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FACTORS ASSOCIATED WITH THE MENTAL HEALTH OF FEMALE ADOLESCENTS AT JUNIOR HIGH SCHOOL 8 IN GORONTALO CITY

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ABSTRACT

Adolescence is a vulnerable period for mental health disorders due to significant psychological and social changes, in which adolescent girls are considered more susceptible to such conditions compared to their male counterparts. This study aims to identify factors associated with the mental health of female adolescents at SMP Negeri 8 Gorontalo City. This study employed a quantitative research design using a cross-sectional method. The study population consisted of all female students at SMP Negeri 8 Gorontalo City, totaling 70 individuals. A sample of 60 female adolescents was selected using purposive sampling technique. The questionnaires were adapted from previous studies, with reported Cronbach's alpha coefficients of 0.966 for knowledge, 0.794 for social media use, and 0.986 for family support; the Indonesian DASS-21 had reported construct reliability coefficients of 0.77–0.88. The Chi-Square test was used to examine the relationship between variables. The results of the Chi-Square test revealed that there is a significant relationship between family support (p-value=0.001) and social media use (p-value=0.002) with the mental health of female adolescents at SMP Negeri 8 Gorontalo City, whereas no significant relationship was found between knowledge level (p-value=1.000) and mental health among female adolescents at SMP Negeri 8 Gorontalo City. Strengthening family support and encouraging wise limitations on social media use are necessary to promote the mental health of female adolescents in preventing psychological disorders.

Keywords: *Mental health, knowledge, social media, family support, female adolescents.*

INTRODUCTION

Mental health is a fundamental aspect of adolescent development, as it shapes how individuals think, manage their emotions, and behave in everyday life. It also supports their ability to identify and develop their potential during this critical stage of growth (Supini et al., 2024). Adolescence represents a period of transition between childhood and adulthood, marked by substantial physical, biological, and emotional transformations. Despite these changes, adolescents often give greater attention to maintaining their physical well-being than to recognizing and addressing their psychological needs (Rahmawaty et al., 2022). Maintaining good mental health helps adolescents manage stressful situations, perform routine activities, adapt to daily demands, and remain productive in their lives (Supini et al., 2024).

The World Health Organization (WHO) estimates that around one billion people globally are affected by mental health disorders, while suicide claims one life approximately every 40 seconds (Inggrid et al., 2020 as cited in Abas et al., 2023).

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Furthermore, findings from the Global Burden of Disease study (2020) show that, compared with 2019, the number of females experiencing anxiety disorders rose by approximately 52 million cases in 2020, while major depressive disorder cases increased by more than 35 million during the same period (Abas et al., 2023).

Data from the 2023 Indonesian Health Survey (Survei Kesehatan Indonesia/SKI) show that depression affected 1.4% of Indonesians aged 15 years and above, compared with 1.0% of the population in Gorontalo Province. Meanwhile, the proportion of individuals experiencing mental health problems based on the Self-Reporting Questionnaire-20 (SRQ-20) reached 2.0% nationally, with corresponding figures of 1.6% in Gorontalo Province and 2.7% in South Sulawesi Province. These statistics underscore the need to strengthen mental health promotion and facilitate the early recognition of psychological difficulties. Nevertheless, depression prevalence and mental health problems identified through the SRQ-20 represent different indicators and must therefore be interpreted separately rather than treated as equivalent measures (Kemenkes RI, 2024).

In 2019, approximately one in seven adolescents worldwide was estimated to experience a mental disorder, corresponding to approximately 166 million adolescents, comprising 89 million males and 77 million females. A national analysis in Indonesia found that emotional mental health disorders affected 9.8% of individuals aged 15 years and older among the 37,728 participants included in the analysis. Gorontalo Province had the second-highest prevalence, at 19.8%. Furthermore, data from 2018 revealed that depression affected 6.1% of Indonesians aged 15 years and above, with Gorontalo Province again ranking second, recording a prevalence of 10.0% (Antu et al., 2025). In 2022, 21.93% of the population aged ≥15 years who were at risk of mental health problems had undergone screening. In Gorontalo Province, the number of adolescents aged 15–18 years identified as being at risk was 3,356, with the highest number recorded in Bone Bolango Regency (1,226 individuals), followed by Boalemo Regency (809), Gorontalo Regency (661), North Gorontalo Regency (389), Gorontalo City (250), and Pohuwato Regency (21) (Antu et al., 2025).

Several interconnected factors, including physical and non-physical aspects, contribute to an individual's mental health, with knowledge being one of the important determinants. Among adolescents, a sound understanding of mental health can influence their perceptions, attitudes, and actions in maintaining psychological well-being. Furthermore, sufficient knowledge helps adolescents identify potential symptoms of mental health disorders, recognize early warning signs, and understand appropriate measures for managing these conditions (Aziz, 2025). During adolescence, high exposure to social media may also influence mental health, as social media has become one of the most widely accessed sources of interaction and information among adolescents. Excessive social media use, particularly exposure to negative content and social comparison, may increase the risk of stress, anxiety, and emotional disturbances, whereas well-managed exposure can provide valuable social support and beneficial information (Sa'diyah et al., 2022).

