



Original Article

The correlation between bullying and mental-emotional disorders among adolescents in Pekalongan city

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ARTICLE INFORMATION

Received: December 17, 2024

Revised: June 10, 2025

Accepted: June 10, 2025

KEYWORDS

Bullying; Adolescent; Mental Disorders; Mental Health;

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ABSTRACT

Background: Adolescence is a critical developmental period characterized by increased vulnerability to mental health disorders, particularly in response to psychosocial stressors such as bullying. In Indonesia, the incidence of adolescent mental-emotional disorders and bullying is rising. While international studies have established a link between bullying and mental health, research in specific local contexts remains limited.

Purpose: This study aims to examine the correlation between bullying and emotional mental disorders among adolescents in Pekalongan City.

Methods: This research employed a cross-sectional study conducted between October and November 2024, involving 360 high school students aged 15–18 years, selected through proportional random sampling from a population of 3,080. Bullying was measured using the Forms of Bullying Scale–Victimization (FBS-V), while emotional and mental disorders were assessed using the Strengths and Difficulties Questionnaire (SDQ). The data were analyzed using Spearman's rank correlation test.

Results: The study found that 85% of respondents had experienced bullying, predominantly in the low category (82.5%). Additionally, 26.1% of students were identified as having emotional mental disorders. Statistical analysis revealed a significant positive correlation between bullying and emotional mental disorders (Spearman's $\rho = 0.470$, $p < 0.001$), indicating moderate correlation strength.

Conclusions: Bullying is positively associated with emotional and mental disorders among adolescents in Pekalongan City.

INTRODUCTION

Adolescence represents a critical developmental stage marked by rapid emotional, psychological, and social transitions. During this period, individuals are particularly vulnerable to mental health issues, especially when exposed to psychosocial stressors such as bullying. According to the World Health Organization, approximately 14% of adolescents globally experience mental health disorders, yet most cases remain undiagnosed and untreated (WHO, 2021).⁴⁻⁶

In Indonesia, recent data reveal a concerning rise in bullying incidents among adolescents. In 2024, a total of 573 bullying cases were reported in educational settings—a stark increase from 91 cases in 2020, 142 in 2021, 194 in 2022, and 285 in 2023.¹ Such incidents have significant consequences. Studies have shown that bullying can have severe emotional and psychological impacts. One report indicated that 20.8% of bullying victims in Indonesia

develop emotional and mental disorders,² while other findings estimate the prevalence to be as high as 51.1%.³ A survey reported that one in three adolescents (34.9%), equivalent to 15.5 million Indonesian adolescents, has one mental health problem and one in twenty adolescents (5.5%), equivalent to 2.45 million Indonesian adolescents, has one mental disorder.⁷ One of the mental health problems that adolescents often experience is emotional and mental disorders.⁸

Research consistently demonstrates a strong association between bullying and mental health problems in adolescents. Victims often report elevated scores on the Strengths and Difficulties Questionnaire (SDQ), indicating more pronounced emotional disturbances. Evidence from Nigeria and Egypt supports this association, showing significant correlations between bullying and all SDQ subscales, including emotional symptoms, conduct problems, and peer relationship issues.⁹⁻¹¹

<https://doi.org/10.30595/medisains.v23i2.25021>

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Despite the abundance of global literature, a notable research gap persists in the Indonesian context, particularly at the local level. Pekalongan City, for example, has seen limited empirical investigation into the relationship between bullying and adolescent mental health. Furthermore, most existing studies predominantly focus on physical and verbal bullying. Relational bullying—an insidious and often underreported form involving social exclusion and manipulation—is more prevalent during adolescence yet remains underexplored. This study aims to analyze the correlation between bullying and emotional mental disorders among adolescents in Pekalongan City. By focusing on a specific local context and addressing understudied forms of bullying, this research seeks to contribute meaningful insights to the global discourse on adolescent mental health.

METHOD

Study Design

This research employed an analytic observational approach using a cross-sectional design.¹²

Setting and Respondent

The study was conducted between October and November 2024 in Pekalongan City, Central Java, Indonesia. The target population consisted of high school students aged 15 to 18 years, totalling 3,080 students across the city. Using Slovin's formula with a 95% confidence level and a 5% margin of error, a sample size of 360 students was calculated. Participants were selected using proportional random sampling to ensure representation across schools.

