

Stress, Emotional Intelligence, and Health Management

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ABSTRACT

Adolescents go through hormone, physical, psychological, and social changes that often cause emotional turmoil. The effects of emotional upheaval result in adolescents lacking the ability to control emotions, putting them at risk for stress. One of the factors that can minimize stress is emotional intelligence, which is a person's ability to manage emotions. The incidence of stress among adolescents in Central Java Province is 4.7%. Several things, namely problems in school, differences in arguments between parents and children, and relationships with peers, cause stress among adolescents. To know the relationship between emotional intelligence and the level of stress among adolescents in X High School. This research is a non-experimental quantitative research with a cross-sectional research design. Purposive sampling technique was used to select 85 students of X High School as the research participants. Kendall Tau was used to analyze data. There is a relationship between emotional intelligence and stress levels of adolescents at X High School. The results of the analysis with the Kendall tau test obtained p value = 0.000 means p value <0.05. The correlation coefficient or r value = 0.867 shows a very strong negative correlation. Conclusion: A highly significant negative relationship exists between Emotional Intelligence and stress.

Keywords: Emotional intelligence, Stress level, Adolescents

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INTRODUCTION

Youth is the transition from childhood to adult life¹. Adolescents are defined as those aged 10-19². It is during this period that adolescents go through development to reach physical, mental, social, and emotional maturity. In general, this period lasts from the age of 13 to the age of 18, which is the time when children are in high school³.

It is estimated by the Central Statistics Agency (BPS) that by the year 2023, there will be 64.16 million adolescents in Indonesia⁴. That

figure represents 23.18 percent of the country's total population last year. Compared to the previous year, the number of adolescents in Indonesia in 2023 will decrease by 2.52 percent. In 2022, there were 65.82 million youth in the country. There are various changes during adolescence, namely hormonal, physical, psychological, and social changes¹. Major physical changes are the development of secondary sex characteristics, the occurrence of growth spurts, and changes in behavior and social relationships with the environment. Psychosocial changes occur as well, including

behavior, relationships with the environment, and attraction to the opposite gender. Adolescence is characterized by puberty, when the body's hormonal system changes, which affects the physical form (especially the sexual organs) and psychology, especially emotions (Mu'tadin, 2010)⁵. The level of adolescent emotions is highly dependent on the impact of physical changes and psychological life. This means that emotions will also increase as more and more changes occur and are not controlled by adolescents⁶.

The lack of adolescents' ability to master and control emotions will result from the effects of unstable emotional changes. This condition makes adolescents constantly experience storm and stress. Changes in adolescent emotions are the result of hormonal changes and stop with age. Adolescents are said to be emotionally mature when they are able to control emotions, wait to express emotions, express emotions in a more acceptable way, be critical before reacting, and have more stable emotions.

Emotional turmoil in adolescents is inextricably linked to various influences such as the environment they live in, family, school, peers, and activities they engage in daily. This shows the amount of emotional turmoil that exists in adolescents when interacting with their environment. In order to avoid negative things that can harm themselves and others, adolescents should understand and have emotional intelligence⁵.

Emotional intelligence is a set of skills that a person possesses to regulate his or her mood to achieve optimism and happiness through the ability to comprehend oneself and others, interact with others, regulate and control feelings, and adapt to various demands and changes of life⁷. The subjects have a good emotional intelligence, they are able to control themselves, they are able to manage their emotions, both positive and negative emotions. By not expressing explosive emotions in public and by being able to act in a rational way so that it can be accepted by the people in the surrounding environment⁸.

This is consistent with the research conducted by Supriadi, Atti & Yanti (2017), which explains that adolescents who are good at adapting to their environment will more easily adapt to something new⁹. Individuals who are good at expressing positive feelings or emotions in their environment will find it easy to establish

interactional relationships with other people or in their school environment. Social skills will be easier to develop for individuals who can control their emotions.

