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Cross-Sectional Study: Family Social Support and Self-Harm Behavior in Early Adolescents in the Agricultural Region of Jember Regency

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ABSTRACT
Problems experienced by early adolescents are often triggered by stressors related to physical, cognitive, and emotional changes, which may lead to low self-confidence and self-harming behaviors. These issues can cause psychological distress, thereby increasing the importance of family support. This study aimed to analyze the relationship between family social support and self-harm behavior among early adolescents in the agricultural region of Jember Regency. A correlational research design with a cross-sectional approach was employed. The study population consisted of early adolescents enrolled in public junior high schools (SMPN) in Jember, totaling 2,191 students. A sample of 376 students was selected using proportionate stratified random sampling. Data were collected using the Perceived Social Support from Family (PSS-Fa) questionnaire and the Deliberate Self-Harm Inventory (DSHI). Bivariate statistical analysis using Kendall's tau-C revealed a significant relationship between family social support and self-harm behavior in early adolescents in the agricultural region of Jember ($p = 0.002$, $r = -0.081$). These findings indicate that family social support plays a crucial role in maintaining adolescents' emotional stability and preventing self-harm behaviors resulting from difficulties in adapting to stressors.

Keywords: Adolescents, Family Social Support, Self-Harm

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INTRODUCTION

Self-identity is one of the most crucial aspects of social development in early adolescence, playing a significant role in shaping an individual's character. Early adolescents who successfully establish their identity and social roles are better equipped to manage internal and external conflicts with confidence. Conversely, those who fail to form a clear self-identity may experience role confusion, leading them to withdraw or conform to a group identity due to a perceived lack of individual purpose and identity. This situation can prompt adolescents to engage in new behaviors influenced by peer groups without considering the consequences, potentially giving rise to various adolescent behavioral issues (1).

The challenges faced by early adolescents often stem from stressors associated with physical, cognitive, and emotional changes during their developmental stage. These stressors may result in unique behavioral expressions, such as low self-esteem and aggressive behaviors like self-harm (2). Self-harm is defined as deliberate behavior aimed at coping with emotional distress by inflicting harm upon oneself without suicidal intent (3). According to data from the Indonesian Ministry of Health in 2019, the suicide rate among adolescents reached 3.7 per 100,000 population, a figure higher than that of other age groups. A study conducted in Malaysia reported that among 250 students aged 13–16 years,

approximately 68%—comprising 58 males and 112 females—had engaged in self-harm (4). Similarly, a study in Indonesia found that 50.8% of 59 respondents showed a tendency toward self-harming behavior (5). These data indicate that adolescents are particularly vulnerable to self-harm when facing life challenges, both globally and in Indonesia.

Emotional problems such as stress, depression, and negative emotions (e.g., anger, sadness, disappointment, hopelessness) are common in early adolescence and often unavoidable. These emotional difficulties may reduce adolescents' enthusiasm for life and cause them to withdraw from their environment. Therefore, early adolescents require social support, particularly from their families (6). Social support is defined as the comfort and reassurance one feels from receiving attention, care, and assistance from others. It can positively influence an adolescent's mood and lead to behavior change based on the information they receive (7). Family support plays a vital role in an individual's psychological well-being. Raihani (2019) identified several factors contributing to self-harm, including lack of attention, absence of positive support and guidance from family members, and poor family harmony (8).

A preliminary study conducted in all public junior high schools (SMPN) in Ambulu District revealed that 40% of 20 students reported low family social support. Furthermore, interview results showed that 60% of students had engaged in self-harm, including cutting themselves (30%), rubbing glass against the skin (15%), hitting or banging their bodies (25%), and biting or scratching (15%). About 50% of those students expressed a desire to repeat self-harm behaviors when feeling stressed. Based on this background, the objective of this study was to examine the relationship between family social support and self-harming behavior in early adolescents.

METHODS

This research employed a quantitative correlational design using a cross-sectional approach. The two measured variables were family social support and self-harming behavior. The study population consisted of 2,191 junior high school students from a sub-district in Jember Regency. The sample size of 376 students was determined using the Slovin formula. Sampling was conducted using a probability sampling technique with a proportionate stratified random sampling method.

