

The Relationship between Psychosocial Stress on The Quality of Life and Self-Control in Adolescent Girls

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Article Information: received in August 2025; approved in November 2025; published in December 2025

ABSTRAK

Introduction: High academic pressure affects adolescents' emotional and social well-being, resulting in a decline in their overall quality of life and impacting their self-control abilities. **Objective:** This study aimed to analyze the relationship between stress on the quality of life and self-control of adolescents. **Methods:** This was a cross-sectional study. The sample consists of 225 11th-grade female students, determined using the Lemeshow formula with an $\alpha=5\%$ margin of error. Simple random sampling was employed. The instruments used were the Perceived Stress Scale (PSS) questionnaire, WHOQOL-BREF questionnaire, and Self-control Competency Scale questionnaire. Data were analyzed using SPSS version 16 with a chi-square test. **Results:** Most respondents experienced moderate stress (188 people, 83.6%), most female students had a low quality of life (160 people, 71.1%), and had moderate self-control (188 people, 83.6%). There is a significant correlation between stress and the quality of life of adolescent girls ($P=0.000<0.05$) and self-control ($P=0.000<0.05$). **Conclusion:** High stress is associated with low quality of life and self-control in adolescent girls...

Keywords: Stress; Self-Control; Quality of Life; adolescent girls

INTRODUCTION

The adolescent phase plays a crucial role in psychological and social growth, shaped by both psychosocial and sociocultural factors^{1,2}. Adolescence is the transitional period from childhood to adulthood, during which many changes occur. The changes that occur during adolescence are rapid and include physical, cognitive, and emotional changes. These changes are the initial stressors for each individual in life, leading adolescents to experience psychosocial stress³. Stress is the body's and mind's response to changes that occur. Psychosocial stress is affected by a variety of factors, including one's living situation, the educational environment, the family's financial condition, interpersonal relationships, unforeseen or unanticipated occurrences, and personal habits⁴.

Globally, the World Health Organization (WHO) has not yet published data on the incidence of stress among adolescents. However, several studies in Indonesia have found that the incidence of stress among Indonesian adolescents is high. According to the 2018 Indonesian Basic Health Survey, the prevalence of stress among adolescents aged 15-24 years is 6.2%⁵. A previous study⁶ found that 7.7% of Indonesian students experienced mental health problems (stress). Furthermore, the research conducted by Rendra et.al³ concluded that the majority of adolescents experience moderate stress caused by various factors.

Various types of stress pose risks to physical and mental health. Stressors can be one-time or short-term events or they can occur continuously over a long period of times⁷. Stress has a significant impact on adolescents' quality of life of adolescents⁸. Adolescents who experience stress have lower quality of life^{9,10}. Adolescents often face various sources of stress such as academic pressure, social demands, and anxiety about the future¹¹.

High academic pressure affects adolescents' emotional and social well-being, resulting in a decline in their overall QoL. Academic stress is often the main cause of reduced quality of life among adolescents, especially in psychological and social domains¹². The quality of life of adolescents is influenced by several factors such as age, gender, physical activity, academic stress, and environment. A good quality of life can improve adolescents' physical, psychological, and social health¹³. The more adaptive the coping mechanisms used by adolescents, the better their QoL. Conversely, the more maladaptive the coping mechanisms, the poorer the quality of life of adolescents¹⁴. Coping mechanisms are closely related to a person's self-efficacy. Self-efficacy can determine the level of stress that an individual experiences. Therefore, stress is closely linked to the quality of life of adolescents because of its impact on coping mechanisms and self-efficacy. This is consistent with the research by Erik et al., which showed that stress is negatively associated with all HRQOL subscales: physical health, psychological well-being, autonomy and parents,

social support and peer relationships, and the school environment. In this study, all of these relationships were mediated by self-efficacy, which accounted for about one-fifth of the decrease in HRQOL^{11,13}.

