

Association Between Coping Strategies and Psychological Well-Being among Urban Adolescents in an Islamic Senior High School

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ABSTRACT

Adolescence is a developmental stage characterized by academic, social, and emotional challenges that may influence psychological well-being. Coping strategies are considered important factors that help adolescents manage stress and maintain positive psychological functioning. This study aimed to examine the association between coping strategies and psychological well-being among adolescents. This study employed a quantitative descriptive–correlational design with a cross-sectional approach. The research was conducted at a religious-based senior high school in Makassar, Indonesia, involving 36 adolescents selected using stratified random sampling. Coping strategies were measured using the Brief COPE questionnaire, while psychological well-being was assessed using an adapted Psychological Well-Being (PWB) questionnaire. Both variables were categorized into categorical data for bivariate analysis purposes. Data were analyzed using descriptive statistics and Chi-square analysis to examine the association between coping strategy categories and psychological well-being levels. Because of the relatively small sample size, the findings were interpreted cautiously. Most respondents demonstrated adaptive coping strategies (94.4%) and high psychological well-being (61.1%). Statistical analysis showed that coping strategies were significantly associated with psychological well-being ($p < 0.05$), indicating that adolescents who applied adaptive coping strategies tended to demonstrate higher psychological well-being. However, findings related to maladaptive coping should be interpreted cautiously because the number of respondents in this category was very limited. Adaptive coping strategies were positively associated with psychological well-being among adolescents. These findings highlight the importance of strengthening adaptive coping skills through school-based mental health programs. Future studies are recommended to involve larger and more diverse populations to improve generalizability.

Keywords: adolescents; coping strategies; psychological well-being; mental health; urban area; Indonesia

INTRODUCTION

Adolescence is widely recognized as a critical developmental stage characterized by substantial biological, cognitive, emotional, and psychosocial changes. Rapid hormonal fluctuations, ongoing brain maturation, and identity exploration during this period contribute to increased vulnerability to psychological distress and emotional instability. In parallel, adolescents are required to navigate multiple developmental demands, including academic achievement, peer acceptance, and self-identity formation. Without effective coping resources, these challenges may negatively influence mental health and overall psychological well-being ¹.

The complexity of adolescent development is further intensified within urban environments. Urban adolescents are frequently exposed to competitive academic climates, heightened parental expectations, dense peer interactions, and continuous engagement with digital media. The widespread use of social media has amplified processes of social comparison, self-presentation concerns, and perceived social evaluation, all of which may adversely affect emotional regulation and self-esteem ². A growing body of evidence suggests that excessive engagement with social networking sites is associated with increased anxiety, stress, and depressive symptoms, as well as poorer psychological well-being among adolescents ³. These findings highlight the importance of understanding protective psychological factors that enable adolescents to adapt effectively to urban stressors. These global trends are also reflected in many developing countries, including Indonesia. In Indonesia, adolescent mental health has increasingly become a public health concern. National findings from the Indonesia National Adolescent Mental Health Survey (I-NAMHS) indicate that a substantial proportion of adolescents experience emotional and psychological difficulties, including stress, anxiety, and behavioural problems, while national media reports have further highlighted the growing public awareness and urgency of addressing adolescent mental health issues ^{4,5}. If not appropriately addressed, these conditions may interfere with academic performance, disrupt interpersonal relationships, and hinder long-term psychosocial development. Efforts to address adolescent mental health challenges are further complicated by social stigma surrounding psychological problems and limited access to mental health services, particularly within educational settings in urban areas.

Understanding adolescent psychological well-being requires a comprehensive theoretical perspective that acknowledges both individual and environmental influences. Bronfenbrenner's Ecological Systems Theory emphasizes that adolescent development emerges from continuous interactions between individuals and multiple environmental systems, such as family, school, peer groups, media, and broader sociocultural contexts ⁶. Within

urban settings, adolescents simultaneously encounter opportunities for support and sources of stress arising from these interconnected environments. Complementing this perspective, the Stress–Coping Model proposed by Lazarus and Folkman conceptualizes coping as cognitive and behavioral efforts used to manage demands appraised as stressful ^{7,8}. According to this framework, psychological outcomes depend not only on stress exposure but also on how individuals interpret stressors and mobilize coping strategies, which may be adaptive or maladaptive depending on situational demands and available resources ⁹.

