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ANALYSIS OF RISK FACTORS FOR DEPRESSION AMONG ADOLESCENTS AT SENIOR HIGH SCHOOL 1 BANGGAI, BANGGAI LAUT REGENCY, CENTRAL SULAWESI

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Abstract

Background. The results of the Indonesian population census show that the number of teenagers reached 17%. During adolescence, there is a lot of growth and development in all aspects. This condition will make the risk for factors depression increase. The incidence of depression in adolescents has increased over the past decade, especially in the age group 12-20 years. Aim. This study aims to analyze the risk factors for depression among adolescents at Senior High School 1 Banggai. Methods. This study used a *mixed method*, namely a *sequential explanatory design*, involving 276 respondents and 15 informants. Data were analyzed using the *chi-square* test, multiple regression analysis and thematic analysis. Results. *The chi-square* test shows that age (p=0.005), gender (p=0.026), mindset (p=0.000), self-esteem (p=0.000) and stress (p=0.000) influenced the incidence of depression, while genetic factors (family history) (p=0.121) had no significant effect. The results of multiple regression analysis showed that self-esteem (p=0,000) and stress (p=0,000) are the dominant variables causing depression in adolescents. Thematic analysis of risk factors for depression in adolescents revealed three themes, namely "mindset", "self-esteem", and "stress". Where depression is a psychological response to 1) the ability to think in adolescents 2) the category of self-esteem that adolescents have 3) and the presence of stress in adolescents. Conclusion. There is an influence between the factors age, gender, mindset, self-esteem and stress on the incidence of depression in adolescents. The dominant variables are self-esteem and stress.

Keywords: Depression, Risk Factors, Adolescents, Mixed Methods, Mental Health.

INTRODUCTION

According to the World Health Organisation (WHO), adolescents make up 1.2 billion or a total of one-sixth of the world's population. This number is expected to increase until 2050, especially in low- and middle-income countries, where almost 90% of children aged 10 to 19 years live. In the Southeast Asia region, adolescents account for 20% or the equivalent of 360 million people (1). The results of the population census in 2020 showed that the number of adolescents (aged 10-19 years) in Indonesia was 46 million people or 17% of the total population (2). In Central Sulawesi, the number of adolescents is 587,573 people (31.25%) of the total population of 2,985,734 people (3).

Adolescence is a phase of growth that is full of stress and conflict, including adjustment, the experience of romance, self-discovery, and separation from adult society and culture. It is a process of maturation, where adolescents are considered more capable of making decisions for themselves than children (4). This period is also characterised by growth and development in all aspects, which increases the risk of depression. Depression in adolescents is often chronic and four times more likely to

persist into adulthood, affecting development, academic performance, and relationships with family or peers (5).

Depression is a common illness worldwide with an estimated 5% of the world's population experiencing it (6). Research shows that mental health problems such as depression and anxiety commonly occur while individuals are in school, with 40% of young people with depression or anxiety disorders not completing high school (7,8). The Centers for Disease Control and Prevention (2016) reported that in the United States, approximately one in five adolescents had a diagnosis of a mental health disorder, 30% of high school students reported depressive symptoms, and 18% considered suicide (9). The "Report on National Mental Health Development in China (2019-2020)" shows that the detection rate of depression in primary schools is about 10%, while in high schools it reaches 40% (10). The prevalence rate of emotional problems such as anxiety and depression in young people suggests that one in eight young people experience mental health problems. Based on the 2018 Basic Health Research (RISKESDAS) in Indonesia, the prevalence of mental emotional disorders in people aged more than 15 years was 9.9%, an increase from 6% in RISKESDAS 2013 (11, 12).

The highest prevalence of depression in Indonesia is Central Sulawesi Province, reaching 12.3% (13). The top three prevalence of depression in Central Sulawesi are North Banggai Regency (31.24%), Poso Regency (21.74%), and Tojo Una-Una Regency (19.83%) (14). In 2021, Banggai Laut Regency had 180 people with mental disorders (ODGJ), with 31 of them having depressive disorders. SMA Negeri 1 Banggai is included in the working area of Puskesmas Banggai, which reported 10 cases of depressive disorders in people aged 15-59 years, with 6 males and 4 females (15).