Mid-adolescence, aged 14 to 16 years, is a period when children are in high school and have to adjust to a new environment in school and broader socialization¹⁰. Adolescents attending school have many tasks, much material to learn in a short time, KKM (Minimum Completion Criteria) goals to exceed, demands from parents, teachers, and peers to improve academic performance, pressure to achieve grades, and career aspirations¹¹. Therefore, during this period, adolescents experience various life dynamics that often cause psychological pressures that can lead to stress¹².

Stress is a subjective experience based on a person's perception of the situation he or she is facing. Stress is related to a reality that does not meet expectations or a stressful situation. This condition leads to feelings of anxiety, anger, and frustration¹³. Stress is an inevitable part of a person's life. Stress can affect anyone, including adolescents¹⁴. Stress in teenagers can affect emotional changes, lack of concentration, decreased learning, and negative behavior that is not accepted by society¹³.

The prevalence of stress among adolescents is increasing every year. As many as (6.0%) of Indonesians aged 15 years and above have experienced mental-emotional disorders in the form of stress, anxiety, and depression (Rikesdas, 2013)¹⁵. The prevalence of mental emotional disorders among adolescents in Central Java province was 4.7%¹⁵.

Sugiyanti, Priyanto & Suhariyanti, (2017) explains that 44 female adolescent (74.58%) experienced mild stress and moderate stress during their research carried out at SMK Kesdam IV/Magelang. On the other hand, 15 male adolescents (25.42%) experienced mild stress and moderate stress. Thus, in this study, female adolescents experienced more stress than male adolescents. This is in line with the research proposed by Sutjiato, Kandou & Tucunan (2015) that women use their feelings more when dealing with a problem¹⁷. Women are more likely to experience feelings of guilt, anxiety, increased or even decreased appetite, sleep disturbances, and eating disorders. Unlike men, who are expected to be stronger than

women, men use their reason more than their emotions.

Stress in adolescents attending SMK is influenced by internal and external factors. Internal factors are mindset, personality, and beliefs, while external factors are denser lessons, pressure to excel, and encouragement of social status¹⁸. Academic stress, which is a pressure due to subjective perceptions of academic status, is one of the internal and external factors that affect student stress. This pressure creates reactions that students experience in the form of physical reactions, behaviors, thoughts, and negative emotions that arise due to school or academic demands¹⁸.

El-Aziz (2017) explains that biological stress, family stress, school stress, peer stress, and social stress are the factors that influence adolescent stress in Pondok Pesantren Al- Al-Munawwir Krapyak Yogyakarta in his research¹⁴. In this study, social stress is the dominant influence with adolescent stress. Mu'tadin (2010) further explained that adolescents, who are at the same age as their peers, must have the ability for effective adaptation. Adolescents often vent their excess energy in non-positive directions such as fighting if the activities they do in school (generally, adolescents spend more time in school) are insufficient to meet the demands of their energy fluctuations¹⁹.

If adolescents have high emotional intelligence and character, juvenile delinquency such as fighting, drugs, alcohol, and unrestrained sexual behavior will not occur. This agrees with Goleman's view of success in society, where it turns out that 80% is influenced by emotional intelligence and only 20% is determined by IQ (Intelligence Quotient or Intellectual Intelligence). This ability is needed by individuals, including teenagers²⁰. The ability to manage emotions or emotional intelligence is also one of the factors that can minimize stress²¹.

METHOD

This research is a non-experimental quantitative cross-sectional research design. This research was conducted in X High School. The population in this study were all the students from 3 classes in class X, X High School, a total of 108 students. The sampling technique used was purposive sampling. The sample size obtained in this study was 85

students of X High School. Furthermore, from the 85 students, the researchers took them according to the order of the classes visited. The first class had 28 students who met the inclusion criteria. The second class had 27 students and the third class had 30 students. The inclusion criteria for sampling are willing to become respondents and follow the flow of research, adolescents aged 15-16 years, adolescents who live with both parents.

