



The Role of Recreational Sports on Stress Degradation in Adolescents

Fajar Aulia Rahmawati¹, Dita Yuliastrid², Pudjijuniarto³, Indra Hirmanwan Susanto⁴

¹²³⁴Ilmu Keolahragaan, Universitas Negeri Surabaya, Surabaya, Jawa Timur, Indonesia

Abstract

The condition known as stress degradation is when the relationship between an individual and their environment can result in a gap with pressures that originate from various situations with various biological, psychological, and social system resources of an individual that decline. With the emergence of various problems in the lives of adolescents, it will cause things that end in increased stress. The purpose of this quantitative description study is to determine the role of recreational sports on stress degradation in adolescents. The researcher conducted an analysis using an observational analytical research method using a cross-sectional study design with a total of 52 adolescents aged 11-21 years in Menganti District - Gresik. Data collection using the Depression Anxiety Stress Scale 42 questionnaire and a recreational sports activity questionnaire. After all the data has been collected, the results will be tabulated data presented in a table, then processed using SPSS software version 25 then analyzed using simple linear regression. The results showed that the level of stress showed that most of the study respondents were high at 48.1% while for moderate at 36.5%. For very high at 9.6%. For normal at 3.8% and for mild at 1.9%. Recreational sports activity shows that most of the research respondents are very high at 80.8% while for high it is 17.3% and for moderate it is 1.9%. The results of the study showed that the magnitude of the correlation or relationship (R) value is 0.212 which means that there is a relationship between recreational sports activity and decreased stress levels is weak. The results of the analysis obtained a determination coefficient (R Square) of 0.045 which means that the influence of the independent variable, namely recreational sports activity on the dependent variable, namely the level of adolescent stress, is 45%.

Keywords: *Stress, Recreational Sports, Teenager*

Correspondence author: Fajar Aulia Rahmawati, Universitas Negeri Surabaya, Indonesia.
Email: fajar.20153@mhs.unesa.ac.id



Jurnal Pendidikan Jasmani (JPJ) is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

INTRODUCTION

Adolescence is a developmental phase that is full of physical, psychological, or social challenges. The changes experienced cause adolescents to experience emotional turmoil known as the "period of storm and stress" which results in rapid changes in personality, emotions, and social relationships (Dahl & Hariri, 2005). This period is often marked by instability in feelings, difficulty in managing stress, and the search for self-identity which leads to increased stress. Several factors such as pressure from family, friends, and the social environment can cause adolescents to feel depressed and anxious. The adolescent period is very vulnerable to emotional disorders and stress that can affect the overall development of adolescents.

The emotional burden borne by adolescents, which is internal or external, often makes it difficult for adolescents to manage their feelings (Nyoman et al., 2022). The inability to deal

with stress can lead to mental disorders, such as anxiety, depression, and severe stress which can have a negative impact on physical health. Stress not only affects psychological conditions but can also reduce the overall quality of life. Stress management is very important to ensure that adolescents' mental and emotional health is maintained. An effective approach to dealing with stress is through sports, especially recreational sports, which can help relieve mental tension and improve mood.

Recreational sports have many benefits that have been scientifically proven to improve physical and mental well-being. Physical activity can stimulate the release of endorphins, hormones that play a role in improving mood and reducing feelings of anxiety and depression (Dafid Dwi Cahyo & Ali Maksum, 2021). Exercise can reduce cortisol levels, which are hormones related to stress, thus providing a relaxing effect on the body and mind. With the increasing interest in recreational sports among adolescents, activities are considered as one of the fun and effective ways to manage stress. Several studies have also shown that recreational sports can improve physical fitness which in turn can improve a person's quality of life and emotional well-being.