Poor mental health in adolescents is associated with serious long-term consequences, such as substance abuse, low educational attainment, violence, self-harm, and even suicide that can persist into adulthood. Studies show half of mental health problems begin by the age of 14 and most cases go undetected and untreated (10). Factors contributing to depression in adolescents include age, gender, genetic factors, mindset, self-esteem, and stress (16). The risk of depression is also associated with young age, lack of social support, poor health status (17), rural residence, higher class levels, and adverse childhood experiences (18). Childhood trauma and parenting are also influential, although hereditary history is not directly associated with depression in adolescents (19, 20). Pessimistic mindsets and low self-esteem are also known to increase the risk of depression (21, 22). Depressive disorders are generally triggered by multiple interacting life events (16).

The above description is a reference for research to analyze the risk factors for depression in adolescents at Senior High School 1 Banggai, Banggai Laut Regency, Central Sulawesi.

METHODOLOGY

Research Type: The research method employed in this study is mixed methods research, which integrates both quantitative and qualitative approaches. Specifically, the study utilized the sequential explanatory design model, comprising two phases. Initially, quantitative data were collected to investigate variables such as age, gender, genetic factors (family history), mindset, self-esteem, stress, and the dependent

variable, depression. Subsequently, qualitative methods were employed, guided by the quantitative results, to further explore the variables of mindset, self-esteem, stress, and depression among selected informants. (23).

Place and Time of Research: The research was conducted at Senior High School 1 Banggai, Banggai Laut Regency, Central Sulawesi Province. This research was conducted in January 2024.

Population and Research Sample: The population in this study were all students at SMA N 1 Banggai in the 2023/2024 school year with a total of 884 students. The sample size in this study was determined using stratified random sampling technique, with a total sample size of 276 adolescents from SMA N 1 Banggai. The qualitative approach used non-probability sampling, specifically purposive sampling, to select informants in accordance with the specified criteria. Informants consisted of counselling teachers, health workers, and adolescents with varying questionnaire scores.

Research Instruments: Firstly, to measure mindset, a positive thinking questionnaire consisting of 10 items with a 5-point Likert scale was used, which includes aspects such as positive expectations, self-affirmation, non-judgemental statements, and adjustment to reality. Second, to measure self-esteem, the Rosenberg Self-Esteem (RSE) questionnaire consisting of 10 items with a 4-point Likert scale was used. Third, to measure stress levels, the Depression Anxiety Stress Scales (DASS-42) questionnaire consisting of 14 items, adapted to Bahasa Indonesia, with a 4-point Likert scale was used. Fourth, to measure the level of depression, the DASS-42 questionnaire with 14 items was also used. In addition, for the qualitative approach, data was collected through structured interviews with respondents who fulfilled the predetermined criteria.

Data Collection: Data collection based on the type of data, namely primary data and secondary data. Primary data in this study was obtained through filling out questionnaires and direct interviews with respondents. Meanwhile, secondary data is information taken from external sources such as articles, journals, theses, and literature studies, as well as student data from the student affairs section of SMA N 1 Banggai obtained by reading and understanding.

Data Processing and Analysis: Data processing in the quantitative approach used Microsoft Excel and SPSS 29, through the stages of editing, coding, processing, and cleaning. Quantitative data analysis included univariate, bivariate, and multivariate analyses using the Chi-Square test and multiple linear regression. In the qualitative approach, data analysis was carried out by thematic analysis through the stages of understanding the data, compiling codes, and looking for themes. Data were presented in the form of frequency distribution tables for univariate analysis and cross tabulation tables between dependent and independent variables for bivariate and multivariate analysis in the quantitative approach, while the qualitative approach was presented in the form of narratives.

Research Ethics: This study has received ethical clearance approval from the Ethics Committee of the Faculty of Public Health, Hasanuddin University on 2 January 2024 with number 004/UN4.14.1/TP.01.02/2024.