Another important factor is family support, which includes attention, affection, communication, and parental involvement in adolescents' lives. Adequate family support can serve as a psychological protective factor by helping adolescents manage stress, develop adaptive behaviors, and improve their ability to cope with problems, thereby contributing to better mental health (Labiq et al., 2024). Knowledge, social media use, and family support are relevant factors to consider in adolescent mental health promotion. Recent research indicates that mental health literacy interventions can improve adolescents' knowledge and understanding of mental health, although evidence regarding sustained changes in help-seeking and other outcomes remains variable (Yani et al., 2025). Sala et al. (2024) explained that the association between social media engagement and adolescent mental health is shaped by several aspects, including individual differences, usage patterns, and the characteristics of platform content and design. Similarly, Liu et al. (2024) underscored the role of family-related influences in examining how adolescents' screen media habits are associated with their mental health. Taken together, these findings provide a rationale for investigating knowledge, social media use, and family support as interconnected factors in adolescent mental health. Understanding the contribution of these factors may provide a basis for developing mental health education programs in schools, promoting more responsible social media engagement, and strengthening family-based support initiatives. Examining their associations with mental health among female adolescents in the local setting can provide context-specific evidence to guide future mental health promotion initiatives. Mental health should be maintained and nurtured as effectively as possible to prevent the development of mental disorders. When mental health is impaired, individuals may experience a reduced quality of life, including increased susceptibility to stress, fatigue, and boredom. An individual can be considered mentally healthy when they are free from symptoms of mental disorders, including neurosis and psychosis (Rahmawaty et al., 2022).

Labiq et al. (2024) used a qualitative approach to explore the role of family support in the mental health of university students at UIN Syarif Hidayatullah Jakarta. Their findings highlighted the importance of emotional support, attention, effective communication, and a supportive family environment for students' psychological well-being. However, their study focused on university students and examined family support qualitatively, whereas the present study focuses on female junior high school students and quantitatively examines the associations of knowledge, social media use, and family support with mental health. This difference highlights the need for context-specific evidence concerning these factors among female adolescents at SMP Negeri 8 Gorontalo City. Similarly, Sa'diyah et al. (2022) provided quantitative empirical support for the present study by demonstrating a significant association between an external factor and students' mental health. The Pearson Product-Moment correlation test demonstrated a statistically significant inverse association between the level of social media engagement and students' mental health, as reflected by a correlation coefficient of −0.220 and a p-value of 0.041, which was below the 0.05 significance threshold.

Examining these three factors together may help identify areas that warrant attention in adolescent mental health promotion. Evidence from recent studies indicates that educational interventions aimed at improving mental health literacy can enhance adolescents' awareness and understanding of mental health issues, emphasizing the potential benefits of incorporating mental health education into school programs (Yani et al., 2025). Furthermore, the association between social media engagement and adolescents' psychological well-being is influenced by individual differences, usage behaviors, and platform characteristics, underscoring the need to encourage more conscious and responsible use of digital media (Sala et al., 2024). Moreover, family dynamics and support play an important role in examining the connection between adolescents' screen media exposure and mental health outcomes, highlighting the need to involve families in efforts to promote adolescent mental well-being (Liu et al., 2024). These findings support the consideration of school-based mental health education, digital literacy, and family-focused support strategies in adolescent mental health promotion. Such efforts should be tailored to the needs of female adolescents and developed collaboratively by schools and families.

From an Islamic perspective, mental health is also given considerable attention. This is reflected in the Qur'an, particularly Surah Yunus verse 57, which states that the Qur'an is an admonition, a healing for what is in the hearts, and guidance and mercy for believers. This verse indicates that Islamic teachings provide spiritual guidance for addressing inner problems, including restlessness, anxiety, and psychological distress. The "diseases of the heart" referred to in the verse may encompass emotional disturbances and psychological imbalance. In the context of adolescent mental health, spiritual values derived from the Qur'an can serve as a source of strength for managing stress, coping with life pressures, and maintaining emotional stability. Thus, efforts to maintain mental health are consistent with Islamic teachings, which emphasize the importance of divine guidance as a foundation for achieving holistic mental well-being.

While earlier investigations have identified family support and social media engagement as factors associated with mental health, research examining the combined relationships of mental health knowledge, social media use, and family support among female students at the junior high school level is still scarce, particularly within the local setting of Gorontalo City. Previous research by Labiq et al. (2024), for example, focused on university students and explored family support qualitatively, whereas the present study quantitatively examines these three factors among female adolescents at SMP Negeri 8 Gorontalo City. This study may provide context-specific evidence to inform school-based mental health education, responsible social media use, and family support strategies. In light of this, the present study sought to determine whether knowledge, social media use, and family support are associated with the mental health status of female adolescents attending SMP Negeri 8 Gorontalo City.