Positive Psychology further enriches this understanding by emphasizing strengths, resilience, and protective factors that promote optimal functioning despite adversity ¹⁰. From this perspective, psychological well-being extends beyond the absence of distress and reflects positive functioning, meaning-making, self-acceptance, and personal growth. Ryff conceptualizes psychological well-being as a multidimensional construct encompassing self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth ^{11,12}. Previous research consistently shows that adaptive coping strategies and supportive social environments are associated with higher psychological well-being among adolescents ⁸.

Despite the growing body of international evidence, existing studies on coping strategies and psychological well-being among adolescents have predominantly focused on students in general public school settings. Adolescents attending Islamic secondary schools (madrasahs), particularly in urban areas, may experience unique coping dynamics due to the integration of religious values, spiritual practices, and academic expectations within their educational environment. Compared with adolescents in public schools, students in madrasahs may engage in coping processes influenced not only by academic and peer-related demands but also by religious norms, collective values, and faith-based meaning-making practices that potentially shape how stress is interpreted and managed. In addition to common urban stressors such as academic competition, peer influence, and digital media exposure, this dual academic–spiritual context may create distinct coping experiences that remain insufficiently explored in existing research. This contextual difference highlights an important gap in the literature and underscores the need to examine coping strategies within culturally and institutionally specific educational environments.

Furthermore, empirical studies examining coping strategies and psychological well-being among urban adolescents in Indonesian Islamic secondary schools remain limited. The lack of evidence from this specific context restricts understanding of how coping patterns operate within urban religious-based educational settings and limits the development of contextually appropriate mental health interventions. Methodologically, many previous studies have relied on simple correlational approaches without adequately addressing the ordinal nature of psychological well-being categories. Although urban-related stressors such as social pressure and digital exposure are highlighted in the broader literature, these factors were not directly measured in the present study. Instead, the urban context is positioned as a developmental background that may shape adolescents' coping experiences. Therefore, this study specifically focuses on examining the association between coping strategies and psychological well-being within an urban educational setting rather than testing urban stress variables directly. Thus, this study aims to identify coping strategies used by urban adolescents and examine their association with psychological well-being among students in Islamic secondary schools in Indonesia. Therefore, the urban context is conceptualized as a socio-environmental background rather than a directly measured variable in this study.

MATERIALS AND METHODS

This study employed a quantitative descriptive–correlational design using a cross-sectional approach to explore the relationship between coping strategies and psychological well-being among adolescents. A quantitative approach was selected to enable objective measurement and statistical analysis of relationships between variables within the study context. The cross-sectional design allowed variables to be measured simultaneously, providing a snapshot of adolescents' coping patterns and levels of psychological well-being during the study period.

The research was conducted at Madrasah Aliyah Negeri (MAN) 1 Makassar from May to July 2025 following administrative approval from the school authorities. MAN 1 Makassar is an Islamic senior high school under the supervision of the Ministry of Religious Affairs of the Republic of Indonesia. The school integrates general academic curricula with Islamic values in both learning activities and character development. As a religious-based educational institution situated in an urban setting, the school was considered an appropriate context for examining adolescents' coping strategies and psychological well-being, as students experience academic, social, and religious demands simultaneously.

The study population consisted of students aged 15–18 years enrolled in the 2024/2025 academic year. A total of 36 respondents were selected using stratified random sampling based on grade level (Grades X, XI, and XII). Each grade level represented a stratum, and participants were proportionally selected to ensure balanced representation across academic levels. Inclusion criteria included students who were willing to participate, able to complete the questionnaires independently, and present during data collection.

Coping strategies were measured using the Brief COPE questionnaire, a standardized instrument widely applied in previous studies to assess coping responses. One study utilizing this instrument is that of Marakshina et al. (18), which validated the Brief COPE-A inventory among adolescents and evaluated its psychometric properties. The instrument consists of 28 items rated on a 4-point Likert scale (1 = never, 2 = rarely, 3 = often, 4 = always). The questionnaire used in this study was adapted from previously applied versions, with linguistic adjustments made to enhance clarity and comprehensibility for Indonesian adolescents without substantial modification to the conceptual meaning of the original instrument. Total scores ranged from 28 to 112. For analytical purposes, coping scores were categorized into adaptive and maladaptive coping based on the theoretical midpoint calculated using the formula $(\text{maximum score} + \text{minimum score}) / 2$. A cut-off score of 70 was applied, with scores ≥ 70 categorized as adaptive coping and scores < 70 as maladaptive coping. This categorization was based on the theoretical midpoint of the instrument score range and was used to facilitate categorical analysis.