RESULTS AND DISCUSSION

Results

The research was conducted at the State Senior High School 1 Banggai. SMA N 1 Banggai is located at Jalan Jogugu Sophia No. 19, Lampa Village, Banggai District, Banggai Laut Regency, Central Sulawesi Province. The school was established in 1982 with the school establishment decree 244d/AG-120/82. This A accredited school has a number of facilities and infrastructure, namely 24 classes, 2 laboratories, 1 library, 1 counselling room, 1 UKS (School Health Effort) room, 17 student sanitation facilities, 1 school mosque with 6 active school days.

Quantitative Method Results

This study was conducted in January 2024 on 276 adolescents aged 15-18 years at SMA N 1 Banggai. Respondents were obtained by researchers directly taken and have characteristics that can be classified according to age, gender, and genetic factors (family history). The descriptive results of respondents' characteristics can be shown as in the following table:

Table 1: Distribution of Respondents' Characteristics Based on Age, Gender, and Genetic Factors (Family History) of Adolescents at SMA N 1 Banggai

Respondent Characteristics	Frequency (f)	Percentage (%)
Age		
15 years	79	28,7%
16 years old	90	32,6%
17 years	89	32,2%
18 years old	18	6,5%
Total	**276**	**100%**
Gender		
Male	88	31,9%
Women	188	68,1%
Total	**276**	**100%**
Genetic Factors (Family History)		
There is	13	4,7%
No	263	95,3%
Total	**276**	**100%**

Source: Primary Data, 2024

Based on Table 1, the majority of respondents in this study were adolescents aged 16 and 17 years, with 90 and 89 respectively, while the least were 18 years old with 18 adolescents. The gender of the majority of respondents was female, with 188 adolescents, while only 88 adolescents were male. Most of the respondents, 263 adolescents, did not have a family history of mental illness, while only 13 adolescents had such a family history.

Depression Status in Adolescents

Based on Table 2, the majority of adolescent girls (n=120) were at the normal level of depression, while only 3 were severe. For male adolescents, 71 were at normal levels and 3 were at severe levels. The majority of adolescents without a family history of mental illness were at normal levels of depression (n=182) and only 2 were at severe levels. In contrast, adolescents with a family history of mental illness showed 9 in normal levels and 1 in mild and severe levels. Age, gender, mindset, self-esteem, and

stress significantly influenced depression in adolescents, while genetic factors had no significant effect.

Table 2: Distribution of adolescent depression levels at SMA N 1 Banggai

Independent variable	Category	Teenage depression					P-Value*
		Normal	Lightweight	Medium	Severe	Very severe	
Age Factor	15 years	66	6	5	1	1	**0,005**
	16 years old	63	15	5	5	2	
	17 years	50	17	15	7	0	
	18 years old	12	6	0	0	0	
Gender	Male	71	6	8	3	0	**0,026**
	Women	120	38	17	10	3	
Genetic Factors (Family History)	There is	9	1	2	0	1	**0,121**
	None	182	43	23	13	2	
Mindset	Low	0	0	0	0	0	**0,000**
	Medium	2	2	2	1	2	
	High	189	42	23	12	1	
Self-esteem	Low	13	7	6	6	2	**0,000**
	Medium	168	37	19	7	1	
	High	10	0	0	0	0	
Stress	Normal	115	17	4	1	0	**0,000**
	Lightweight	41	15	12	0	1	
	Medium	30	10	7	8	0	
	Severe	5	2	2	3	2	
	Very severe	0	0	0	1	0	

Source: Primary Data, 2024

Determinants of Depression in Adolescents

Multivariate analysis using logistic regression test to determine factors that are significantly associated with depression in adolescents. The unqualified factors ($p < 0.05$) will be removed from the model gradually to get the most accurate model in predicting depression in adolescents.