RESULTS

The rats' mean body weight was 180-200 grams, with 185.8 grams meeting the inclusion criteria. Normal rats' baseline cholesterol averages 111.45 mg/dl. The high-fat, high-cholesterol diet raised blood serum cholesterol to the inclusion criteria (>120 mg/dl) with a mean value of 221.8 mg/dl before lycopene. The mean cholesterol dropped to 151.9 mg/dl after lycopene administration. Twenty-eight rats consumed isocaloric food before and after lycopene administration.

Plasma lycopene levels increased in most treatment groups for mg/head/day (P1 = 0.72, P2 = 1.08, P3 = 1.44) from 54 UI/L to 67, 76, and 97, except in group P0 (control group), which decreased from 54 to 53. P3 had almost twice the plasma lycopene increase of the control. Plasma lycopene levels rise with dose.

The study results on antioxidant status in the form of measurement results of vitamin C, vitamin E, and glutathione peroxidase levels measured enzymatically are described and included in Table 1.

Table 1. Age Variable

Variable	Min	Max	Mean ± SD
Age	15	16	15,69 ± 0,464

The mean age of the respondents in this study was 15.69 years and the standard deviation was ± 0.464, as shown in Table 1 above.

Table 2. Gender

Variable	Frekuensi (f)	Persentase (%)
Gender		
Boy	41	48,2
Girl	44	51,8
Total	85	100

In Table 2, there are Variables of Gender from the respondents. It got 41 boys and 44 girls who became a respondent for this research.

Table 3. Emotional Intelligence

Variable	Frekuensi(f)	Persentase (%)
Emotional Intelligence		
High	32	37,6
Medium	53	62,4
Low	0	0
Total	85	100

In table 3 above, it is known that most respondents in this study have moderate emotional intelligence, namely 53 students (62.4%). While for the high level of emotional intelligence there are 32 students (37.6%). And there are none with low emotional intelligence.

Table 4. Stress Level

Variabel	Frekuensi(f)	Persentase (%)
Stress Level		
Normal	31	36,5
Low	43	50,6
Medium	11	12,9
Total	85	100

In table 4 above, it is known that most respondents in this study experienced mild stress, namely 43 students (50.6%). While for the normal level there are about 31 students (36.5). Then for the moderate level there are 11 students (12.9).

Table 5. Relationship between Emotional Intelligence and Stress Level in Adolescents at X High School

Emotional Intelligence	Stress Level								<i>p</i>	<i>r</i>
	Normal		Low		Medium		Total			
	F	%	f	%	f	%	f	%		
High	31	36,5	1	1,2	0	0	32	37,7	0,000	0,867**
Medium	0	0	42	49,4	11	12,9	53	62,3		
Low	0	0	0	0	0	0	0	0		
Total	31	36,5	43	50,6	11	12,9	85	100		

On the basis of Table 5 above, it is known that the respondents who have a high level of emotional intelligence with a normal level of stress are 31 students (36.5%). Respondents who have high emotional intelligence with low stress levels are 1 student (1.2%). Participants with high emotional intelligence and moderate stress levels were not found in this study (0%). Participants with moderate emotional intelligence and normal stress levels were not found in this study (0%). Respondents who have moderate emotional intelligence with low-stress levels are 42 students (49.4%). Respondents who have moderate emotional intelligence with moderate levels of stress are 11 students (12.9%). Respondents with low emotional intelligence were not found in this study (0%).

The results of the bivariate analysis showed that there is a relationship between emotional intelligence and stress levels among adolescents at X High School, as p -value = 0.000 means p -value < 0.05. The correlation coefficient or r value = 0.867 shows a very strong negative correlation, which means that the higher the emotional intelligence, the lower the stress level in adolescents.

DISCUSSION

Respondent Characteristics

Age

The study results in Table 1 show that the mean age of respondents is 15.69 years, with a minimum age of 15 and a maximum age of 16. Dewi, Anisa & Lintang (2015) explain that the age range of 15 to 16 years is the middle category of adolescents¹⁰. Muhith (2015) explains the developmental tasks of a middle adolescent, namely learning to grow and develop from a child to an adult, accepting one's own physical condition, achieving a more mature relationship and association with the opposite sex so that adolescents can get along well with both male and female sexes and behave in a socially responsible manner²².

