38.0)	
15			33 (18.4)	
Gender				
Male			57 (31.8)	
Female			122 (68.2)	
Peer Support		43-80		0.200
Vulnerability of suicidal ideation		18-40		0.001
Protective factors of suicidal ideation		7-37		0.001
Have you ever been diagnosed with a physical or mental illness by a doctor?				
Yes			10 (5.6)	
No			169 (94.4)	
Have you ever been a smoker?				
Yes			5 (2.8)	
No			174 (97.2)	
Have you ever consumed alcohol?				
Yes			0 (0)	
No			179 (100)	
Have you ever participated in an organization at school or outside of school?				
Yes			33 (8.4)	
No			146 (81.6)	

Variable	mean (SD)	range	frequency	p value
Have you ever been bullied?			53 (29.6)	
Yes			126	
No			(70.4)	
Have you ever had an unpleasant experience?			69 (38.5)	
Yes			110	
No			(61.5)	

Sociodemographic characteristics and scores of peer support and suicidal ideation measures of students (n = 179)

As depicted in table 1, the mean age of the junior high school student was 13.51 (0.944). Female constituted 122 (68.2%) of the total sample. The mean scores on the Peer Support, vulnerability of suicidal ideation and protective factors of suicidal ideation were 58.92 (SD: 5.050), 35.56 (SD: 4.268) and 24.52 (SD: 4.247). Ninety-four, four percent (94.4%) of the students indicated a “no” to the question, “Have you ever been diagnosed with a physical or mental illness by a doctor?”. Ninetyseven,two percent (97.2%) of the students indicated a “no” to the question, “Have you ever been a smoker?”. Twentynine, six percent (29.6%) of the students indicated a “yes” to the question, “Have you ever been bullied?”. thirty-eight, five percent (38.5%) of the students indicated a “yes” to the question, “Have you ever had an unpleasant experience?”

Table 2. Logistic regression analysis of *Peer Support* variables for the suicidal ideation (n=179)

Variable	-2 Log Likelihood	Goodness-of-Fit	R-Square	Parameter Estimates	p1+p2
Peer Support	(23.627- 16.526)	0,057	.065		-1,709
Protective factors of suicidal ideation				.008	
Vulnerability of suicidal ideation				.840	

Discriminative validity (logistic regression analyses)

Table 2 shows the results of a multiple logistic regression, indicating that peer support and protection of Suicidal Ideation have a significance value of 0.008. This value is smaller than the alpha value ($0.008 < 0.05$). This means that the peer support ratio partially influences protection of Suicidal Ideation. The table above also shows that peer support and suicide vulnerability of Suicidal Ideation have a significance value of 0.840. This value is greater than the alpha value ($0.840 > 0.05$). This means that peer support does not partially influence vulnerability of Suicidal Ideation.

From the table above, it can also be seen that there is a decrease in the -2 Log Likelihood value from *Intercept Only* 23.627 to Final, namely 16.526 with a significance level of $p = 0.029$. This means that the model with *peer support* is better than the *Intercept Only* model so it can be concluded that the model fits. From the table above, it is obtained that the significance value is 0.057, which means that the logistic regression model fits the observational data. The R-Square value is 0.065 or 6.5%, which means that 6.5% of *peer support* variables affect adolescent suicide ideation while the other 93.5% is influenced by variables not included in this study. From the table above it is also seen that suicide vulnerability has a significance

value of 0.840. This value is greater than alpha ($0.840 > 0.05$). This means that partially *peer support* does not affect suicide vulnerability while the *Protective* value of suicide ideation is 0.008 which means that the value is smaller than alpha (0.008,0.05). This means that partially *peer support* affects the vulnerability of *Protective* suicidal ideation. Based on the results of these calculations, the regression coefficient of the *peer support* variable is negative, meaning that the relationship between *peer support* variables and suicidal ideation is negative, meaning that the higher the value of adolescent *peer support*, the more likely it is to reduce adolescent suicidal ideation.