Table 3: Multivariate Analysis of the Effect of Each Determinant of Depression in Adolescents

Variables	Beta	P (Sig.)
Age factor	0.122	0.020
Gender	-0.074	0.155
Genetic factors	0.035	0.502
Mindset	-0.158	0.003
Self-esteem	-0.233	0.000
Stress	0.335	0.000

Source: Primary Data, 2024

Table 3, shows that the age factor (regression coefficient 0.122, Sig. 0.020) has a positive effect on the incidence of depression, meaning that the higher the age, the higher the level of depression. Gender (regression coefficient -0.074, Sig. 0.155) and genetic factors (regression coefficient 0.035, Sig. 0.502) have no significant effect on the incidence of depression. Mindset (regression coefficient -0.158, Sig. 0.003) has a negative effect on depression, indicating that the lower the mindset, the higher the level of depression. Self-esteem (regression coefficient -0.233, Sig. 0.000) also negatively affects depression, meaning that the lower the self-esteem, the higher the level of depression. Stress (regression coefficient 0.335, Sig. 0.000) has a positive influence, meaning the higher the stress, the higher the level of depression.

As for the results of the Qualitative Method obtained through interviews with informants. The informants in this study were 15 people, consisting of 12 key informants, namely 6 male students and 6 female students selected based on the results of the questionnaire, and 3 supporting informants (teachers, the person in charge of the mental health program at the Banggai sub-district health centre, and the person in charge of the mental health program at the Banggai Laut district health office). Information was collected using the *focus group discussion* method and in-depth interviews, and documentation studies were conducted. The focus group discussion method was conducted on adolescents with normal/low to moderate questionnaire results while in-depth interviews were conducted on adolescents with high/severe or very severe questionnaire results and were conducted on Counselling Guidance (BK) teachers, the person in charge of the Community Health Efforts (SME) programme at the health centre and the head of the Disease Control (P2) sector at the health office.

There are various opinions of key informants and supporting informants regarding depression in adolescents. Therefore, 2 opinions of key informants and supporting informants were selected that could represent the opinions of other informants, as can be seen from the quote below:

> *"Depression is a mental disorder that causes people to not know what to do, the new signs are often delusional, a new sense of loneliness if in my opinion the cause is because of suppressing feelings, not being able to channel emotions properly new there is no place to tell new stories too suppressed new anyway a new sense of emptiness mm a sense of worthlessness. I kind of include because I often fantasize like it's not normal so e because it's often right until I get reprimanded at home too because I often fantasize I'm also confused so why do I often fantasize for a while then I have a very deep fantasy until I hear the sound of people screaming directly I'm shocked immediately I look left and right ih what is this I have a new fantasy that I also often forget what kind of things I just made kind of quickly forget, like I finished making what was that e new I was very lazy to eat or at least eat but only eat a little. I used to say that I had a papi so e until that time I had begged me to die I wanted to die I wanted to die kase permission so but it couldn't be so new I had already had time to do so e I had suicidal intentions from when I was a child, I had taken medicine but only drank 2 but the dose was high but I didn't die because if the barcode (slashing the wrist) there were scars so I was afraid that I just knew I had this self not I have it but God so but if I took my medicine how many times. This was when I was in junior high school but the point is that so that there is no problem I am tired of meeting people, I don't like to be friends with people even though there is no problem, the group organisation that I chaired I left because I thought it was disturbing then I cried until I was tired I don't know why suddenly I was tired of people, the point is that people don't make mistakes with me maybe I think all these people are hypocrites. I have also happened 4 times to me at that time even though I had eaten so that I was just not long angry immediately like darkness so e, I kind of feel dizzy immediately "*
>
> **(BAY, 16 th)**

Based on the interview excerpts, it is known that depression according to informants is a mental disorder in which people have no purpose in life with symptoms of frequent

delusion, loneliness, inability to channel emotions and low self-esteem. The informants belong to the category of depression with signs and symptoms of feeling lonely, antisocial, often daydreaming until they hear voices, low self-esteem, sleeping more, taking drugs and suicidal ideation. Meanwhile, another opinion from one of the informants is:

> *"Depression, what I know is that depression is a disease that affects people who have themselves that can make people commit suicide, just what causes it e maybe he has bad exam scores or there are problems with his family or with friends too e. If I don't think so, let me have I have problems but I know that everything must have a wisdom so you just enjoy this life I have mama said so I also try to be grateful that I have a life that is important to try as hard as I can so just enjoy the results anyway"*

(RA, 17 years old)

According to the informant, depression is a disease that occurs in oneself to the point of committing suicide, the cause is poor test scores and having problems with family or friends. In addition, informants are included in the normal depression category with signs and symptoms of being confident in their own abilities in dealing with problems, feeling happy and fine, and feeling grateful for everything that happens.

The majority who experience depression have symptoms that vary from mild to severe, such as loss of appetite, fatigue, daydreaming and hearing voices, forgetfulness, lack of appetite, emotional instability, difficulty in social interaction, and suicidal thoughts. Depression is caused by pressure, feelings of emptiness, low self-esteem, environment, loneliness, bullying, family violence, sexual abuse, family or school problems, breakups, stress, and substance use. Signs and symptoms of a person affected by depression include frequent daydreaming, feeling lonely, disturbed relationships, a tendency to take drugs, skipping school, and suicidal thoughts.

In addition, supporting informants' opinions on depression can be seen from the quote below:

> *"What I know is that depression is a mental disorder that is caused by something that causes excessive sadness in people. The causes can be genetic and then stress can also be, because of problems that are not resolved anyway, trauma can and socio-economic problems"*

(A, Head of Disease Control Division of the Health Office)

Based on the results of an interview with the head of the disease control field of the Banggai Laut Regency Health Office, depression is a mental disorder that causes persistent sadness with the causes being genetic, stress, trauma and social economic problems. On the other hand, a different opinion was expressed by the counselling teacher of SMA N 1 Banggai, where depression is the disruption of one's mind due to decreased self-awareness and the causes are being bullied, low self-esteem, antisocial, and stress. As stated in the following quote:

> *"Depression is a kind of disturbed mind so that he is what's the name even due to a decrease in self-awareness, that's depression. If the cause is usually being bullied, it seems that in the end he feels inferior, isolates himself, then the second problem in the family or problems with friends can also be stressful, so in the long run it might be depression."*

(H, Counselling Teacher of SMA N Banggai)

Therefore, it can be concluded that depression according to support informants is a mental disorder that causes excessive sadness. The causes of depression known to supporting informants are stress, genetics, low self-esteem, trauma, being bullied, antisocial, and socioeconomic problems.

DISCUSSION

This study was conducted on 276 adolescents at SMA N 1 Banggai. Age, gender, genetic factors, and mindset together can influence the incidence of depression in adolescents with a contribution of 28.9%. The results of the qualitative analysis showed that the majority of key informants experienced depression from mild to very severe, with symptoms such as loss of appetite, easy fatigue, hallucinations, forgetfulness, lazy eating, unstable emotions, social fatigue, and suicidal ideation. According to supporting informants, depression is a mental disorder that causes excessive sadness, with causes such as stress, genetics, low self-esteem, trauma, bullying, antisocial behaviour and socioeconomic problems.

The results of this study are in line with Mandasari and Tobing who showed a depression level of 13.97 which shows symptoms of mood swings that are only sad, anxious but still in a reasonable and normal stage. Adolescents should be able to try to adapt to changes, but not all adolescents are able to adapt. If adolescents do not successfully adapt to the changes that occur, it will lead to a sense of insecurity, feeling disappointed, feeling a failure, or feeling depressed because they are unable to overcome a problem that occurs to them. If this happens continuously and adolescents continue to blame themselves, this can lead to depression. Depression can be influenced by gender and age (24).