Psychological well-being was assessed using an adapted Psychological WellBeing (PWB) questionnaire previously applied in adolescent research. A relevant study by Afrashteh and Hasani examined mindfulness and psychological well-being among adolescents by considering the mediating roles of self-compassion, emotional dysregulation, and cognitive flexibility. The instrument consisted of 10 statements rated on a 4-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). The instrument was linguistically adapted to suit participant characteristics without substantial modification to the conceptual substance of the original measure. Total scores ranged from 10 to 40 and were categorized into three levels: low (10–19), moderate (20–29), and high (30–40). This categorization was employed for descriptive purposes to facilitate interpretation of the findings.

Because both instruments have been widely used in prior empirical studies, additional validation was not conducted in the present exploratory study. The use of established instruments was considered sufficient to maintain measurement consistency and allow comparability with previous studies, particularly within the context of a study with a limited sample size.

Data collection was conducted in classroom settings under the supervision of the researcher and school staff. Standardized instructions were provided to ensure uniform understanding of questionnaire items. Participants completed the questionnaires independently to minimize response bias.

Data analysis was performed using SPSS version 25. Descriptive statistics were applied to summarize respondent characteristics and variable distributions, including frequencies and percentages. Bivariate analysis was conducted using the Chi-square test to examine the association between coping strategies (adaptive/maladaptive) and levels of psychological well-being (low/moderate/high), as both variables had been categorized into categorical data. The Chi-square test was selected because it is commonly used to assess associations between categorical variables. However, considering the relatively small sample size and the presence of several cells with low expected frequencies, the findings were interpreted cautiously as exploratory results. Because several cells had expected frequencies below 5, the Chi-square findings should be interpreted as exploratory, and Fisher's Exact Test may be considered in future studies with similar distributions. Statistical significance was determined at $p < 0.05$.

Ethical considerations were strictly observed throughout the study. Ethical approval with an Ethical Exemption status was obtained from the Ethics Committee of Poltekkes Kemenkes Makassar (Ethical Exemption No.: 1510/M/KEPK-PTKMS/VII/2025). All participants received clear information regarding the study objectives, procedures, confidentiality, voluntary participation, and their right to withdraw at any time without penalty. Informed consent was obtained from all participants, and anonymity was ensured through the use of coded identifiers.

RESULTS

The analysis focuses on the core study variables coping strategies and psychological well-being, whereas the urban environment serves only as a contextual characteristic rather than an analytical variable.

Respondent Characteristics

A total of 36 adolescents were included in the analysis. Most participants were aged 16–17 years ($n = 26$, 72.2%), while 10 respondents (27.8%) were aged 18 years. Female participants predominated ($n = 23$, 63.9%), whereas male participants accounted for 36.1% ($n = 13$). Based on grade level, the majority were enrolled in Grade XI ($n = 20$, 55.6%), followed by Grade XII ($n = 11$, 30.6%) and Grade X ($n = 5$, 13.8%) (Table 1).

Table 1. Respondent Characteristics

Characteristics	Category	Frequency (n)	Percentage (%)
Age (years)	16–17	26	72.2
	18	10	27.8
Gender	Male	13	36.1
	Female	23	63.9
Class	X	5	13.8
	XI	20	55.6
	XII	11	30.6
Total		36	100.0

Distribution of Coping Strategies

Adaptive coping strategies were dominant among respondents, accounting for 94.4% of the sample (n = 34), whereas maladaptive coping strategies were observed in 5.6% (n = 2) (Table 2).