Stress-related theory studies show that adolescents who engage in physical activities including sports have lower stress levels compared to adolescents who are not physically active. Recreational sports serve as a channel to distract from stress and provide an opportunity for adolescents to enjoy moments of relaxation (Dahl & Hariri, 2018). Sports also improve sleep quality and increase self-confidence, which can help reduce anxiety that is often felt by adolescents. Some types of recreational sports such as team sports, yoga, or outdoor activities can provide a sense of togetherness and reduce feelings of isolation that are sometimes felt by adolescents. Recreational sports have a very important role in helping adolescents cope with stress and improve their mental well-being.

In Gresik Regency, the stress experienced by adolescents is increasingly worrying. Adolescents who are in emotional turmoil often fall into negative behavior such as juvenile delinquency, including bullying, illegal racing, and brawls. The importance of a more effective approach to managing stress among adolescents so that they do not engage in detrimental activities. One solution that can be provided is through recreational sports that can provide a positive outlet for adolescent energy. By doing some sports activities, adolescents can not only maintain physical fitness but can also relieve the mental stress they experience (Aqobah et al., 2023).

From the events experienced by teenagers in Gresik Regency, researchers feel the need to study more deeply about how recreational sports can affect stress reduction in teenagers.

This study aims to determine the extent of the role of recreational sports in reducing stress in teenagers, especially in Gresik Regency. The results of this study are expected to provide a clearer picture of the benefits of recreational sports for the mental well-being of teenagers. This study also aims to provide recommendations to related parties such as schools and parents, to further support recreational sports activities as a way to manage stress in teenagers.

With the aim of the study using a quantitative approach to analyze the relationship between recreational sports activity and stress levels in adolescents. Researchers will collect data through questionnaires that measure stress levels and adolescent activity in recreational sports. The results of this study are expected to contribute to developing more effective stress management strategies and increasing awareness of the importance of recreational sports in the daily lives of adolescents.

METHOD

This study uses an observational analytical method with a cross-sectional study design. The quantitative method aims to determine the relationship between recreational sports and stress in adolescents. The selection of the method was carried out to measure the role of recreational sports in reducing stress in adolescents.

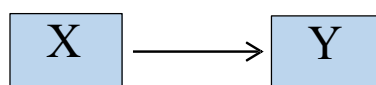


Figure 1. Model of the relationship between independent and dependent variables

Description

X: Recreational Sports

Y: Stress Degradation

This research lasted for 2 weeks, from May to July 2024, in Menganti District, Gresik. The selection of this location was based on the availability of equipment to support the research and ease of access because it is the domicile of the researcher.

The population of this study consisted of adolescents aged 11-21 years in Menganti District, Gresik. The sample used in this study was 52 adolescents selected through incidental sampling techniques. This technique allows researchers to select samples randomly from individuals who happen to be encountered and according to predetermined criteria (Imansari & Kholifah, 2023).

Recreational sports are activities carried out regularly to improve well-being with the aim of relaxing the body and soul, and can be measured by a recreational sports activity questionnaire (Widiyanti et al., 2022). Stress degradation refers to a decrease in stress levels caused by interactions between individuals and the environment, which can affect health if

uncontrolled (Nur & Mugi, 2021). In this study, stress levels will be measured using the Depression Anxiety Stress Scale (DASS 42) questionnaire.

The research instrument used a questionnaire to collect data. Measurement of stress levels was carried out using the Depression Anxiety Stress Scale (DASS 42) questionnaire which has been tested for validity and reliability. The questionnaire created showed validity with a p-value <0.05 and reliability with Cronbach's alpha = 0.816 meaning valid and reliable. Measurement of recreational sports activity used a questionnaire (Masdiana et al., 2021) with the results of validity p-value <0.05 and reliability Cronbach's alpha = 0.862. Both of these questionnaires have been tested using IBM SPSS version 25.

Data collection was carried out by distributing questionnaires to respondents to obtain the required information. The questionnaire was given through Google Form media to simplify the process and speed up data collection objectively. Before filling out the researcher provided an explanation regarding the contents of the questionnaire so that respondents could understand each question well.

After the data was collected, the tabulation process was carried out and presented in the form of a table to be analyzed using SPSS software version 25. Univariate analysis was used to determine the relationship between two variables, namely the role of recreational sports and stress levels in adolescents.