DISCUSSION

Peer support was negatively correlated with suicidal ideation in the bivariate analysis of this study. Previous studies also mentioned that peer support collaborates with suicidal ideation (Zheng et al., 2023). The better the support from peers, the lower the risk of suicidal ideation in adolescents. Likewise, the existence of stress triggered by peers is also one of the factors for the emergence of suicidal ideation in adolescents (Zheng et al., 2023). Peer support is an important factor in shaping adolescent mental health, especially as a protective factor for suicidal ideation. The results of previous studies state that peer support and social support are protective factors in preventing suicidal ideation (Dimick et al., 2025; Otten et al., 2022). The presence of peers is considered a strong protective factor because they provide a sense of security, acceptance, and being heard. In addition, support from peers can moderate the relationship between emotional intelligence and suicidal ideation (Dimick et al., 2025). Peer support is a form of emotional, social, or practical assistance provided by individuals who are in the same age group or have similar experiences. In this study, it was found that peer support had a significance value of $P < 0.05$ with the protective factor of suicidal ideation. Adolescents assume that the support provided by peers who have the same thoughts as them makes the life they are living considered more feasible and passionate. In addition, the existence of peers, currently referred to as "BESTIE" in the Indonesian version, is also considered as one of the factors that influence adolescents' ability to make decisions or overcome problems, and even become part of their determinants in planning their future lives. So in the context of peer support "BESTIE" is currently largely in control of each other among adolescents. The current phenomenon of peer support is also an important thing that schools, parents need to know. They should always keep an eye on the associations made by their children. It could be that the support provided by their peers is no longer about good or supportive support for their mental health but rather poor support or even support that leads to a decrease in adolescent mental health with or without them realizing it. Therefore, education on empathy, healthy communication, and healthy adolescents physically, psychologically and socially as well as spiritually should be part of mental health promotion efforts among adolescents.

This study also showed that peer support in bivariate analysis did not correlate with suicide vulnerability. In the context of this research what is meant by vulnerability of suicidal ideation in adolescents is a condition that describes where an adolescent has a greater possibility or tendency to experience or have suicidal thoughts or desires due to certain factors such as psychological status, self-concept disorders, physical illness or social pressure. As previous studies also explain that the negative psychological status experienced by adolescents provides evidence of a direct relationship with the emergence of suicidal ideation experienced by adolescents (Zheng et al., 2023). Another study also mentioned that psychological factors have the most significant role associated with suicidal ideation as well as levels of depression and anxiety (Simcock et al., 2021). Previous research by Galindo-Domínguez & Losada (Galindo-Domínguez & Losada Iglesias, 2023) found that peer support was only effective in reducing suicidal ideation when combined with emotional maturity and adequate levels of

family and teacher support. As explained in previous studies, the mental health of school children has relevance to family functioning at home (Quintero-Jurado et al., 2022).

Peer support acts as a moderator in the relationship between emotional intelligence and suicidal ideation especially in late adolescents. This means that peer support alone is not enough, it needs to be supported by internal capabilities and other support systems for the effect to be significant. Based on the results of this study, it was found that based on the age characteristics of adolescents who participated in this study were 12-15 years old, which means they were in early adolescence. Adolescence is a crucial period in the formation of self-identity (Wang et al., 2025). In adolescence this is a period where emotions are more intense, because cognitive development is still ongoing, thus making adolescents more vulnerable. Adolescence is often regarded as the most problematic phase, with high-risk issues, including suicidal ideation (Castillo-Barriga et al., 2025). Adolescents begin to explore various aspects of identity, including values, interests, and social roles. This identity-seeking process can cause internal conflicts, especially if they face pressure from family, peers. Previous studies have suggested that support and recognition from peers are crucial in shaping adolescents' self-confidence and psychological well-being. However, at the same time, peer pressure can increase the risk of risky behaviors such as social conflict. In addition, the stigma of someone who has a mental health disorder such as having had suicidal ideation is a negative label given by the social environment, which makes someone fall into deeper conflict. The same study also explained that stigma about suicide is something that is difficult to change for the better or achieve (Oexle et al., 2025). The same study on suicidal ideation has also been conducted on adolescents aged 13-18 years (Dimick et al., 2025) and mentioned that sociodemographic factors are often associated with a history of suicide in adolescents (Puzio et al., 2025). At the same time it was explained that in early adolescence they are particularly vulnerable to the emergence of suicidal behavior (Li et al., 2024). It is therefore imperative that schools not only focus on fostering supportive peer relationships to reduce suicidal ideation among adolescents but also involve families, launch programmers to improve emotional intelligence and social connectedness and implement strategies to support students who are vulnerable to suicidal ideation, especially those who have negative life events attached to them.

CONCLUSION

This study is a pioneering study investigating the influence of peer support on suicidal ideation. It also provides new insights into suicidal ideation in adolescents, making it crucial to develop strategies to prevent suicidal ideation, including school-based peer support.

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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