Another study that is in line with this research is a study by Riziana which found the majority of respondents were 16 years old with most of them in the normal level of depression (25). Lubis explained that adolescents are more vulnerable to depression due to important developmental stages such as the transition from childhood to adolescence, school to college or work, and puberty to marriage (26). However, research by Xiu et al. in Shandong Province, China, showed a high level of mental health problems among students, caused by respondents' personality characteristics and environmental factors (27). These results differ from Magson et al.'s study, which stated that although depression and anxiety symptoms increased and life satisfaction decreased from T1 (12 months before COVID-19) to T2 (2 months after government restrictions), age did not affect these changes (28).

In this study, 88 adolescents with male gender, while 188 adolescents with female gender. Based on the results of the analysis conducted, it was found that 71 adolescents of male gender had a normal level of depression, 6 adolescents had mild, 8 adolescents had moderate, 3 adolescents had severe, while none had very severe. In female adolescents, there were 120 adolescents who had normal levels of depression, 38 adolescents had mild levels, 17 adolescents had moderate levels, 10 adolescents had severe levels, and 3 adolescents had very severe levels of depression. So it can be concluded, the majority of depression levels of both male and female adolescents are in the normal level. The results of bivariate analysis using Chi-Square obtained a p-value of 0.026 <0.05 (α), so it can be concluded that there is a significant influence between gender on the incidence of depression in adolescents.

Bird and Rieker in Thaha concluded that, although there is no significant difference between physical and mental health in men and women, disorders such as depression and anxiety tend to be more common in women, while personality disorders tend to be more common in men (29). Pertiwi also found the same, with the majority of adolescent girls (64.3%) and boys (74.7%) showing normal levels of depression, but a higher percentage of adolescent girls experiencing various levels of depression compared to boys (30). A study by Kedang et al. confirmed these findings by stating that 66.7% of adolescent girls and 33.3% of adolescent boys experienced some level of depression, and there was a significant association between gender and the incidence of depression (31). Similar findings were also reported by Girma et al., where the prevalence of depression in adolescents in Jimma, Southwest Ethiopia reached 28%, with females tending to have higher depression scores in a multivariate linear regression analysis (32).

In this study, adolescents who had a family history of people with mental disorders were 13 adolescents, while adolescents who did not have a family history of people with mental disorders were 263 adolescents. So that the majority of respondents do not have genetic factors (family history) of people with mental disorders. The results of bivariate analysis using Chi-Square obtained a p-value of 0.121> 0.05 (α), it can be concluded that there is no significant influence between genetic factors on the incidence of depression in adolescents. The results of this study are in line with research conducted by Nuriyah that the results of bivariate analysis showed no significant relationship between hereditary history and the incidence of depression (33). However, it is inversely proportional to the research conducted by Syahputra et al. which states that genetic factors are one of the factors that influence the incidence of mental disorders. Genetic factors that are passed down to individuals affected by this disease can cause the adaptation process that occurs to be very inflexible and feelings of inferiority will arise (34).

In this study, 79 adolescents had low mindset, 122 adolescents had moderate mindset, and 75 adolescents had high mindset. Based on the results of the analysis conducted, it was found that adolescents who had a low mindset were in a normal level of depression as many as 30 adolescents, mild 25 adolescents, moderate 15 adolescents, severe 8 adolescents, and very severe 1 adolescent. In adolescents who have a moderate mindset are in a normal level of depression as many as 82 adolescents, mild 20 adolescents, moderate 13 adolescents, severe 6 adolescents, and 1 very severe adolescent. In adolescents who have a high mindset are in a normal level of depression as many as 61 adolescents, mild 1 adolescent, moderate 3 adolescents, severe 3 adolescents, while very severe does not exist. So it can be concluded that the majority of depression levels of both adolescents who have a low, moderate, and high mindset are at a normal level. The results of bivariate analysis using Chi-Square obtained a p-value of 0.000 <0.05 (α), it can be concluded that there is a significant influence between mindset on the incidence of depression in adolescents. The results of this study are in line with research conducted by Sari et al. that the majority of adolescents have a pessimistic mindset and there is an association between a pessimistic mindset and the risk of depression in adolescents (35). In contrast to this study, research conducted by Hu et al. showed that the development of mindset as a moderator in the relationship between depression and thinking ability in adolescents (36).