The focus of the analysis is to obtain a description of each variable. This description is listed in a frequency table that is used as a tester for descriptive statistical analysis.

Table 1. Univariate Analysis

No.	Variable	Data Type	Statistical Test
1.	Gender	Categorical	Proportion
2.	Age	Categorical	Proportion
3.	Stress Levels of Teenagers Aged 11-21 years	Categorical	Proportion

Simple regression analysis is the relationship between two variables: the independent variable and the dependent variable. The linear regression method uses an estimating equation to estimate the dependent variable. Simple regression is the process of producing a mathematical relationship between one independent variable and one dependent variable.

RESULTS AND DISCUSSION

Result

This study was conducted in Menganti District, Gresik Regency, located in East Java. Menganti District has various recreational sports facilities that can be utilized by the community including teenagers. The initial conditions of the study showed that the level of stress in teenagers in Menganti District was quite high due to various factors such as academic demands, family problems, and social pressure. It is important to examine the role of recreational sports in reducing stress in teenagers in this area. The population and sample selection of the study was conducted at SMAN 1 Menganti located on Jl. Raya Boteng, Putat Lor, Menganti District, Gresik Regency. Most of the students at SMAN 1 Menganti are aged 15-17 years which is the age range of teenagers who are vulnerable to stress. Most teenagers there cope with their stress by actively doing recreational sports, such as fishing, soccer, badminton, jogging, swimming, mountain climbing, gymnastics, and rope jumping.

Based on table 2, it can be concluded that most of the respondents of the study were male with a total of 28 teenagers or 53.8% while females numbered 24 teenagers or 46.2%. For age, the majority of respondents were in the age range of 15-17 years, namely 45 teenagers or 86.5% while the age of 18-21 years there were 6 teenagers or 11.5% and the age of 11-14 years only 1 teenager or 1.9%. In terms of educational status, most of the respondents were high school students as many as 44 teenagers or 84.6% for college students 5 teenagers or 9.6%, junior high school 2 teenagers or 3.8%, and workers 1 teenager or 1.9%. For the status of parental employment, the majority of respondents came from families with self-employed jobs, as many as 29 teenagers or 55.8% then entrepreneurs as many as 6 teenagers or 11.5% civil servants and other jobs each 5 teenagers or 9.6%. In terms of recreational sports frequency, most respondents exercise 2-3 times a month as many as 31 teenagers or 59.6% while 15 teenagers or 28.8% exercise more than 5 times and 6 teenagers or 11.5% only 1 time. The most common type of recreational sport is badminton which is done by 29 teenagers or 55.8% then there are other sports as many as 12 teenagers or 23.1%. Football is done by 6 teenagers or 11.5%, and fishing by 5 teenagers or 9.6%.

Description of respondent characteristics regarding gender, age, formal education or school status, parents' employment status, recreational sports in the last month, and type of recreational sports are presented in table 3 as follows:

Table 2. Respondent Characteristics

Category	Total	Percent (%)
Gender		
Male	28	53,8
Female	24	46,2
Age (Years)		
11-14	1	1,9
15-17	45	86,5
18-21	6	11,5
Education		
Junior High School	2	3,8
Senior High School	44	84,6
College Student	5	9,6
Employee	1	1,9
Parents' Employment Status		
PNS	5	9,6
TNI/POLRI	1	1,9
Self-Employed	29	55,8
Entrepreneur	6	11,5
Trader	3	5,8
Farmer	3	5,8
Others	5	9,6
Recreational Sports in the Last Month		
1 time	6	11,5
2-3 time ²	31	59,6
More than 5 times	15	28,8
Type of Recreational Sports		
Fishing	5	9,6
Football	6	11,5
Badminton	29	55,8
Others	12	23,1

This stress level refers to the level of stress in adolescents. The following will be presented in table 3:

Table 3. Stress Levels in Respondents

Stress Levels	Frequency	Percentage (%)
Normal	2	3,8
Light	1	1,9
Moderate	19	36,5
High	25	48,1
Very high	5	9,6
Total	52	100

Based on table 3 above, it can be concluded that most of the research respondents have high stress levels, namely 25 teenagers or 48.1%. In 19 teenagers or 36.5% have moderate

stress levels. There are 5 teenagers or 9.6% with very high stress levels, 2 teenagers or 3.8% have normal stress levels and 1 teenager or 1.9% with mild stress levels.