The Variable, Instrumen, and Measurement

The independent variable was bullying victimization, and the dependent variable was mental-emotional disorders. Bullying was assessed using the Forms of Bullying Scale–Victimization (FBS-V), a validated instrument consisting of 10 items covering physical, verbal, relational, and cyberbullying domains.¹³ Mental-emotional disorders were assessed using the Strengths and Difficulties Questionnaire (SDQ), which comprises 25 items covering emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behaviour.¹⁴

Data Analysis

Spearman's rank correlation test was employed to examine the association between bullying exposure and mental-emotional disorders, considering the ordinal nature of the data and non-parametric distribution.

Ethical Consideration

This study received ethical clearance from the Health Research Ethics Committee, Faculty of Public Health, Diponegoro University (Approval No: 352/EA/KEPK-FKM/2024).

RESULTS

Respondent Characteristics

A total of 360 adolescents aged 15–18 years (mean 15.9 years) were included, with a predominance of female participants. The majority had experienced bullying, most frequently categorized as low intensity. Emotional and verbal bullying were the most prevalent forms, whereas physical bullying was reported less frequently. Notably, more than one-fourth of adolescents (26.1%) exhibited mental-emotional disorders, highlighting the significant psychological burden associated with bullying experiences in this population (Table 1).

Table 1. Characteristics of Bullying and Mental-Emotional Disorders among Adolescents (n = 360)

Variable	Result
Age	15.9 ± 0.91
Sex	
Male	66 (18.3%)
Female	294 (81.7%)
Bullying	
Never	54 (15.0%)
Low	297 (82.5%)
High	9 (2.5%)
Type of Bullying	
Physical bullying	56 (15.6%)
Verbal bullying	276 (76.7%)
Non-verbal abuse	110 (30.6%)
Emotional abuse	287 (79.7%)
Exclusion	163 (45.3%)
Mental-Emotional Status	
Normal	164 (45.6%)
Borderline	102 (28.3%)
Mental-Emotional Disorder	94 (26.1%)

Association between Bullying and Mental-Emotional Disorders

Among the 54 respondents who had never experienced bullying, most had no mental-emotional disorders (74.1%). Conversely, among the nine respondents who experienced bullying at a high level, the majority had mental-emotional disorders (88.9%). The Spearman's rank test yielded a p-value of 0.000 (< 0.05) with a correlation coefficient of 0.470, indicating a significant association between bullying and mental-emotional disorders among adolescents in Pekalongan City, with a “moderate” correlation strength. The positive direction of the correlation indicates that the more frequently adolescents experience bullying, the higher the likelihood of developing mental-emotional disorders (Table 2).

Table 2. Cross-tabulation of Bullying Level and Mental-Emotional Status

Bullying Level	Mental-Emotional Status			Total	ρ	p-value
	Normal	Borderline	Disorder			
Never	40 (74.1%)	8 (14.8%)	6 (11.1%)	54 (100.0%)	0.470	< 0.001
Low	123 (41.4%)	94 (31.6%)	80 (26.9%)	297 (100.0%)		
High	1 (11.1%)	0 (0.0%)	8 (88.9%)	9 (100.0%)		
Total	164 (45.6%)	102 (28.3%)	94 (26.1%)	360 (100.0%)		

DISCUSSION

This study revealed that the majority of adolescents had experienced bullying (85%), although most reported experiencing it at a low level (82.5%). This finding is consistent with previous research, which indicated that 95.5% of high school students had experienced bullying.¹⁵ The high prevalence of bullying among adolescents may be attributed to the varying forms it takes, broadly categorized into overt and relational bullying.¹⁶ Overt bullying includes direct, observable actions, such as physical aggression and verbal insults. In contrast, relational bullying involves indirect tactics aimed at harming the victim's social relationships, such as exclusion, gossip, and social isolation.¹⁷ Based on the present study's questionnaire, adolescents most frequently experienced relational bullying, including broken friendships, gossiping, and public shaming. During middle school years, when social status among peers becomes crucial, adolescents are more likely to engage in relational aggression.¹⁶ This transition explains why relational bullying has a greater effect on adolescents' well-being compared to overt bullying.¹⁸ During middle school years, when social status among peers becomes crucial, adolescents are more likely to engage in relational aggression.¹⁶ This transition explains why relational bullying has a greater effect on adolescents' well-being compared to overt bullying.¹⁸

Relational bullying poses greater risks to adolescent mental health. Studies in Asian contexts suggest that overt bullying has no significant link to mental health, whereas relational bullying is more persistent and challenging to detect.¹⁷ The cultural emphasis on harmony in collectivist societies may result in quicker adult intervention for overt bullying, but relational bullying often goes unnoticed and thus has longer-lasting effects.¹⁹ Consistent with the findings, another study reported that 82.7% of adolescents had been bullied.²⁰ Bullying behaviour is defined as intentional, repeated acts involving power imbalance and may take verbal, physical, or psychological forms.^{21,22} For an act to be classified as bullying, it must be deliberate, systematic, and recurring and must cause harm to the victim.