In this study, 14 adolescents had low self-esteem, 247 adolescents had moderate self-esteem, and 15 adolescents had high self-esteem. Based on the results of the analysis conducted, it was found that adolescents who had low self-esteem were in normal depression levels as many as 6 adolescents, mild 2 adolescents, moderate 4 adolescents, severe 1 adolescent, while very severe did not exist. In adolescents who have moderate self-esteem are in normal depression level as many as 174 adolescents, mild 41 adolescents, moderate 19 adolescents, severe 10 adolescents, and 3 adolescents are very severe. In adolescents who have high self-esteem are in a normal level of depression as many as 12 adolescents, mild 1 teenager, moderate 1 teenager, severe 1 teenager, while very severe does not exist. The results of bivariate analysis using Chi-Square obtained a p-value of 0.000 <0.05 (α), so it can be concluded that there is a significant influence between self-esteem on the incidence of depression in adolescents. The results of this study are in line with research conducted by Alvaro et al. which shows that self-esteem is one of the mediating variables in depression (37). Not much different from this study, the results of research conducted by Tanoko showed a negative correlation between self-esteem and depression (38). Another study that is also in line with this study is Sanchez-rojas et al. which shows a relationship between self-esteem and depressive symptoms in children and adolescents (39).

In this study, adolescents who had mild stress levels were 12 adolescents, moderate stress levels were 14 adolescents, severe stress levels were 11 adolescents, and very severe stress levels were 5 adolescents. So that the majority of adolescents have stress levels in normal conditions. Based on the results of the analysis conducted, it was found that adolescents who had mild stress levels were in normal depression levels as many as 2 adolescents, mild 6 adolescents, moderate 2 adolescents, severe 1 adolescent, and very severe 1 adolescent. In adolescents who have moderate stress levels are in normal depression levels as many as 4 adolescents, mild 4 adolescents, moderate 5 adolescents, severe 1 adolescent, while very severe does not exist. In adolescents who have severe stress levels are in normal depression levels as many as 2 adolescents, mild 5 adolescents, moderate 1 adolescent, severe 2 adolescents, and very severe 1 adolescent. In adolescents who have very severe stress levels are in normal depression levels of none, mild 3 adolescents, moderate none, severe 1 adolescent, and very severe 1 adolescent. So it can be concluded that the majority of depression levels both adolescents who have mild, moderate, severe, and very severe stress levels are in normal levels. The results of bivariate analysis using Chi-Square obtained a p-value of 0.000 <0.05 (α), it can be concluded that there is a significant influence between stress levels on the incidence of depression in adolescents.

The results of this study are in line with research conducted by Pertiwi et al. that the majority of adolescents who have stress levels in the normal category, the majority of adolescents also do not have symptoms of depression and are in the normal category (30). Not much different from this study, the results of research conducted by Rahmawati et al. show that the majority of adolescent stress levels are at normal levels (40). Other research that is also in line with this study is research conducted by LeMoult et al. that individuals who experience stress are at risk of experiencing major depressive episodes. In addition, adolescents who have experienced depression and experience stress can trigger a major depressive episode (41).

CONCLUSION

Based on the results of the study of risk factors causing depression in adolescents at SMA Negeri 1 Banggai, Banggai Laut Regency, Central Sulawesi, it can be concluded that there is an influence between age, gender, mindset, self-esteem and stress on the incidence of depression in adolescents. The greatest risk for depression in adolescents is self-esteem and stress.

Limitations of the Study: Because this study was conducted with the aim of knowing the risk factors that cause depression in adolescents, so this study cannot include preventive and curative measures for depression in adolescents such as conducting health promotion about depression or mental health with counselling teachers and related health workers so as to improve adolescent mental health. This study did not collaborate with relevant health workers due to the incompatibility of the research time with the target time of programme implementation and this study has not examined the risk factors for depression incidence as a whole so that there are still many other risk factors that are not included in this study.

Conflict of interest: None

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