In addition to quality of life, stress is related to adolescents' self-control. Self-control is an individual's ability to manage emotions, thoughts, and behaviors when facing challenging situations¹⁵. Previous research concluded that individuals with good self-control tend to have lower levels of aggression, whereas those with poor self-control tend to have higher levels of aggression¹⁶. Some adolescents may engage in negative habits to alleviate anxiety and tension¹¹. Lack of self-control in adolescents can be seen in deviant behaviors or attitudes, such as students being unable to control their emotions, associating with wrong peers, or being unable to make the right choices, which can be detrimental to themselves and those around them¹⁷. Several factors can affect an individual's self-control, including environment, education, and social support¹⁸. The ability to exercise good self-control also leads to better outcomes in various aspects, including thinking, behavior, emotions, and appearance¹⁹.

Persistent stress levels can increase the risk of developing serious mental disorders such as depression and anxiety disorders. These conditions require long-term treatment and impact overall quality of life and self-control²⁰. Prolonged stress can lead to difficulties in social adaptation, affect personal and professional relationships, and cause challenges in interpersonal communication. High levels of stress and mental disorders can affect overall physical health, potentially resulting in serious illnesses. By understanding the short-term and long-term effects of stress on adolescents, it can be concluded that early detection and provision of effective support for adolescents diagnosed with stress are crucial²¹.

After gaining a broader understanding of the impact of psychosocial stress, early detection in adolescents is crucial. However, stress in adolescents often goes unnoticed by their families, teachers, or the adolescents themselves. This study aimed to determine the level of psychosocial stress in adolescents at an early stage. By conducting early detection or screening, researchers can design appropriate interventions to help adolescents effectively manage stress, thereby improving their quality of life and self-control.

METHOD

This study employed a quantitative method using a cross-sectional approach. The dependent variables in this study were quality of life and self-control, whereas the independent variable was stress level. The research was conducted at State Senior High School 2 Makassar and State Senior High School 3 Makassar between May and June 2025. The study population consisted of female students at State Senior High School 2 Makassar and State Senior High School 3 Makassar. The sample in this study comprised a portion of 11th-grade female students, totaling 225 people, selected using the Lemeshow formula with a 5% margin of error. The sampling technique used was a probability method, specifically, simple random sampling.

Data were collected using primary data. The questionnaire for characteristics included the father's education, mother's education, family income, and disease history. In addition, the Perceived Stress Scale (PSS) questionnaire was used to assess stress in the respondents, the WHOQOL-BREF questionnaire to measure quality of life, and the Self-control Competency Scale questionnaire to assess self-control among female students. The validity and reliability test results for the PSS-10 showed good internal consistency (Cronbach's alpha = 0.862). For the WHOQOL-BREF questionnaire, the overall reliability value was 0.73 with a Cronbach's alpha of 0.75, and the item reliability value was 0.97. Meanwhile, the Self-control Competency Scale questionnaire's 18 indicators from the Short Version of the Emotional Competency Scale demonstrated validity and reliability and are suitable for widespread use among Indonesian adolescents.

Data were analyzed using SPSS version 16 with the chi-square test. This study obtained ethical approval from the Faculty of Public Health (approval number 822/UN4.14.1/TP.01.02/2025). The informed consent process is carried out after providing an explanation to the respondents, and if they agree, the respondents who will be involved sign the consent form before filling out the questionnaire.

RESULT

The characteristics of the respondents showed a variety in the educational backgrounds of both fathers and mothers, with most fathers and mothers falling into the high school category, namely 90 people (40%) and 106 people (47.1%), respectively. The majority of the students' families were in the high-income category, with 126 families (56%). Additionally, 21 (9.3%) of the female students had an illness (Table 1).