RESEARCH METHOD

This quantitative study adopted a cross-sectional design and was conducted at SMP Negeri 8 Gorontalo City, Gorontalo Province, in May 2026. The independent variables were knowledge, social media use, and family support, while mental health was the dependent variable. The population comprised 70 female students, from whom 60 participants were selected using Slovin's formula with a 5% margin of error. Participants were recruited through purposive sampling based on predefined criteria: female students aged 14–15 years, enrolled at the school, able to communicate in Indonesian, and willing to participate in the study in accordance with informed consent procedures. The exclusion criteria were students experiencing severe medical conditions or severe mental disorders that could interfere with their ability to understand and complete the questionnaire. These criteria were established to ensure that participants met the study requirements and could provide the information needed to address the research objectives.

The study utilized both primary and secondary data. Primary information was gathered directly from all selected respondents through the distribution of research questionnaires. Meanwhile, secondary information was obtained from public health center reports and relevant literature sources. The research instrument consisted of a structured questionnaire covering respondents' characteristics and four study variables: knowledge, social media use, family support, and mental health. The knowledge questionnaire was adapted from Puspitasari (2025), the social media use questionnaire from Tato & Estika (2025), the family support questionnaire from Kuncoro (2024), and the mental health questionnaire was based on the instrument reported by Hakim & Aristawati (2023). Each questionnaire was scored according to the operational definitions established for this study. Knowledge was categorized as good (≥80%) or poor (<80%); social media use was categorized as high (≥80%) or low (<80%); and family support was categorized as adequate (≥80%) or inadequate (<80%). Mental health was classified according to the study's operational cut-off, with scores ≥8 indicating the presence of mental health problems and scores <8 indicating their absence. The reliability coefficients reported for the knowledge, social media use, and family support questionnaires were Cronbach's alpha values of 0.966, 0.794, and 0.986, respectively. Mental health status was evaluated using the Indonesian adaptation of the Depression Anxiety Stress Scales-21 (DASS-21). Hakim & Aristawati (2023) reported construct reliability values between 0.77 and 0.88 for this instrument. However, these psychometric results refer to the findings of the original validation study and should not be interpreted as reliability coefficients calculated from the present sample of female adolescents.

The data were examined through univariate and bivariate statistical procedures. Univariate analysis was used to summarize respondents' profiles, covering age, parents' educational background and employment status, knowledge levels, family support, social media use, and mental health conditions. Meanwhile, bivariate analysis assessed the relationships between the independent variables (knowledge, social media use, and family support) and the dependent variable (mental health) using the chi-square test. Fisher's Exact Test was applied to 2 × 2 contingency tables when the expected frequencies did not

meet the required assumptions for the chi-square test. A p-value below 0.05 was considered statistically significant.

RESULTS AND DISCUSSION

Results

Respondents' Characteristics

The respondents' characteristics were examined to describe their demographic and socioeconomic backgrounds, including age, parents' educational attainment, and parents' occupations. The distribution of these characteristics among the 60 respondents is presented in Table 1.

Table 1. Distribution of Respondents' Characteristics

Respondents' Characteristics	Frequency	Percentage (%)
Age		
14 years	29	48.3
15 years	31	51.7
Mother's Education		
Elementary School (SD)	2	3.3
Junior High School (SMP)	19	31.7
Senior High School (SMA)	34	56.7
Bachelor's Degree (S1)	5	8.3
Father's Education		
Elementary School (SD)	17	28.3
Junior High School (SMP)	14	23.3
Senior High School (SMA)	24	40.0
Bachelor's Degree (S1)	5	8.3
Mother's Occupation		
Housewife (IRT)	57	95.0
Teacher	1	1.7
Civil/Contract Worker (TKW)	1	1.7
Entrepreneur	1	1.7
Father's Occupation		
Driver	10	16.7
Mechanic	2	3.3
Laborer	19	31.7
Entrepreneur	29	48.3
Total	60	100.0

Sumber: Primary Data (2026)

Based on Table 1, the characteristics of the respondents indicate that the majority of adolescents were 15 years old, suggesting that most participants were in mid-adolescence. The educational backgrounds of the parents were relatively diverse; however, both mothers' and fathers' educational attainment was predominantly at the secondary education level, reflecting the heterogeneous social and educational backgrounds of the respondents' families. In terms of occupation, most mothers were not employed outside the home, whereas fathers had more diverse occupations, with a predominance of entrepreneurship and informal-sector employment. Overall, these

characteristics indicate that the respondents came from families with diverse educational and socioeconomic backgrounds, which may provide an important context for understanding the mental health conditions of adolescents in this study.

Univariate Analysis

Descriptive statistics were used to present the characteristics of the main study variables among the 60 female adolescent participants, encompassing knowledge, social media use, family support, and mental health status. Their respective frequency distributions and percentages are summarized in Table 2.