The level of recreational sports activity refers to the participation of adolescents in recreational

Table 4. Respondents' Level of Recreational Sports Activity

Respondents' Level of Recreational Sports Activity	Frequency	Percentage (%)
Very high	42	80,8
High	9	17,3
Medium	1	1,9
Low	0	0
Very Low	0	0
Total	52	100

Based on the explanation of table 4 above, it can be concluded that the level of recreational sports activity of most of the research respondents is very high, amounting to 42 teenagers or 80.8%, while for high it is 9 teenagers or 17.3% and for moderate it is 1 teenager or 1.9%.

Table 5. Linear Regression Analysis Results

Model Summary				
Model	R	R Square	Adjusted R Square	l. Error of the Estimate
1	.212 ^a	.045	.026	5.299

From the table above, the correlation value (R) of 0.212 indicates a weak relationship between recreational sports activity and decreased stress levels. The output results also show a determination coefficient (R Square) of 0.045, which means that the effect of recreational sports activity on adolescent stress levels is 4.5%.

Discussion

The age range of adolescents who were respondents in this study was 11-21 years with the majority aged 15-17 years who are included in the category of middle adolescence or the transition period to late adolescence. In this age range, there are significant physical, social, and psychological changes in individual development. A study by (Jobson, 2020) stated that 74% of adolescents have immature emotional levels. Adolescents who do not reach emotional maturity may have difficulty managing their emotions properly (Febbiyani & Adelya, 2017). Adolescence is a period of life full of identity crises and ambiguity that makes adolescents unstable, emotional, and sensitive. Adolescents tend to make decisions quickly or act carelessly

which can affect their behavior. As part of the phase experienced by adolescents, they need support to overcome the developmental challenges that exist.

According to (Ministry of Health, 2018) adolescence is a period in which a person's physical, psychological, and intellectual growth develops rapidly. Adolescents are very curious, adventurous, and dare to take risks. The success of adolescence is measured by their ability to accept physical and mental conditions and direct themselves in a direction that is useful for themselves and others (Ismatuddiyana et al., 2023). There are still many adolescents who face emotional mental disorders including stress, depression, and anxiety. The data (Risksdas, 2018) shows that 10.1% of adolescents experience emotional mental disorders higher than the national average. This stress can arise due to physical changes, changes in identity, academic pressure, and social. This phase is important for adolescents to learn to manage the feelings and stress they experience.

In the development of psychology, adolescents begin to build self-identity and show signs of independence. Although driven by feelings or emotions, adolescents can assume virtual and think big picture. They are still less flexible in applying their thinking to some situations that make them vulnerable to problems. Research by (Azmi, 2015) states that adolescents in the middle phase are very vulnerable to various problems. Adolescents face problems such as physical changes, identity, social roles, academic pressure, interpersonal relationships, social media pressure, and family challenges. All factors experienced coupled with natural emotional and psychological changes cause significant stress in adolescents. Many adolescents are not aware of the level of stress they are experiencing and this has an impact on their mental health.

Factors that cause stress in adolescents are very diverse. There are physical and hormonal changes that can disrupt emotional balance and pressure to find their identity in social groups. Adolescents often feel pressured to conform to social standards or expectations of others in order to be accepted. Increasing academic challenges can cause high stress due to having to compete in exams and school assignments (Rohmatillah & Kholifah, 2021). Interpersonal relationships with peers, family, or even partners can also trigger stress in adolescents. Pressure from social media that provides unrealistic standards adds to emotional stress. Uncertainty about the future such as educational or career choices plays a role in increasing stress levels in adolescents.