Table 1. Distribution of Respondent Characteristics

Variable	Total	Percentage (%)
Father's education		
<Senior high school	12	5.3
Senior high school	90	40
Diploma/Bachelor's Degree	89	43.6
Graduate Program	25	11.1
Mother's education		
<Senior high school	16	7.1
Senior high school	106	47.1
Diploma/Bachelor's Degree	89	39.6
Graduate Program	14	6.2
Family Income		
High	126	56
Low	99	44
Medical History		
Have	21	9.3
Does not have	204	90.7
Total	225	100

The incidence of stress experienced by female students was mostly at a moderate level, with 188 individuals (83.6%), while 21 individuals (9.3%) fell into the severe category and 16 individuals (7.1%) in the mild category (Figure 1). Regarding quality of life, most female students were in the low category with 160 individuals (71.1%), while 65 individuals (28.9%) were in the high category (Figure 2). Meanwhile, in terms of self-control, the majority were in the moderate category with 188 individuals (83.6%) and the fewest were in the low category with 15 individuals (6.7%) (Figure 3).

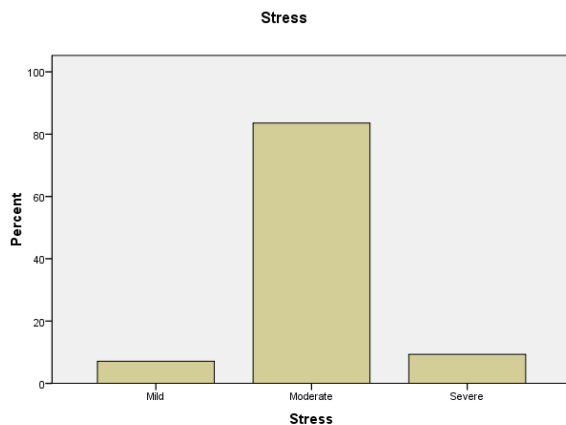


Figure 1. Stress by level

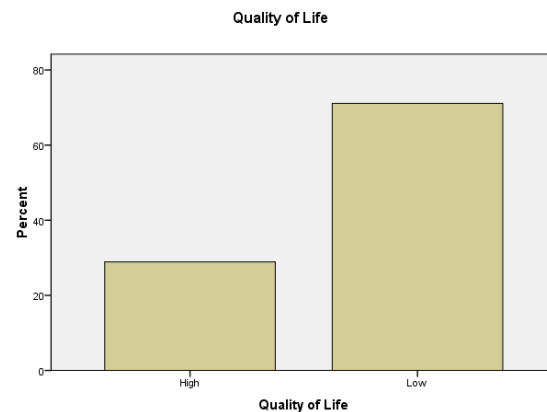


Figure 2. Quality Of Life by category

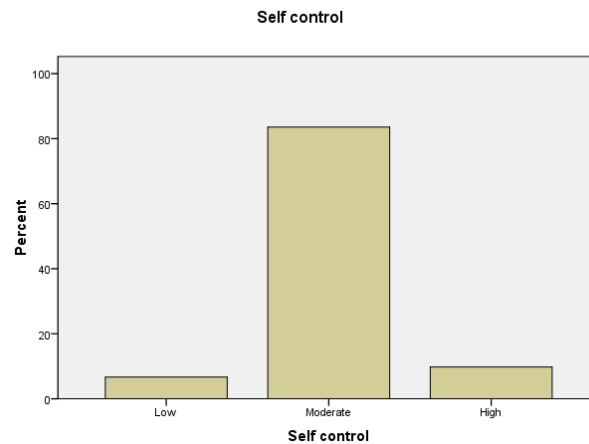


Figure 3. Self Control by Category

Table 2 Relationship between Stress Levels and Respondents' Quality of Life

Stress Level	Quality of Life				Total		P value
	High		Low				
	n	%	n	%	n	%	
Mild	15	93.8	1	6.2	16	100	0.000
Moderate	50	26.6	138	73.4	188	100	
Severe	0	0	21	100	21	100	
Total	65	28.9	160	71.1	225	100	

Chi-Square Test

An analysis of the results for stress levels and quality of life of respondents showed that respondents with mild stress levels were more likely to have a high quality of life, namely 15 people (93.8%). For those with moderate stress levels, 138 (73.4 %) had a low quality of life. Among those with severe stress,) (100% had low quality of life. Analysis using the chi-squared test showed a significant relationship between stress levels and quality of life ($P = 0.000 < 0.05$) (Table 2).