Table 2. Frequency Distribution of Study Variables

Study Variables	Frequency	Percentage (%)
Knowledge Level		
Good	59	98.3
Poor	1	1.7
Social Media Use		
Low	20	33.3
High	40	66.7
Family Support		
Supportive	29	48.3
Less Supportive	31	51.7
Mental Health		
Mental health problems	40	66.7
No mental health problems	20	33.3
Total	60	100.0

Sumber: Primary Data (2026)

Table 2 shows that 59 respondents (98.3%) had good mental health knowledge, while only 1 respondent (1.7%) had poor knowledge.. Regarding social media use, most respondents reported high usage, with 40 respondents (66.7%), whereas 20 respondents (33.3%) reported low usage. These findings indicate that social media was frequently used by most respondents in their daily activities. In terms of family support, 31 respondents (51.7%) reported receiving less supportive family support, while 29 respondents (48.3%) reported receiving supportive family support, indicating that a considerable proportion of respondents had not received optimal family support. Regarding mental health status, 40 respondents (66.7%) experienced mental health problems, while 20 respondents (33.3%) did not experience mental health problems.

Bivariate Analysis

Table 3. Association Between Knowledge Level and Mental Health

Knowledge Level	Mental Health				Total		*p-value*
	Mental Health Problems		No Mental Health Problems				
	n	%	n	%	n	%	
Good	39	66,1	20	33,9	59	98,3	1,000

Poor	1	100,0	0	0,0	1	1,7
Total	40	66,7	20	33,3	60	100,0

Sumber: Primary Data (2026)

Table 3 shows that, among the 60 respondents, most participants with a good level of knowledge, namely 39 respondents (66.1%), still experienced mental health problems, while 20 respondents (33.9%) did not experience mental health problems. Among respondents with a poor level of knowledge, all 1 respondent (100%) experienced mental health problems, with no respondents in this category reported as having no mental health problems. As 50.0% of the cells had expected counts below 5 (minimum = 0.33), Fisher's Exact Test was applied. The two-sided test yielded a p-value of 1.000 ($p > 0.05$), indicating no statistically significant association between knowledge level and mental health among the female adolescents studied.

An additional bivariate analysis was performed to assess the relationship between social media use and mental health among female students at SMP Negeri 8 Gorontalo City. Mental health outcomes were compared between participants with low and high social media use, and the corresponding statistical findings are reported in Table 4.

Tabel 4. Association Between Social Media Use and Mental Health

Social Media Use	**Mental Health**				**Total**		***p-value***
	Mental Health Problems		**No Mental Health Problems**				
	n	**%**	**n**	**%**	**n**	**%**	
Low	8	40,0	12	60,0	20	33,3	0,002
High	32	80,0	8	40,0	40	66,7	
Total	40	66,7	20	33,3	60	100,0	

Sumber: Primary Data (2026)

Based on Table 4, among respondents with low social media use (20 participants), 8 adolescents (40.0%) still experienced mental health problems. This finding indicates that even when social media use is relatively low, mental health problems may still occur. This condition may be influenced by various factors beyond social media use, such as academic pressure, family conflicts, stressful life experiences, lack of emotional support, and individual personality factors. Thus, low exposure to social media does not necessarily guarantee freedom from mental health problems when other stressors are more dominant. Conversely, among respondents with high social media use (40 participants), 8 adolescents (40.0%) did not experience mental health problems. This finding indicates that not all individuals with high levels of social media use experience negative mental health outcomes. This could be explained by the presence of protective factors, including strong coping abilities, controlled social media engagement, constructive use of digital platforms to access educational resources and social support, as well as emotional support from family members and peers.

The Chi-square analysis demonstrated a significant association between social media use and mental health ($p = 0.002$; $p < 0.05$). Respondents with greater social media

engagement showed a higher prevalence of mental health problems. Nevertheless, the cross-sectional nature of this study prevents the establishment of a causal link between these variables. Additional factors, including academic demands, family dynamics, sleep habits, and personal characteristics, may also contribute to variations in adolescent mental health and should be explored in future research.

The relationship between family support and mental health among female students at SMP Negeri 8 Gorontalo City was further assessed through bivariate analysis. Participants were classified based on the level of support received from their families (supportive or less supportive), and their mental health conditions were examined across these categories. The findings and corresponding statistical test results are displayed in Table 5.

Tabel 5. Hubungan Dukungan Keluarga dengan Kesehatan Mental

Family Support	**Mental Health**				**Total**		***p-value***
	Mental Health Problems		**No Mental Health Problems**				
	n	**%**	**n**	**%**	**n**	**%**	
Supportive	10	34,5	19	65,5	29	48,0	0,001
Less Supportive	30	96,2	1	3,2	31	52,0	
Total	40	66,7	20	33,3	60	100,0	

Sumber: Primary Data (2026)

Based on the analysis presented in Table 5, the association between family support and mental health among the 60 respondents showed that, among respondents who received supportive family support, 10 respondents (34.5%) experienced mental health problems, while 19 respondents (65.5%) did not experience mental health problems. Meanwhile, among the 31 adolescents who reported receiving less family support, 30 adolescents (approximately 96.8%) experienced mental health problems, while only 1 adolescent (approximately 3.2%) did not experience mental health problems.