Ali & Asrori (2014) also explain that the age of 15 to 16 years is a period when children are in secondary school³. Adolescents who are in school face demands from parents, teachers, and peers to improve their academic performance, as well as being pressured to advance in their classes and wanting to continue their careers¹¹. Therefore, at this time, adolescents are at risk of experiencing stress¹².

Stress in adolescence is due to many factors, including school or academic demands¹⁸, biological stress in the form of hormones, physical and psychological changes, family stress, peer stress, and social stress¹⁴. This is consistent with previous studies that have shown that young people's stress levels were particularly high when they were still attending school.

The average stress in adolescence is related to growth. Adolescents worry about their changing bodies and search for identity. Adolescents can talk about their problems and develop problem-solving skills, but due to the emotional upheaval and uncertainty of adolescents in making important decisions, adolescents need special help and support from adults¹⁶. This shows that age reflects a person's level of maturity, the level of a person's sense of responsibility, and age affects a person's absorption and mindset.

Gender

The study results in Table 2 show that most respondents were female, 44 students (51.8%) while male respondents were 41 students (48.2%). In this study, the total population of adolescents was 108 students with 54 male respondents and 54 female respondents. According to this study, females are more likely to experience stress than males.

Stress is found three times more in women than in men. This is also in line with the research proposed by Sutjiato, Kandou & Tucunan (2015) that women are more likely to use their feelings when they are dealing with a problem¹⁷. Women are more prone to feelings of guilt, anxiety, increased or even decreased appetite, body image disturbances, sleep disturbances, and eating disorders. In contrast, men are required to be stronger than women, so men use their minds more than their emotions.

Female teenagers have the nature to have more feelings or feelings, in this case men are more likely to suppress their feelings. or feelings, in this case men are more likely to easily vent their feelings. The source of stress in adolescent boys and girls is generally the same, but how that stress affects adolescent girls and boys is different. Gender also affects the impact of stress, as adolescent girls are more sensitive to their environment.

Women are more at risk to experience stress because it is caused by biological factors, namely the neurotransmitter serotonin, which is

one of the biological elements that affect the occurrence of stress in an individual. The brains of men and women have different abilities to produce the hormone serotonin. Serotonin is associated with emotions and is a chemical released by the body into the brain. When a person is under stress, serotonin levels decrease compared to normal. Under normal circumstances, men's and women's brains have balanced levels of serotonin, but the male brain is 52% faster than the female brain at producing serotonin, which is why women are more susceptible to stress.

Emotional Intelligence

The results of the research in Table 3 show that the majority of the respondents' emotional intelligence is in the moderate category, which is 53 students (62.4%). Marsela & Meidiana (2017) explain that students with moderate emotional intelligence are students who are less capable of recognizing their own emotions, managing emotions, motivating themselves, less capable of empathizing with others, and less capable of socializing²³.

Marsela & Meidiana (2017) also explain that the moderate emotional intelligence experienced by students is due to their inability to recognize their own emotions and their lack of knowledge about how to develop their strengths and potential²³. Students often vent their emotions to others because they have difficulty controlling their emotions, as they are unable to control negative emotions by thinking positively. It is also difficult for students to develop trusting relationships with others, so they have difficulty empathizing with others.

The average person has moderate emotional intelligence. This is influenced by several factors, including physical factors. Physical factors are related to an individual's health. If individuals are healthy and can perform activities, then emotional intelligence will also be high. However, if the individual is sick, he will feel disturbed by the existing situation. This situation certainly causes discomfort, such as feeling pain. The individual feels uncomfortable with his or her condition, so it will make the individual feel restless and uncomfortable. This will make individuals unable to control their emotions, so these individuals can be said to have moderate or low emotional intelligence.