Table 3 Relationship between Stress Levels and Self-Control of Respondents

Stress Level	Self-control						Total		P value
	High		Moderate		Low				
	n	%	n	%	n	%	n	%	
Mild	15	93.8	1	6.2	0	0	16	100	0.000
Moderate	0	0	185	98.4	3	1.6	188	100	
Severe	0	0	2	9.5	19	90.5	21	100	
Total	15	6.7	188	83.6	22	9.8	225	100	

Chi Square Test

Regarding the relationship between stress and self-control, in cases of mild stress, most individuals had high self-control (15 people, 93.8%). Regarding moderate stress levels, most had a moderate level of self-control, totaling 185 people (98.4%). For severe stress, 19 people (90.5 %) fell into the low self-control category. Data analysis using the chi-squared test showed a significant relationship between stress levels and self-control ($p = 0.000 < 0.05$) (Table 3).

DISCUSSION

The relationship between stress and the quality of life of adolescent girls

Adolescence is a developmental stage that is particularly susceptible to stress due to major physical and mental changes²². The stress encountered, particularly of an academic nature, can upset emotional and physical equilibrium, thus diminishing the quality of life for female students²³. Studies have revealed that 83.6% of female students experience moderate stress levels. Over time, symptoms of stress and anxiety tend to escalate. Approximately 9.3% of the female students had experienced severe stress. These findings suggest that in this study, the percentage of female students facing clinical levels of stress at the end of the semester or as the school year concluded was notably high. Stress and anxiety levels generally rise as the final exam approaches.

Moderate stress levels were more common among those with a low quality of life, with 138 (73.4%) in this category. Among those experiencing severe stress, all had a low quality of life, totaling 21 people (100%). Previous research has identified various individual and environmental variables related to stress among adolescents²⁴. Various factors can affect stress levels in teenagers, such as gender, personality traits, self-confidence, social connections, and teachers' perceptions. Certain factors are key indicators of stress. Being female, having an anxious disposition, and possessing low emotional self-confidence are linked to heightened stress and depression²⁵⁻²⁷.

The findings from previous research indicate an indirect effect of self-efficacy on the relationship between stress and all subscales of adolescent quality of life²⁸. The highest indirect effect of self-efficacy accounted for approximately one-third of the reduction in the relationship between stress and improvement in the physical well-being subscale of quality of life. This study showed that high levels of stress are known to have a negative impact on adolescents' daily lives^{29,30}. The level of stress perceived by adolescents can lead to maladaptive behaviors³¹.

Stress is inversely related to both quality of life and self-efficacy³². Stress and psychological well-being can influence each other in the daily lives of adolescents. Some individuals might see a drop in their psychological well-being when stress and demands surpass their capabilities, while others might feel more stressed because of worries about their psychological health³³. Self-efficacy, which is confidence in one's ability to accomplish specific tasks, suggests that adolescents could experience a decline in their physical well-being as stress levels rise³⁴. Consequently, there are various reasons and triggers for stress among adolescent girls, including pain intensity and stress itself³⁵.

In this study, respondents were found with low stress levels but low quality of life, and respondents with moderate stress had a high quality of life. Although stress was reported as low, there may be mild chronic stress or physical discomfort not identified as "major stress," yet still affecting quality of life. For example: sleep disturbances, mild pain, poor social relationships, or mild anxiety that is not explicitly labeled as "high stress" can still lower quality of life. A study shows that factors such as illness, sleep, and loneliness are related to quality of life in addition to stress^{31,33}.