The Chi-square test identified a statistically significant relationship between family support and mental health ($p = 0.001$; $p < 0.05$). The results indicate that adolescents receiving stronger support from their families tend to have more favorable mental health conditions than those with limited support. Such support can help alleviate stress, foster feelings of safety, and enhance adolescents' capacity to manage everyday demands and challenges.

Discussion

Association Between Knowledge Level and Mental Health Among Female Adolescents

The findings revealed that knowledge level was not significantly associated with mental health among female adolescents at SMP Negeri 8 Gorontalo City, as indicated by a p-value of 1.000. The descriptive analysis showed that 59 respondents (98.3%) had a good level of knowledge, whereas one respondent (1.7%) had a poor level of

knowledge. Among respondents with good knowledge, 39 (66.1%) experienced mental health problems, while 20 (33.9%) did not. The results suggest that possessing adequate knowledge did not demonstrate a statistically significant relationship with mental health status among the study participants. The observed pattern may suggest a possible gap between mental health knowledge and psychological well-being. However, this interpretation should be made cautiously because the study did not directly assess whether respondents translated their knowledge into mental health-promoting behaviors.

Several factors may be associated with mental health status among adolescents, including academic pressure, family support, social media use, and peer relationships. However, the findings should not be interpreted as evidence of a causal relationship between these factors and mental health outcomes. Further studies involving larger participant groups and a more balanced distribution of knowledge levels are recommended to provide a more comprehensive understanding of the association between mental health knowledge and psychological well-being among adolescents.

The 20 respondents (33.9%) who had good knowledge and did not experience mental health problems indicate that knowledge may function effectively when supported by an adequate environment. Respondents in this group may have had stronger family support, more developed emotional regulation skills, and more controlled social media use, enabling them to translate their knowledge into actual behaviors that help maintain psychological well-being.

When examined based on the individual items in the knowledge questionnaire, respondents were generally able to correctly answer questions concerning the definition of mental health, signs and symptoms of mental disorders, and the importance of maintaining psychological well-being. This cognitive ability corresponds to the knowledge and comprehension levels (C1–C2) in Bloom's taxonomy, which primarily involve knowing and understanding concepts. However, these levels do not necessarily translate into higher-order abilities, particularly application (C3) and analysis (C4). Respondents may know what mental health is and be able to recognize its symptoms, but they may not yet be able to apply this knowledge effectively when managing emotional stress in real-life situations. This may occur because knowledge at the C1–C2 levels is declarative in nature, meaning that it is stored as information in memory and does not automatically lead to behavioral change. Reaching the application stage requires practice, habituation, and consistent environmental support so that knowledge can be transformed into actual behaviors that protect mental health.

According to the PRECEDE-PROCEED model, knowledge is a predisposing factor that can influence behavioral tendencies but does not independently determine health outcomes. Health-related practices are influenced not only by individual factors but also by external conditions, including family and peer encouragement as reinforcing influences and access to health services as an enabling factor. Kim et al. (2022), through a systematic review and meta-analysis, highlighted the application of the PRECEDE-PROCEED model in health programs, demonstrating its relevance for examining the various determinants of health promotion. Likewise, the Health Belief Model (HBM)

explains that individuals' decisions to adopt health behaviors are shaped by their perceived benefits of taking action and the obstacles they anticipate encountering. Recent evidence indicates that perceived benefits and perceived barriers are important constructs for understanding health-related behavioral intentions (Zewdie et al., 2022). Therefore, when barriers such as academic stress, social pressure, and inadequate family support outweigh the perceived benefits of applying mental health knowledge, individuals may be less likely to translate their knowledge into health-promoting behavior, even when their cognitive understanding is adequate.

Puspitasari (2025) stated that knowledge is a cognitive domain that does not always have a direct correlation with an individual's behavior or health condition. Aziz (2025) supports this finding by demonstrating that mental health knowledge alone is insufficient without a supportive family environment. Social Cognitive Theory further explains that individual behavior results from the interaction of three factors: personal factors, environmental factors, and experience. Therefore, an unsupportive social environment, including inadequate family support and high exposure to social media, may weaken the effectiveness of knowledge in maintaining adolescents' mental health, even when their knowledge is categorized as good (Glanz et al., 2021).

The researchers argue that the high proportion of mental health problems among respondents with good knowledge indicates that mental health interventions in schools should not focus solely on increasing knowledge through health education or classroom-based information delivery. A more comprehensive approach is required, including, first, strengthening coping skills and emotional regulation through individual and group counseling so that adolescents can apply their knowledge when facing real-life stressors; second, empowering families through parenting education to enable parents to create a home environment that supports the implementation of mentally healthy behaviors; and third, promoting responsible social media use through education and supervision to prevent excessive exposure to digital stressors from depleting the psychological capacity adolescents need to apply their mental health knowledge in daily life. Overall, knowledge was not significantly associated with the mental health of female adolescents in this study.