Recreational sports provide a variety of activities that are popular among teenagers and have significant benefits (abdul hakim, 20202). Activities such as badminton, jogging, fishing, and soccer are some of the sports that are often chosen by teenagers. Among others, badminton

which hones basic techniques and game strategies and improves fitness, strengthens muscles, and helps reduce stress. Jogging which increases the production of endorphin hormones which function as natural antidepressants, helps reduce anxiety, and improves mood. Fishing offers tranquility through the natural atmosphere, reduces stress, and also provides social benefits through interaction with friends or family. Soccer, can help improve fitness and increase self-confidence and teach teenagers to control emotions so that it has a positive impact on social life. All activities can be beneficial for reducing stress levels and improving physical and mental health.

The reduction in stress experienced by adolescents due to the benefits of recreational sports has many long-term benefits. In addition to the positive physical effects, namely increasing fitness and reducing body fat. Recreational sports also help adolescents to better manage their stress in everyday life (Badri et al., 2024). Sports can distract them from existing stressors, release physical tension, and improve their mood. Social interactions that occur in team sports or joint activities also provide very important mental and social benefits. For adolescents to engage in recreational sports activities regularly as part of a strategy to manage stress. Many factors cause stress in adolescents so that recreational sports can be an effective way to help them stay mentally and physically healthy. The results of the study showed that recreational sports are an effective tool in helping adolescents deal with the pressures of life they experience.

CONCLUSION

Based on the results of data analysis and discussion, it was concluded that most of the study respondents experienced high levels of stress, which were 48.1% of adolescents. In 36.5% of respondents experienced moderate stress and only 9.6% had very high levels of stress. For recreational sports activity, most respondents (80.8%) showed a very high level of activity with 17.3% having a high level of activity. The equation between recreational sports and reducing stress levels showed a significant value of 0.212, which means that recreational sports can help reduce stress by reducing cortisol and increasing endorphin production. Recreational sports can also improve mental well-being, blood circulation, and oxygen in the body which are beneficial in reducing stress levels.

By doing recreational sports, stress reduction was recorded at 45%, indicating that this sport can distract teenagers from everyday stressors. Recreational sports can release the body from physical tension caused by monotonous activities that help improve mood and mental well-being. Some types of recreational sports that are popular among teenagers to overcome

stress include badminton, jogging, fishing, and soccer. For lower stress levels, teenagers also often do sports such as swimming, mountain climbing, rope jumping, and gymnastics. Recreational sports have been shown to have an important role in reducing adolescent stress levels and improving quality of life.

Based on the conclusion, the suggestion that can be given is that for teenagers who have high stress levels, it is advisable to be more active in recreational sports. Recreational sports can help improve individual health, by reducing cortisol and increasing endorphin production which has a positive impact on stress levels and exercise routines. Recreational sports also play a role in increasing blood circulation, oxygen in the body and metabolism, all of which help prepare the body to face daily challenges. For researchers who will continue this research, it is advisable to use wider samples and variables as well as various methods such as experiments that function to identify the role of recreational sports in overcoming adolescent stress in more depth. So that further research can provide a more comprehensive understanding of reducing stress levels in adolescents.