Early interventions aimed at improving adolescents' skills in managing their emotions, including enhancing their ability to cope with existing stress, anxiety, and depression, as well as building social skills and relationships with peers, may be crucial in reducing pressure at the start of the school year³⁵. This is expected to help decrease the likelihood of increased pressure as the year progressed. This is important for improving students' emotional well-being and academic performance³⁴. Therefore, it is essential for schools and families to provide support that can help students manage stress effectively.

The relationship between stress and self-control in adolescent girls

Self-control refers to a person's capacity to manage their emotions, thoughts, and actions under pressure or when facing challenges³⁶. Female students who possess strong self-control skills can handle academic stress more efficiently, which helps to mitigate its adverse effects. In contrast, those with weaker self-control are more susceptible to stress, potentially affecting their mental health and academic performance³⁷.

The results of this study showed that most participants had a moderate level of self-control, with 188 people (83.6%). For those with moderate stress levels, the majority also had moderate self-control (98.4% of female students). Female students experiencing high stress were more likely to have low self-control (90.5 %). This study also found a significant relationship between stress levels and self-control among female high-school students. This finding indicates that moderate and high stress levels can lead to lower self-control.

Individuals who possess strong self-control can manage or alter their internal responses and avoid participating in undesirable activities²². Enhanced self-control is linked to more favorable behaviors such as improved academic performance, greater interpersonal trust, more harmonious social interactions, and the ability to adjust to one's environment³⁸. On the other hand, lack of self-control may be associated with negative behaviors, including academic dishonesty, excessive spending, gambling addiction, substance abuse, sexually transmitted infections, and unhealthy relationships³⁷.

Self-control in adolescents affects a person's physical and mental health in adulthood through two types of effects: cognitive effects and lasting effects²². Regarding the first effect, cognition refers to an individual's condition and process of acquiring or using knowledge, which includes overall perception and evaluation. Adolescents with higher levels of self-control tend to cope better with automatic impulses or pressure in stressful situations³⁹. In addition, adolescents with higher levels of self-control are more effective in avoiding situations that are commonly considered to trigger stress²³. Therefore, a reciprocal relationship exists between stress and self-control.

Previous studies have shown that adolescents with lower levels of self-control are more susceptible to stress, whereas those with good self-control experience lower levels of stress⁴⁰. This is largely due to adolescents' ability to resist temptations or triggers that can lead to excessive stress. It is possible that adolescents with better self-control are more effective at managing stressful situations, or they may view such events as challenges rather than threats, even though they tend to make less careful assessments of the situations they face³¹.

In addition, there is a connection between self-control and mood⁴¹. This means that adolescents with higher self-control are less likely to experience negative moods because they perceive their lives as less burdensome, unpredictable, and uncontrollable⁴². Adolescents tend not to experience excessive stress. This shows that adolescents with higher self-control report milder stress assessments and less indifference toward situations that occur³⁷.

The limitations of this study are that stress was not measured repeatedly, which could have allowed for the detection of changes in the stress experienced by individuals. In addition, the measurements were conducted through self-reporting, which makes the results highly subjective.

CONCLUSION

Stress can disrupt adolescents' quality of life. This is evident in this study, which shows that the lower the stress level, the higher the quality of life. Conversely, the higher the stress level, the lower the quality of life. Stress can also influence self-control. Severe stress can lead to low self-control. Managing stress in adolescents is important because it can affect daily life, including academic achievement and interpersonal relationships in the social environment. Family support and a supportive school environment are crucial for adolescents to adapt to psychological conditions, especially the pressures that cause stress. The need for research to develop interventions or models for the prevention or management of stress in adolescents in order to continue supporting students' academic achievement.

ACKNOWLEDGEMENTS

The research team would like to thank the Research and Community Service Institute of Hasanuddin University and the Rector of Hasanuddin University for funding this research through the Novice Lecturer Research Grant Program at Hasanuddin University (contract number 004673/UN4.1/KEP/2025). Thank you to all the respondents who participated in this study.

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