Association Between Social Media Exposure and Mental Health Among Female Adolescents

The Chi-square analysis identified a significant relationship between social media use and mental health among female students at SMP Negeri 8 Gorontalo City ($p = 0.002$). However, due to the cross-sectional nature of the study, the result demonstrates an association rather than a causal link between the variables. The univariate analysis showed that most respondents were classified as having high social media use, comprising 40 respondents (66.7%). Of these, 32 respondents (80.0%) experienced mental health problems, while only 8 respondents (20.0%) did not. The high prevalence of mental health problems in this group may be explained by several contributing factors. First, frequent social media engagement may increase adolescents' exposure to content involving social comparisons, potentially contributing to feelings of inadequacy, anxiety,

and lower self-esteem. However, the cross-sectional design does not permit these factors to be established as causal mechanisms. Second, the habit of accessing social media late at night may reduce sleep quality, contributing to irritability, difficulty concentrating, and emotional instability throughout the day. Third, using social media during learning activities may divide respondents' attention, increase academic burden, and exacerbate perceived stress. Fourth, some respondents may use social media as an escape from everyday problems, preventing effective problem resolution and allowing psychological distress to accumulate without constructive coping strategies.

Conversely, among the 20 respondents with lower social media engagement, 12 (60.0%) reported no mental health problems. This finding indicates that reduced social media exposure may allow adolescents more time for psychological recovery, improve sleep quality, and maintain concentration in academic activities, potentially contributing to better mental well-being. Nevertheless, 8 respondents (40.0%) in the same group still experienced mental health problems. This finding indicates that low social media use does not automatically protect adolescents from psychological problems when other stressors are more dominant. Potential contributing factors include family conflict that creates an emotionally unsupportive home environment, academic pressure arising from excessive demands for grades and school assignments, traumatic experiences such as peer bullying, and inadequate emotional support from the surrounding environment, leaving adolescents without sufficient psychological resources to cope with stress.

Several factors may account for the relationship observed between social media engagement and mental health, including exposure to social comparison, disturbed sleep patterns, reduced attention span, and fear of missing out (FOMO). Nevertheless, these factors were not specifically assessed in this study and should be regarded as potential explanations rather than confirmed causal mechanisms. First, social comparison may lead respondents to unconsciously compare their physical appearance, academic achievements, and social lives with content presented by other users, triggering feelings of inadequacy, anxiety, and reduced self-esteem, particularly among female adolescents who may be more sensitive to body image concerns. Second, disrupted sleep patterns resulting from social media use before bedtime may interfere with sleep quality and circadian rhythms, contributing to irritability, reduced concentration, and emotional instability on the following day. Third, attention fragmentation caused by social media use during learning activities may disrupt concentration and increase academic demands, resulting in cumulative stress. Fourth, Fear of Missing Out (FOMO) may drive adolescents to repeatedly check social media platforms out of concern that they might miss important updates or social interactions. This ongoing behavior can contribute to recurring anxiety and psychological fatigue.

These findings are also relevant to the characteristics of the respondents. Most respondents were 15 years old (51.7%) and were therefore in middle adolescence, a developmental period characterized by intensive identity formation and a strong need for social validation. Adolescents at this stage may be particularly susceptible to peer norms and may prioritize social acceptance over their own well-being (Rahmawaty et al., 2022).

In addition, most respondents' parents had completed senior high school education, which may potentially influence their capacity to provide critical digital literacy guidance, thereby increasing adolescents' vulnerability to the negative effects of social media when adequate guidance and filtering are lacking.

Nevertheless, 8 respondents (20.0%) in the high social media use group did not experience mental health problems. Several protective factors may have contributed to this condition, including effective emotional regulation, which enables adolescents to manage the negative effects of social media content without becoming emotionally overwhelmed; strong family support, which provides psychological resources when adolescents experience pressure in the digital environment; adaptive coping skills, which encourage adolescents to seek practical solutions rather than using social media as an escape from problems; and positive use of social media, such as accessing educational information, developing creativity, or building meaningful social support networks.

Social Cognitive Theory explains that social media use and its effects on mental health result from interactions among personal factors, such as personality and emotional regulation; environmental factors, such as social norms and parental supervision; and behavior itself. High social media use does not necessarily produce negative outcomes when individuals possess adequate self-control and are supported by a positive social environment. Stress and coping theory further emphasizes that an individual's ability to manage digital stressors plays an important role in determining the extent to which social media affects mental health (Glanz et al., 2021).