Inclusion criteria for the study included: (1) students actively enrolled in junior high schools in the selected sub-district of Jember during the 2023/2024 academic year, (2) students who were willing to participate as research respondents, and (3) students living with their families. The exclusion criteria were: (1) students who were absent during the data collection period and (2) students who declined participation.

To assess family social support, the study employed the Perceived Social Support–Family (PSS-Fa) questionnaire, consisting of 20 closed-ended items. This instrument had previously been tested for validity and reliability by Dewi (2021), with a correlation coefficient (r-count) greater than the table value (r-table = 0.361), indicating all 20 items were valid. The reliability test yielded a Cronbach's alpha of 0.752, suggesting the instrument was reliable.

To measure self-harming behavior, the Deliberate Self-Harm Inventory (DSHI) was used, comprising 17 items. This instrument had been previously

validated, yielding a Cronbach's alpha of 0.858, indicating strong reliability, although the r-count was less than the r-table (0.3008). The statistical test used for data analysis was Kendall's Tau-C.

RESULTS AND DISCUSSION

The respondents in this study consisted of 33 students (8.8%) aged 12 years, 148 students (39.4%) aged 13 years, 117 students (31.1%) aged 14 years, and 78 students (20.7%) aged 15 years. Based on gender, 137 respondents (36.4%) were male and 239 (63.6%) were female. Table 4.2 shows the distribution of family social support levels among early adolescents in the agricultural region of Jember Regency. The majority of respondents, 235 students (62.5%), reported a high level of family social support, followed by 122 students (32.4%) with a moderate level, and 19 students (5.1%) with a low level of family social support.

According to Table 4.4, the level of self-harming behavior among early adolescents in the same region revealed that most students, 319 (84.8%), exhibited a low level of self-harm behavior, while 28 students (7.4%) reported no history of self-harming behavior. Additionally, 27 students (7.2%) showed a moderate level, and only 2 students (0.5%) demonstrated a high level of self-harming behavior.

Table 4.6 presents a cross-tabulation analysis which indicates that among respondents with low family social support, 5.1% exhibited low self-harming behavior. Among those with moderate family social support, 25.5% exhibited low self-harming behavior, while 54.3% of those with high family social support also demonstrated low self-harming behavior.

Table 1. Frequency Distribution of Respondent Characteristics (June, 2024; n = 376)

Characteristic	f	%
Age (years)		
12	33	8.8
13	148	39.4
14	117	31.1
15	78	20.7
Gender		
Male	137	36.4
Female	239	63.6
Parental Education		
No formal education	1	0.3
Elementary school	55	14.6
Junior high school	127	33.8
Senior high school	143	38.0
Diploma/Bachelor's degree	50	13.3
Parental Occupation		
Unemployed	12	3.2
Entrepreneur	140	37.2
Farmer	163	43.3
Civil servant	22	5.9
Private employee	34	9.0
Others	5	1.3
Living Arrangement		
With both parent	260	69.1
With one parent	34	9.0
With grandparents	22	5.9
With parents and grandparents	58	15.4
With siblings	2	0.5
Parental Income		
<Rp2,550,000	267	71.0
>Rp2,550,000	109	29.0
Total	**376**	**100.0**

Table 2. Family Social Support among Early Adolescents (June, 2024; n = 376)

Family Social Support	Frequency (n)	Percentage (%)
Low	19	5.1
Moderate	122	32.4
High	235	62.5
Total	376	100.0

Table 3. Distribution of Self-Harm Behavior Among Early Adolescents (June, 2024; n = 376)

Self Harm	Frequency (n)	Percentage (%)
Never	28	7.4
Low	319	84.8
Moderate	27	7.2
High	2	0.5
Total	376	100.0

The statistical analysis using Kendall's Tau-C test resulted in a p-value of 0.002, indicating statistical significance and supporting the alternative hypothesis (Ha). This finding suggests a significant relationship between family social support and self-harming behavior in early adolescents. The Kendall's Tau-C correlation coefficient was -0.081, indicating a very weak negative correlation. This means that the higher the level of family social support, the lower the incidence of self-harming behavior among early adolescents.