Level of stress

The results of the study in Table 4 show that most of the respondents experienced mild stress, namely 43 students (50.6%). Ema, Farida & Esti (2016) explain that students with mild stress level are students who sometimes experience several symptoms: they are irritable, overreact to circumstances, feel nervous, lack perseverance when they experience delays and face interference in their work, and sometimes feel easily restless²⁴.

The majority of the respondents experienced a mild level of stress, namely 24 people (85.7%). Some of the main problems of stress among adolescents are caused by school problems, parent-child arguments, and peer relationships. Priyoto (2014) also explains that if not properly managed, adolescent stress can affect emotional changes, impaired concentration, decreased learning performance, and negative behavior not accepted by society¹³.

Mubarak, Lilis & Joko (2015) explain the process of stress, namely the presence of the hormone epinephrine (adrenaline), which is a stress hormone released by the adrenal glands²⁵. This hormone, along with other hormones, circulates in the body to increase blood pressure and heart rate, breathing rate, awareness, and a state of tension that prepares a person to face danger. Once the stressful condition has passed, the body relaxes and returns to normal.

The Relationship Between Emotional Intelligence and Stress Levels in Adolescents

The results of the research in Table 5 show that the results of the analysis test using Kendall's tau correlation obtained a p value of 0.000 ($\alpha=0.05$), which means that the p value < 0.05 , H_0 is rejected and H_a is accepted, which means that there is a relationship between emotional intelligence and stress levels in teenagers at X High School. The correlation coefficient value or r value = 0.867 shows a very strong negative correlation, which means that the higher the emotional intelligence, the lower the stress level in adolescents. There is a very strong negative relationship between emotional intelligence and stress in the preparation of a thesis.

This study proves that there is a very significant negative relationship between emotional intelligence and the level of stress of adolescents of the X High School. This means that the higher the emotional intelligence in adolescents, the lighter and even normal the

stress level, and vice versa, the lower the emotional intelligence in adolescents, the higher the stress level.

Marsela & Meidiana (2017) explain that an adolescent with moderate emotional intelligence needs to improve his emotional intelligence because he has a poor ability to recognize his emotions, manage his emotions, motivate himself, empathize with others, and socializing²³. How to improve emotional intelligence is by socializing more, respecting others more, or asking opinions from trusted people to better understand themselves.

The improving emotional intelligence, teens struggle to minimize the various causes of stress. stress. Situations that often cause stress in adolescents include school or academic demands¹⁸, biological stress in the form of hormonal, physical, and psychological changes, family stress, peer stress, and social¹⁴.

CONCLUSION

The characteristics of the respondents in this study are students with an average age of 15.69 years. 52.6% of the respondents are female. The emotional intelligence of the respondents at X High School has mostly experienced moderate emotional intelligence, namely 62.4%. The stress level of respondents at X High School mostly experienced mild stress, namely 50.6%. There is a relationship between emotional intelligence and stress level of X High School students with p value = 0.000 ($p < 0.05$).

REFERENCES

1. Batubara JR. Adolescent development (perkembangan remaja). Sari pediatri. 2016 Nov 23;12(1):21-9. <https://doi.org/10.14238/sp12.1.2010.21-9>
2. WHO. *World Health Statistics 2014*. WHO, 2014.
3. Ali, M., Asrori, M. *Prikologi Remaja*. PT. Bumi Aksara, 2024.
4. Badan Pusat Statistik. *Statistik Indonesia 2023*. Badan Pusat Statistik, 2023.
5. Mu'tadin. *Faktor Penyebab Perilaku Agresif*. Jakarta; 2010
6. Pieter HZ. *Pengantar psikologi dalam keperawatan*. Kencana; 2017.