In this study, 26.1% of adolescents were found to have emotional mental disorders. This is in line with earlier reports indicating a prevalence of approximately 25%.²³ A separate cross-sectional study found a 15.6% prevalence of emotional mental disorders among high school students.² Emotional mental disorders are characterized by disturbances in thoughts, feelings, and behaviours that

impair daily functioning but do not include psychotic symptoms.^{24,25} If left unaddressed, such disturbances may progress to pathological conditions and lead to adverse outcomes in academic, social, and behavioural domains.²⁶

Adolescence is a developmental period characterized by significant physical, emotional, and social changes. While most adolescents develop healthily, it is also a stage where mental disorders are most likely to emerge.²⁷⁻²⁹ This vulnerability is influenced by factors such as pubertal hormonal changes, sleep disturbances, difficulties with emotional regulation, evolving peer relationships, and changes in self-concept.³⁰ Puberty, both in terms of timing and maturation, is a risk factor for mental and emotional disorders.³¹ Hormonal changes directly affect brain regions involved in emotion and reward, while physical changes influence social experiences and self-image.³⁰ Adolescents also experience heightened emotionality, with more frequent and intense reactions, especially to social stimuli.³²⁻³⁴ Poor emotional regulation strategies, such as suppression and rumination, are more strongly linked to internalizing disorders during this stage of life.³⁰

This study found a statistically significant positive correlation between bullying and emotional mental disorders ($\rho = 0.00$, $r = 0.470$), indicating that adolescents who experience bullying are more likely to develop emotional problems. This is consistent with previous findings showing that bullying victims exhibit more psychological difficulties than their non-victim peers.⁹ Victimized adolescents scored higher on all Strengths and Difficulties Questionnaire (SDQ) subscales.³⁵ Bullying may lead to emotional and mental disorders through psychological stress, loss of self-esteem, and trauma.³⁶⁻³⁸ In particular, relational bullying—such as exclusion or rumour-spreading—can have lasting effects due to its covert nature, often escaping adult detection and intervention.³⁹ Consequently, victims may feel unsupported, further exacerbating their emotional problems.

The prevalence of bullying and emotional disorders in this study (85% and 26.1%, respectively) aligns with research showing high rates of anxiety and depression among adolescent bullying victims.^{15,20} Other studies have reported that high school students are at greater risk for depression than younger adolescents, potentially due to academic pressures and future uncertainties.⁴⁰ Higher SDQ scores among victims also reflect a stronger relationship between bullying and mental health problems.³⁵ Findings from international studies support these results. Elevated SDQ scores across all subscales were found among bullying victims in Nigeria and Egypt.^{10,11} Systematic reviews over the past two decades affirm strong causal links

between bullying victimization and mental health disorders such as depression, anxiety, suicidal ideation, and substance abuse.⁴¹ Furthermore, victims typically show internalizing symptoms (e.g., anxiety, depression), while perpetrators exhibit externalizing behaviours (e.g., aggression, delinquency).^{9,42} Evidence shows that bullying victims have greater psychosocial maladjustment and poorer coping strategies than perpetrators.⁴³ Many victims also become bully victims, engaging in bullying behaviour themselves—a cycle fueled by altered perceptions of power dynamics.^{44,45} This cyclical behaviour worsens psychological distress.

Given the high burden of emotional and mental disorders, mental health promotion is crucial. Local health authorities should leverage social media to educate adolescents on mental health, given its widespread use in this population. Cross-cultural studies further demonstrate that collectivist societies are more responsive to overt bullying, while relational bullying often persists unnoticed.¹⁹ This cultural context must be considered when designing interventions. Limitations of this study include its cross-sectional design, which restricts causal inference; reliance on self-reported data, which may introduce bias; and the localized sample of high school students from a single city, thereby limiting the generalizability of the findings.

CONCLUSIONS AND RECOMMENDATION

This study demonstrates that bullying significantly contributes to the incidence of emotional and mental disorders among adolescents in Pekalongan City. These findings align with previous research, although variations exist across different cultural contexts. To establish a clearer understanding of the causal relationship and enhance the generalizability of the findings, future studies employing longitudinal designs and broader geographic coverage are recommended.

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