Table 2. Distribution of Coping Strategies

Coping Strategy Category	Frequency (n)	Percentage (%)
Adaptive	34	94.4
Maladaptive	2	5.6
Total	36	100.0

Distribution of Psychological Well-Being

Most respondents demonstrated high psychological well-being (n = 22, 61.1%), followed by moderate (n = 10, 27.8%) and low levels (n = 4, 11.1%) (Table 3).

Table 3. Distribution of Psychological Well-Being Levels

Psychological Well-Being Category	Frequency (n)	Percentage (%)
Low	4	11.1
Moderate	10	27.8
High	22	61.1
Total	36	100.0

Association Between Coping Strategies and Psychological Well-Being

Cross-tabulation results showed that respondents with adaptive coping strategies were predominantly classified in the high psychological well-being category (61.1%), whereas descriptive patterns suggested that respondents with maladaptive coping tended to appear more frequently in lower psychological well-being categories. However, this finding should be interpreted cautiously because only two respondents were classified in the maladaptive coping category.

Chi-square analysis indicated a statistically significant association between coping strategies and psychological well-being, $\chi^2(2, N = 36) = 6.54, p = .038$, Cramer's $V = .42$, suggesting a moderate association between coping strategy type and psychological well-being level.

Table 4. Association Between Coping Strategies and Psychological Well-Being

Coping Strategy Category	Low n (%)	Moderate n (%)	High n (%)	Total n (%)
Adaptive	3 (8.3)	9 (25.0)	22 (61.1)	34 (94.4)
Maladaptive	1 (2.8)	1 (2.8)	0 (0.0)	2 (5.6)
Total	4 (11.1)	10 (27.8)	22 (61.1)	36 (100)

Note: Percentages were calculated based on the total sample size (n = 36).

DISCUSSION

The present study showed a significant association between coping strategies and psychological well-being among adolescents. Adolescents who applied adaptive coping strategies tended to report higher levels of psychological well-being compared to those who used maladaptive coping strategies. These findings suggest that coping strategies are closely associated with adolescents' ability to manage stress and maintain positive psychological functioning during their developmental period.

The predominance of adaptive coping identified in this study is consistent with previous research showing that adaptive coping is associated with better mental health outcomes among adolescents¹³.¹³ reported that effective coping strategies are related to improved psychological well-being through reduced emotional distress and better adjustment to daily stressors. Similarly¹⁴, emphasized that coping skills represent important pathways associated with adolescent well-being, particularly when adolescents face academic and social pressures. These findings support the view that adolescents who employ adaptive coping strategies tend to demonstrate better emotional regulation and resilience. The overwhelming predominance of adaptive coping (94.4%) suggests a possible contextual influence that should be interpreted cautiously.

The association observed in this study also aligns with theoretical perspectives that consider coping as a mechanism related to mental health outcomes. Adaptive coping strategies such as problem-solving and positive cognitive reframing may help adolescents interpret stressful situations more constructively, which is associated with higher psychological well-being. In contrast, maladaptive coping strategies may be related to increased stress perception and reduced emotional adjustment. The moderate strength of association found in this study indicates that coping strategies represent meaningful correlates of psychological well-being, although other psychosocial factors may also contribute. However, because several cells contained low frequencies, the observed association should be interpreted as exploratory findings and viewed with caution^{15,16}. Although this study was conducted in a madrasah setting where religious values may shape students' daily experiences, religiosity variables were not directly measured; therefore, any interpretation regarding the influence of the religious environment on coping strategies should be considered cautiously and should not be interpreted as a causal conclusion within the present study. From a practical perspective, the findings highlight the importance of strengthening adaptive coping skills through school-based mental health programs. Schools play an important role in supporting adolescents' emotional regulation and resilience. Previous studies have shown that school-based interventions are associated with improved psychological outcomes and adolescent mental health development¹⁷. Therefore, integrating coping skill training into counseling services or student development programs may help adolescents manage stress more effectively and support psychological well-being.

In interpreting these findings, contextual specificity should be considered. The study was conducted in a single religious-based school, and institutional or cultural characteristics may be related to how coping strategies are expressed among students. However, religiosity variables were not directly measured in this study; therefore, any interpretation regarding the influence of the religious environment on coping strategies should be considered cautiously and should not be interpreted as a causal conclusion within the present study. Since urban stressors were not measured directly, interpretations related to urban influences remain contextual rather than causal. Future research is encouraged to specifically examine religiosity and cultural factors to better understand their potential association with coping patterns among adolescents.