The results showed that the majority of respondents were 13 years old, totaling 148 students (39.4%). This finding aligns with the study by Hidayah (2022) on self-harm among junior high school students in Karanganyar, which reported a mean age of 13.73 years with a standard deviation of 1.138 (9). Similarly, Istiana (2023) found that 100% of the 59 respondents aged 12–15 years had engaged in self-harm (10). According to Law No. 20 of 2003 on the National Education System, all Indonesian citizens aged 12–15 are required to attend junior high school (SMP) or its equivalent. The researchers assert that adolescents aged 12–15 years are in early adolescence and are obliged to attend junior secondary education.

In this study, most respondents were female, comprising 239 students (63.6%), while males accounted for 137 students (36.4%). This is consistent with the study by Istiana (2023), where 52.5% of junior high students were female. Likewise, Pratiwi (2021) reported that 68.2% of students at SMPN 2 Karanganyar were female (11). The researchers assume that there are more female students in junior high due to a higher population of girls in the area.

Regarding parental education, most respondents' parents had completed senior high school (38%). This is in line with Juliantara (2021), who found that most parents of adolescents at SMPN 8 Samarinda had completed junior or senior high school (65.1%). Parental education influences both cognitive and

Table 4. Cross-Tabulation of Family Social Support and Self-Harm Behavior (June, 2024; n = 376)

Family Social Support	**Self-Harm**								**Total**	
	Never		Low		Moderate		High			
	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)
Low	0	0	19	5.1	0	0	0	0	19	5.1
Moderate	7	1.9	96	25.5	18	4.8	1	0.3	122	32.4
High	21	5.6	204	54.3	9	2.4	1	0.3	235	62.5
Total	**28**	**7.4**	**319**	**84.8**	**27**	**7.2**	**2**	**0.5**	**376**	**100**

Table 5. Correlation Test Results Using Kendall's Tau-C Analysis (June, 2024; n = 376)

Variable	**p-value**	**r**
Family Social Support	0.002	-0.081

non-cognitive development in adolescents. Educated parents are more likely to provide a supportive home environment conducive to adolescent development through informed parenting practices (12). Thus, researchers conclude that most junior high students' parents completed high school or its equivalent, which positively affects adolescent cognitive development.

The study also revealed that the predominant occupation among respondents' parents was farming, accounting for 163 respondents (43.3%). This supports the findings of Ilata (2022) and Hou et al. (2022), who reported that farming was the primary occupation among the parents of adolescents (13, 14). Yulihasri (2021) found that parents' full-time work outside the home can reduce the attention given to adolescents (15). The researchers conclude that the predominance of farming among parents is influenced by the agricultural setting of the study area, which may lead to reduced parental attention.

Furthermore, 69.1% of respondents lived with both parents, which is consistent with Alini (2022), who found that 88.3% of junior high school adolescents lived with both biological parents (16). According to Mensi (2020), the family environment plays a crucial role in shaping adolescent behavior, with parents being the first source of support (17). Therefore, researchers emphasize that adolescents need strong parental support to navigate developmental challenges effectively.

Regarding family income, 71% of respondents' parents earned less than Rp. 2,550,000—below the Jember Regency minimum wage. This indicates that most families were in the low-income category, consistent with Saragih (2023), who found that 68.6% of respondents' families earned below or equal to the regional minimum wage (18). Researchers suggest that this economic condition may affect adolescents' ability to meet their needs and access education.

Data from the Perceived Social Support From Family (PSS-Fa) questionnaire showed that 62.5% of respondents experienced high family social support. This aligns with Febriana (2021), who reported that 88.9% of adolescents received strong family support (19). Such support facilitates healthy, independent, and positive adolescent development. Researchers conclude that emotional and informational support from families helps adolescents manage problems more effectively.