Sa'diyah et al. (2022) found a statistically significant inverse relationship between the intensity of social media use and mental health among 87 university students ($r = -0.220$; $p = 0.041$), suggesting that more frequent social media engagement was associated with poorer mental health. In a similar context, Sala et al. (2024), through an umbrella review encompassing 24 reviews, demonstrated that the relationship between social media use and adolescent mental health is influenced by individual characteristics, usage patterns, and the nature and design of digital platforms. Furthermore, Azem et al. (2023), in a scoping review involving 43 studies, identified associations between social media engagement and several mental health concerns among adolescents, including depression, anxiety, sleep disturbances, and diminished self-esteem. These previous findings are relevant to the current study, which also demonstrated a significant association between social media use and mental health status among female students at SMP Negeri 8 Gorontalo City ($p = 0.002$). Although the findings are consistent with previous studies, differences in study populations and methods should be considered. Furthermore, the cross-sectional design allows only the identification of associations, not causal relationships.

The findings reveal a significant association between social media use and mental health among female adolescents. Potential explanations include social comparison, sleep disturbances, reduced attention, and using social media to cope with personal difficulties. However, these factors were not directly assessed, and the cross-sectional design does not establish causality. The results highlight the importance of promoting balanced social

media habits, strengthening coping skills, and enhancing family support. Further longitudinal studies are needed to clarify the relationship between social media use and mental health over time.

Association Between Family Support and Mental Health Among Female Adolescents

The Chi-square analysis revealed a statistically significant relationship between family support and mental health among female students at SMP Negeri 8 Gorontalo City ($p = 0.001$; $p < 0.05$). Therefore, the alternative hypothesis (Ha) was accepted, while the null hypothesis (H0) was rejected. Among the three variables examined in this study, family support demonstrated the strongest association with mental health. The univariate analysis showed that 31 respondents (51.7%) received less supportive family support. Of these, 30 respondents (96.8%) experienced mental health problems. Given the cross-sectional nature of the research, the findings indicate an association between family support and mental health status but do not demonstrate a direct causal relationship. This high proportion suggests that inadequate family support was strongly associated with psychological problems among female adolescents. Several factors may contribute to this condition. First, limited parental involvement in adolescents' daily lives may leave adolescents without an adequate outlet for expressing their feelings and concerns, causing emotional distress to accumulate without appropriate support. Second, closed or one-way communication patterns within the family may cause adolescents to feel unheard and undervalued, gradually undermining their self-confidence and psychological well-being. Third, limited family economic resources, as reflected by the predominance of fathers working as laborers (31.7%) and entrepreneurs (48.3%), may contribute to financial pressure within the household, potentially reducing parents' emotional capacity to adequately address adolescents' psychological needs. Fourth, the absence of emotional support from family may encourage adolescents to seek fulfillment of their emotional needs through social media as an escape, which may further exacerbate mental health problems over time.

Conversely, among the 29 respondents (48.3%) who received supportive family support, 19 (65.5%) did not experience mental health problems, whereas 10 (34.5%) still experienced mental health problems. The absence of mental health problems among most respondents in this group suggests that adequate family support can function as an effective protective factor in maintaining adolescents' psychological stability. Families that provide emotional availability, appreciation, and active involvement in adolescents' lives can help them develop greater psychological resilience when facing various pressures. The occupational characteristics of the parents may also help explain these findings. Most fathers worked as entrepreneurs (48.3%) or laborers (31.7%), while 95% of mothers were housewives. Economic demands and financial pressures experienced by parents may potentially limit the time and emotional capacity available to provide consistent emotional support to adolescents. The predominance of respondents aged 15 years (51.7%) may further increase this vulnerability, as middle adolescence is

characterized by heightened emotional needs and increasing influence from external environments beyond the family. Adolescents at this developmental stage require the emotional presence of parents as a psychological anchor; therefore, the absence of such support may create an emotional gap that is difficult to compensate for through other sources of support (Hamidah & Rizal, 2022).

The finding that 10 respondents (34.5%) who reported supportive family support also experienced mental health problems suggests that mental health status may be associated with multiple factors beyond family support. Other factors, such as academic pressure, social media exposure, traumatic experiences, and individual vulnerability, may also be associated with mental health status; however, these factors were not established as causal explanations in this study. First, intense academic pressure, including demands related to grades, examinations, and accumulated school assignments, may generate stress that cannot be resolved through family support alone. Second, excessive social media exposure may worsen psychological conditions through mechanisms such as social comparison and sleep disruption, even among adolescents who have supportive families. Third, traumatic experiences such as peer bullying, academic failure, or bereavement may have profound psychological effects that cannot be immediately alleviated by family support. Fourth, biological predispositions to anxiety or depressive disorders, including genetic vulnerability, may influence mental health independently of the quality of environmental support received.