Methodological considerations should also be acknowledged. The distribution of coping categories in this study was uneven, with the majority of participants classified as having adaptive coping strategies and only a very limited number categorized as maladaptive coping. This data distribution may have influenced the observed statistical association and should be taken into account when interpreting the results. Consequently, caution is needed when generalizing the findings to broader urban adolescent populations, where coping patterns and contextual conditions may differ.

Several limitations should be considered. The cross-sectional design limits causal interpretation, as the observed relationship only reflects associations at a single point in time. In addition, the relatively small sample size and single-school setting may limit the generalizability of the findings. The present study used overall coping categories (adaptive vs. maladaptive) for analytical simplicity given the limited sample size. Analyzing specific Brief COPE subscales (e.g., problem-focused, emotion-focused, and avoidance coping) may enable more differentiated intervention implications and reduce the risk of overly generalized program recommendations. Future studies are recommended to involve larger and more diverse samples, include multiple educational settings, and apply longitudinal designs to further examine the relationship between coping strategies and psychological well-being across different contexts.

Overall, the present findings add evidence that adaptive coping strategies are associated with better psychological well-being among adolescents. These findings provide useful implications for mental health promotion programs in educational settings, particularly in supporting adolescents to develop healthier coping skills.

Adolescent psychological well-being is influenced by multiple factors, including emotional regulation, social support, and coping capacity⁽¹⁸⁻¹⁹⁾. Adolescents who utilize adaptive coping strategies tend to demonstrate

greater resilience, optimism, and self-efficacy in managing academic and interpersonal stressors²⁰. Previous studies have also reported that adaptive coping is associated with lower psychological distress and better emotional adjustment, whereas maladaptive coping strategies such as avoidance and emotional suppression are linked to anxiety, emotional exhaustion, and reduced life satisfaction^{21,22}. Adaptive coping may facilitate healthier cognitive appraisal and constructive problem-solving behaviors that support psychological well-being²³. Therefore, educational institutions play an important role in strengthening students' emotional competence through school-based mental health interventions, psychosocial support, and resilience-building programs.²⁴

Moreover, recent evidence suggests that strengthening adaptive coping skills may provide long-term benefits for adolescent mental health and psychosocial functioning²⁵. Interventions focusing on stress management, emotional awareness, and resilience-building have been associated with improved psychological well-being and reduced vulnerability to mental health problems. These findings reinforce the importance of integrating mental health promotion into school curricula and counseling programs to support adolescents during critical developmental transitions²⁶. Future research is encouraged to further examine contextual factors such as family dynamics, digital stress exposure, and socio-cultural influences that may interact with adolescent coping patterns and psychological well-being²⁷.

CONCLUSION AND RECOMMENDATIONS

This study found that coping strategies were significantly associated with psychological well-being among adolescents. Adolescents who applied adaptive coping strategies tended to report higher levels of psychological well-being compared to those using maladaptive coping strategies. These findings indicate a statistical association rather than a causal relationship, considering the cross-sectional nature of the study. The findings highlight the importance of strengthening adaptive coping skills through school-based mental health programs to support adolescents' emotional regulation, stress management, and psychological well-being. Future studies are recommended to involve larger and more diverse samples, include multiple educational settings, and examine specific coping subscales to provide more targeted intervention implications.

However, the findings should be interpreted cautiously due to the relatively small sample size, unequal distribution between coping categories, and the limited number of respondents in the maladaptive coping category. Overall, this study adds evidence that adaptive coping strategies are associated with better psychological well-being among adolescents and may represent an important focus for adolescent mental health promotion programs in school settings.

AUTHOR'S CONTRIBUTION STATEMENT

Sri Angriani¹ contributed to the study conceptualization, research design, data collection, data analysis, interpretation of findings, and manuscript drafting. Rahman² contributed to methodological supervision, data validation, and critical revision of the manuscript. Abd Hady³ contributed to data analysis, interpretation of results, and manuscript review. Rusni Mato⁴ contributed to manuscript editing, critical revision for intellectual content, and final approval of the manuscript. All authors read and approved the final version of the manuscript.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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