REFERENCES

- Abdul Hakim. (2020). Peran Sport Recreation Dalam Upaya Meningkatkan Motivasi Belajar Siswa Siswi Mi Roudlotul Muta ' Allimin Kebonsari Sukodadi. *Jurnal Media Ilmu Keolahragaan Indonesia*, 2(2), 6–7.
- Aqobah, Q. J., Rahmawati, D., Youdistira, F., & Kurnia, A. R. (2023). Analisis Pengaruh Olahraga Terhadap Penurunan Tingkat Stres Analysis of the Influence of Exercise on Reducing Stress Levels. *Journal of Sport Science and Tourism Activity (JOSITA)*, 2(1), 45–51.
- Azmi, N. (2015). *Potensi Emosi Remaja dan Perkembangannya*. 2(1), 36–46. <https://journal.ikipgripta.ac.id/index.php/sosial/article/view/50/49>
- Badri, A., Rajab, F., Ketrina, C., Ketaren, B., Surbakti, R. M., Sitorus, W., & Medan, U. N. (2024). *Pentingnya olahraga untuk kesehatan optimal*. 8(9), 177–181.
- Dahl, R. E., & Hariri, A. R. (2005). Lessons from G. Stanley Hall: Connecting new research in biological sciences to the study of adolescent development. *Journal of Research on Adolescence*, 15(4), 367–382. <https://doi.org/10.1111/j.1532-7795.2005.00102.x>
- Dafid Dwi Cahyo, & Ali Maksum. (2021). Dampak Aktivitas Fisik Dalam Mengatasi Stres Siswa Saat Pandemi Covid-19. <https://ejournal.unesa.ac.id/index.php/jurnal-pendidikan-jasmani/issue/archive483https://ejournal.unesa.ac.id/index.php/jurnal-pendidikan-jasmani>
- Febbiyani, F., & Adelya, B. (2017). Kematangan emosi remaja dalam pengentasan masalah. *Penelitian Guru Indonesia*, 02(02), 30–31.
- Ikanubun, M., Kurdi, K., Muhammad, J., Rusdiyanto Hidayat, R., & CS, A. (2023). Hubungan Antara Olahraga Rekreasi Dengan Tingkat Stres Mahasiswa Fakultas Ilmu Keolahragaan Universitas Cenderawasih. *JURNAL OLAHRAGA PAPUA*, 5(2), 48–56. <https://doi.org/10.31957/jop.v5i2.3964>
- Imansari, N., & Kholifah, U. (2023). Metodologi Penelitian Untuk Pendidikan Kejuruan.
- Ismatuddiyannah, Meganingrum, R. J. A. A., Putri, F. A., & Mahardika, I. K. (2023). Ciri dan Tugas Perkembangan Pada Masa Remaja Awal dan Menengah Serta Pengaruhnya

- Terhadap Pendidikan. *Jurnal Pendidikan Tambusa*, 7(3), 27236.
- Jobson, M. C. (2020). Emotional Maturity among adolescents and its importance. *Indian Journal of Mental Health*, 7(1), 35. <https://doi.org/10.30877/ijmh.7.1.2020.35-41>
- Kemkes, R. (2018). Data Dan Informasi Profil Kesehatan Indonesia.
- Masdiana, I Putu Darmayasa, & I Gede Suwiwa. (2021). Motivasi Masyarakat Kota Singaraja Berolahraga Rekreasi Di Taman Kota Singaraja. *Jurnal Kejaora (Kesehatan Jasmani Dan Olah Raga)*, 6(2), 227–232. <https://doi.org/10.36526/kejaora.v6i2.1397>
- Nur, L., & Mugi, H. (2021). Tinjauan literatur mengenai stres dalam organisasi. *Jurnal Ilmu Manajemen*, 18(1), 20–30. <https://journal.uny.ac.id/index.php/jim/article/view/39339/15281>
- Nyoman, N., Lestarina, W., Katolik, S., Vincentius, S., & Surabaya, P. (2022). Problem Emosi Dan Perilaku Remaja Di Wilayah Gresik.
- Riskesdas. (2018). Laporan Nasional Riskesdas From Kementrian Kesehatan Ri Badan Penelitian Dan Pengembangan Kesehatan.
- Rohmatillah, W., & Kholifah, N. (2021). Stress Akademik antara Laki-laki dan Perempuan Siswa School from Home. *Jurnal Psikologi: Jurnal Ilmiah Fakultas Psikologi Universitas Yudharta Pasuruan*, 8(1), 38–52. <https://doi.org/10.35891/jip.v8i1.2648>
- Widiyanti, F., Bambang, & Pendidikan, P. (2022). Indonesian Journal for Physical Education and Sport. <https://journal.unnes.ac.id/sju/index.php/inapes>