Conversely, the finding that one respondent (3.2%) in the less supportive family group did not experience mental health problems suggests the presence of personal protective factors that may buffer the effects of inadequate family support. First, high personal resilience may enable individuals to persist and adapt positively despite insufficient family support. Second, alternative sources of social support from peers, teachers, or community figures may partially fulfill supportive functions that are unavailable within the family, thereby meeting adolescents' emotional needs. Third, participation in positive activities, such as extracurricular activities, religious communities, or productive hobbies, may provide healthy outlets for managing stress and developing a positive self-identity. Fourth, independently developed adaptive coping skills, including problem-solving, emotional regulation, and appropriate help-seeking, may enable adolescents to maintain their mental health despite suboptimal family support. These findings reinforce the view that mental health is a multifactorial outcome and cannot be determined by a single variable.

According to Social Support Theory, family involvement serves as an essential protective resource that helps individuals manage the negative impacts of stressful life events through five forms of support: emotional, appraisal (esteem), informational, instrumental, and motivational support (Glanz et al., 2021). Stress and coping theory further suggests that the availability of family support enhances individuals' ability to engage in positive reappraisal of stressors and adopt adaptive coping strategies. Conversely, inadequate family support may encourage adolescents to use maladaptive coping strategies, such as escaping into social media or withdrawing from others, which

may ultimately worsen their mental health.

Labiq et al. (2024) emphasized the family's role as a fundamental source of support in providing emotional stability and a sense of security, which may contribute to more favorable mental health outcomes. This is consistent with the findings of Lontoh et al. (2024), who studied junior high school students at SMP Negeri 4 Tanimbar Selatan, Maluku, and identified a significant relationship between family social support and adolescent mental health ($p = 0.001$). Likewise, Devita et al. (2025) found a significant association between family support and emotional mental disorders among adolescents ($p < 0.05$), with female participants accounting for 68.1% of the sample and most respondents aged 12–15 years. These previous studies offer relevant comparisons because they focused on adolescent populations rather than university students. In agreement with these findings, the present study also demonstrated a significant association between family support and mental health among female students at SMP Negeri 8 Gorontalo City ($p = 0.001$). Nevertheless, the cross-sectional design does not allow a causal relationship between the two variables to be established.

The researchers argue that the 96.8% proportion of mental health problems among respondents receiving less supportive family support highlights the substantial role of the family as a foundation for adolescents' psychological well-being. Parenting education programs, family counseling, and active collaboration between schools and parents are therefore needed to ensure that family support is provided consistently and effectively. Strengthening emotional care and encouraging greater parental participation may serve as important strategies within broader initiatives to promote adolescent mental well-being. Nevertheless, longitudinal and intervention-based research is required to establish whether these measures produce measurable improvements in mental health outcomes.

The originality of this research is reflected in its integrated examination of knowledge, social media use, and family support as factors associated with mental health among female adolescents in a local school context in Gorontalo City. Previous reviews have explored these aspects separately, covering the effectiveness of mental health literacy interventions (Yani et al., 2025), the relationship between social media engagement and adolescent mental health (Sala et al., 2024), and family-related influences on screen media use and mental health outcomes among adolescents (Liu et al., 2024). The present study extends this body of literature by examining the associations of all three factors with mental health within the same group of female junior high school students at SMP Negeri 8 Gorontalo City. The findings provide context-specific evidence showing that social media use and family support were significantly associated with mental health, whereas knowledge was not. By examining these factors together, this study may inform the development of school-based mental health promotion strategies tailored to female adolescents. Nevertheless, the cross-sectional design limits interpretation to associations and does not establish causal relationships.

The results offer valuable insights for strengthening adolescent mental health promotion initiatives within educational institutions, family environments, and primary healthcare services. In schools, mental health education may help improve adolescents'

mental health literacy, as supported by recent evidence on universal educational interventions (Yani et al., 2025). Promoting digital literacy and educating adolescents about responsible social media practices are also important, as the impact of social media on mental health differs depending on individual characteristics, usage habits, and platform features (Sala et al., 2024). Within the family environment, greater attention should be given to open communication, emotional care, and parental participation, considering the association of family-related factors with adolescents' screen media habits and mental health outcomes (Liu et al., 2024). Primary healthcare facilities, particularly community health centers (Puskesmas), may complement school and family initiatives through mental health education, early identification of psychological difficulties, initial support, and referral when necessary. Collaboration among schools, families, and healthcare professionals may therefore help develop context-sensitive mental health promotion strategies for female adolescents. These implications should be interpreted in light of the present study's cross-sectional design, which identifies associations but does not establish causality.

CONCLUSION

The study findings demonstrate that knowledge was not significantly related to mental health among female adolescents ($p = 1.000$). In contrast, social media use and family support showed statistically significant associations with mental health, with p-values of 0.002 and 0.001, respectively. Greater social media engagement was associated with less favorable mental health conditions, whereas adequate family support was associated with better mental health. Based on these findings, schools and healthcare providers should enhance mental health education, counseling services, and early screening initiatives, alongside promoting responsible social media use among adolescents. Families are also encouraged to foster open communication, provide consistent attention, and strengthen emotional support for adolescent girls.

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