7. Putri DR. Peran dukungan sosial dan kecerdasan emosi terhadap kesejahteraan subjektif pada remaja awal. *Indigenous: Jurnal Ilmiah Psikologi*. 2016;1(1):12-22. <https://doi.org/10.23917/indigenous.v1i1.1770>
8. Karmiana N. *Hubungan antara kecerdasan emosi dengan penyesuaian diri mahasiswa perantau asal lampung*. Skripsi. Universitas Muhammadiyah Surakarta, 2016.
9. Supriadi D, Yudiernawati A, Rosdiana Y. Hubungan Kecerdasan Emosional dengan Perkembangan Sosial pada Remaja di SMP Wahid Hasyim, Malang. *Nursing News: Jurnal Ilmiah Keperawatan*. 2017 Oct 30;2(3).
10. Dewi RC, Oktiawati A, Saputri LD. *Teori & konsep tumbuh kembang bayi, toddler, anak dan usia remaja*. Yogyakarta: Nuha Medika. 2015.
11. Rahmawati WK. Efektivitas teknik restrukturisasi kognitif untuk menangani stres akademik siswa. *JKI (Jurnal Konseling Indonesia)*. 2016;2(1):15-21.
12. Nursalam. *Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan*. Salemba Medika, 2011.
13. Priyoto. *Konsep Manajemen Stress*. Nuha Medika, 2014.
14. El-Azis KM, Rahayu PP. *Faktor-Faktor Yang Mempengaruhi Stres Remaja Pada Tahun Pertama Di Pondok Pesantren Al-Munawwir Krpyak Yogyakarta*. Skripsi. Universitas' Aisyiyah Yogyakarta, 2017.
15. Kementerian Kesehatan Republik Indonesia. *Laporan Hasil RISKESDAS 2013*. Jakarta: Kementerian Kesehatan Republik Indonesia, 2013.
16. Sugiyanti DA, Suhariyanti E, Priyanto S. Pengaruh Guided Imagery Dalam Menurunkan Stress Siswa Menghadapi Proses Boarding School Di SMK Kesdam IV Kota Magelang. *Journal of Holistic Nursing Science*. 2017 Jul 31;4(2):50-8.
17. Sutjiato, M., A. A. T. Tucunan., & G. D. Kandou. (2015). Hubungan Faktor Internal dan Eksternal dengan Tingkat Stress pada Mahasiswa Fakultas Kedokteran Universitas Sam Ratulangi Manado. . *JIKMU, Vol, 5. No, 1 Januari 2015*.
18. Barseli M, Ifdil I, Nikmarijal N. Konsep stres akademik siswa. *Jurnal konseling dan pendidikan*. 2017 Dec 28;5(3):143-8. <https://doi.org/10.29210/119800>
19. Fatimah S. Efektivitas Konseling Kognitif-Perilaku Untuk Mereduksi Stres Akademik Peserta Didik Kelas XI Farmasi SMK Al-Wafa Ciwidey Kabupaten Bandung Tahun Ajaran 2014/2015. *Jurnal Bimbingan dan Konseling Islam*. 2017 Mar 7;6(1):93-122.
20. Asyik FM, Ismanto AY, Babakal A. 1 Hubungan Pola Asuh Orang Tua Dengan Kecerdasan Emosional Pada Anak Usia Remaja Dikelurahan Soasio Kota Tidore Kepulauan. *JURNAL KEPERAWATAN*. 2015 May 14;3(2).
21. Lestari ND, Rizkiyah N. The workplace stress and its related factors among indonesian academic staff. *Open Access Macedonian Journal of Medical Sciences*. 2021 Mar 3;9(T4):70-6.
22. Muhith A. (2015). *Pendidikan Keperawatan Jiwa*. CV. Andi Offset.
23. Marsela PA, Dwidiyanti M. *Gambaran Tingkat Kecerdasan Emosi Mahasiswa Bidikmisi di Departemen Ilmu Keperawatan Fakultas Kedokteran Universitas Diponegoro* (Doctoral dissertation, Diponegoro Universty).
24. Ema AM, Kusuma FH, Widiani E. Hubungan tingkat stres dengan kejadian insomnia pada remaja pengguna media sosial di mts muhammadiyah i malang. *Nursing News: Jurnal Ilmiah Keperawatan*. 2017 Sep 30;2(3).
25. Mubarak WI, Indrawati L, Susanto J. *Buku ajar ilmu keperawatan dasar*. Jakarta: Salemba Medika. 2015.