Family social support in agricultural areas was generally high, similar to findings by Ratna (2020), who attributed this to strong parent–child bonds rooted in local customs (20). This contrasts with Mardiah (2019), who found better family support in urban areas due to higher educational and economic levels (21). Researchers infer that both settings offer adequate support but are influenced by different factors. In rural areas, closeness fosters protection, whereas urban adolescents may enjoy more freedom but risk becoming individualistic.

Regarding self-harm behavior measured using the Deliberate Self-Harm Inventory (DSHI), 84.8% of respondents fell into the low self-harm category. This is supported by Islamida (2023), where 66.6% of adolescents reported low self-harm levels (22), and Zhang (2016), who found that rural adolescents engaged in less self-harm than urban peers (23). This may be due to greater emotional protection and community support in rural areas (24). Researchers argue that adolescents are vulnerable to stress from various sources, which may lead them to engage in self-harm as a coping

mechanism. Peer and environmental influences also play a role.

Bivariate analysis using Kendall's Tau-C test revealed a statistically significant but weak negative correlation (r = -0.081, p = 0.002) between family support and self-harm. This supports Nemati (2020), who found a negative correlation between the two variables (25). Researchers conclude that inadequate family support may foster feelings of loneliness, low self-esteem, and stress, prompting adolescents to seek support from peers or their social environment.

According to Stuart's stress adaptation theory, family social support is a coping resource that helps individuals manage problems (26). Emotional support, in particular, can make adolescents feel loved and secure, helping them regulate emotions under stress. Adolescents who turn to their families for support are more likely to use adaptive coping mechanisms, which foster positive interpersonal relationships and resilience (27, 28).

Cross-tabulation showed that 5.1% of adolescents with low family support reported low self-harm, which seems inconsistent with the negative correlation. Zuraidah (2022) suggests that lack of interaction may result in adolescent indifference, making peer support a critical external coping resource (29). According to Mufidha (2019), peer support significantly influences positive adolescent behavior, helping them regulate emotions and navigate social pressures (30).

Interestingly, one respondent (0.3%) reported high self-harm despite moderate family support, due to parental divorce and living with grandparents. Nasution (2023) found that divorce may alter parental roles and supervision, increasing self-harm risk (31). Researchers argue that divorced families can reduce parental attention and emotional support.

Additionally, one respondent (0.3%) reported high self-harm despite strong family support but lacked emotional support. Suryana (2022) emphasized that emotional support is vital during early adolescence due to emotional volatility (32). Yustika (2023) also found that emotional support influences adolescent behavior by preventing negative coping mechanisms (33). Researchers conclude that even when overall family support is strong, a lack of emotional support and financial hardship can contribute to self-harm.

LIMITATIONS

The researcher cannot guarantee that respondents accurately recalled when their self-harm occurred. Some responses may refer to incidents more than a year ago. Also, the family support questionnaire included a "don't know" option, potentially introducing bias if respondents were unsure or unwilling to disclose information.

RESEARCH ETHIC

This study adhered to ethical principles including autonomy, confidentiality, justice, beneficence, and non-maleficence. Ethical approval was obtained from the Faculty of Nursing, University of Jember (Certificate No. 272/UN25.1.14/KEPK/2024).

CONFLICT OF INTEREST

The researchers declare no conflict of interest with participants or the research institution.

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CONCLUSION

This study found a significant but very weak negative correlation ($p = 0.002$; $r = -0.081$) between family social support and self-harm behavior in early adolescents in agricultural areas of Jember Regency. The negative direction indicates that higher family support correlates with lower self-harm behavior. Family support plays a key role in stabilizing adolescents' emotions and preventing maladaptive coping mechanisms. The researchers believe that insufficient family interaction may hinder openness and increase the risk of self-harm.

It is recommended that nurses improve awareness of self-harm and its interventions. Education about adolescent mental health is essential for identity development. Nurses should collaborate with schools to provide outreach on the dangers of self-harm. Given the high prevalence of self-harm in junior high students, schools—especially guidance counselors—should evaluate their mental health programs. Future studies could explore other factors related to self-harm, such as low self-esteem, and expand the research to non-agricultural areas.

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