

# Correlation Between Physical Activity and Student Life Satisfaction: A Study on Junior High School Students

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## ABSTRACT

**Background:** Evidence shows that the level of physical activity of adolescents in the world is still very lacking, while physical activity itself has a holistic effect, both physically and mentally, including on one's life satisfaction. The purpose of this study was to determine the relationship between physical activity and student life satisfaction.

**Methods:** Correlational research was used in this study. A total of 58 students of Jogoroto 1 Junior High School (JHS) consisting of 29 boys and 29 girls. SLSS and IPAQ-SF instruments were used in this study and data analysis techniques used descriptive statistics and Spearman's rho rank correlation test.

**Results:** The correlation test results showed a positive correlation coefficient and significance less than 0.05 between physical activity and student's life satisfaction, both in terms of METs value ( $r=0.875$ ,  $p=0.000<0.05$ ) and physical activity category ( $r=0.929$ ,  $p=0.000<0.05$ ).

**Conclusions:** There is a significant correlation between physical activity and student's life satisfaction. The higher the level of physical activity, the higher the level of student's life satisfaction.

**Keywords:** *physical activity; student life satisfaction; junior high school students*

## 1. Background

Young adolescents have many opportunities to plan for the future during education. Having a happy life, useful to others, far from worry is the dream of many people. The main thing that a person must have to be happy is life satisfaction. Life satisfaction can be expressed when positive feelings are more dominant than negative feelings. Satisfaction and happiness are two different things, happiness is obtained from daily activities in life according to what is adhered to in its principles (Schafer et al., 2013; Sran et al., 2021). Life satisfaction itself has many meanings, but the literature compiled by Gold (2013) defines life satisfaction as "a cognitive evaluation of well-being based on actual achievements with desired conditions" and having long-term goals in one's life.

Current world conditions show that around 80% of adolescents do not meet the WHO's minimum recommendations for activity (World Health Organization, 2024). In Indonesia, data shows that around 65% of children and youth have a low frequency of physical activity, and as many as 77.12% of children aged 10-15 years show a low level of physical fitness (Mutohir et al., 2023). Physical activity is defined as body movement (involving skeletal muscles) that expends energy, which if done regularly can provide physical and mental benefits (World Health Organization, 2022).

Physical activity is a movement carried out by the body that expends energy and can automatically cause physical and biological changes. Regular exercise can improve cardiovascular fitness, ideally, a person should

do it for 30 minutes a day for moderate-intensity physical activity (Sran et al., 2021; WHO, 2018; World Health Organization, 2024). Research shows that there is a link between physical activity carried out by students and fitness, psychological well-being or mental health, and academic achievement (Guddal et al., 2019; Redondo-Flórez et al., 2022; Wu, 2022; Zhai et al., 2022). Thus, students who lack physical activity are more likely to have poor physical fitness, mental health, and academic achievement. Therefore, to get life satisfaction for students, it can be done by doing physical activity regularly.

There is research that shows a link between physical activity and a person's life satisfaction. Individuals who routinely do physical exercise three times a week feel more satisfied with their lives than people who are not physically active (Brođáni et al., 2015). This research shows that physical activity strengthens the relationship between life satisfaction and a person's mental well-being (Zayed et al., 2018). This also has the potential to apply to adolescents who are studying at the secondary education level or junior high school. Students in school have challenges in dealing with academic stress (Bohman et al., 2024), and academic stress can also have an impact on students' life satisfaction (Sari, 2019). The higher the academic stress experienced by students, the lower the level of life satisfaction (Dureja & Sharma, 2024). From previous research, on the subject of college students, it appears that life satisfaction is negatively correlated with student academic stress (Rathakrishnan et al., 2022). On the other hand, to reduce the academic stress experienced by students, an active lifestyle is needed. If students have an active lifestyle, the better the level of life satisfaction experienced by students (An et al., 2020).

From the description that has been explained above and several references that have been mentioned, only a few have studied the correlation between physical activity and life satisfaction in adolescents who are studying at the junior high school level, especially in East Java, Indonesia. Therefore, this study aims to investigate this using the Student's Life Satisfaction Scale (SLSS) and IPAQ instruments. Bagian Latar Belakang harus menjelaskan latar belakang penelitian, tujuannya, ringkasan literatur yang ada dan mengapa penelitian ini diperlukan atau kontribusinya ke lapangan.

## 2. Methods

A quantitative approach was used in this study, with the type of research being correlational research. This study used participants from State Junior High School (SMPN) 1 Jogoroto, Jombang Regency. The purposive sampling technique was used to determine the research sample with the criteria of third-grade students with a minimum age of 15 years and willing to participate in the study voluntarily. A total of 58 students were selected as research subjects consisting of 29 boys and 29 girls.

The research instruments used were the Student's Life Satisfaction Scale (SLSS) to measure students' life satisfaction (Huebner et al., 2022; Jiang & Huebner, 2017) and the International Physical Activity Questionnaire Short Form version (IPAQ-SF) to measure physical activity levels (IPAQ, 2005). This study used descriptive statistical analysis techniques and Spearman's rho rank correlation test. Descriptive statistical tests used the mean and standard deviation (SD) values, and Spearman's rho rank correlation test was used because the distribution of research data was not normally distributed ( $p < 0.05$ ). The SPSS Version 25 and Microsoft Excel 2016 applications were used to help the process of analyzing research data.

## 3. Result

The first process of data analysis was to conduct descriptive statistical tests on the research variables, including the characteristics of the research subjects (age, height, and weight), the level of physical activity, and the level of life satisfaction of the students. The results of the descriptive statistical test can be seen in the table below.

**Table 1. Descriptive Statistical Test Results**

Variabel	Participants (Mean $\pm$ SD)
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	Boy (n=29)	Girl (n=29)	Total (N=58)
Body Weight (Kg)	57.87 ± 16.28	49.27 ± 10.97	53.57 ± 14.43
Height (cm)	163.97 ± 6.11	153.07 ± 5.74	158.52 ± 8,05
Body Mass Index (Kg/m <sup>2</sup> )	21.50 ± 5.80	20.96 ± 4.00	21.23 ± 4.97
Age (years)	15.28 ± 0.45	15.00 ± 0.00	15.14 ± 0.35
Physical Activity Levels (METs)	2055.90 ± 2050.19	2415.07 ± 1453.27	2235.48 ± 1770.61

The results of descriptive statistical analysis also present the distribution of physical activity levels in students which are divided into three levels: low, moderate, and high, which can be seen in the graph below.

### Physical Activity Category

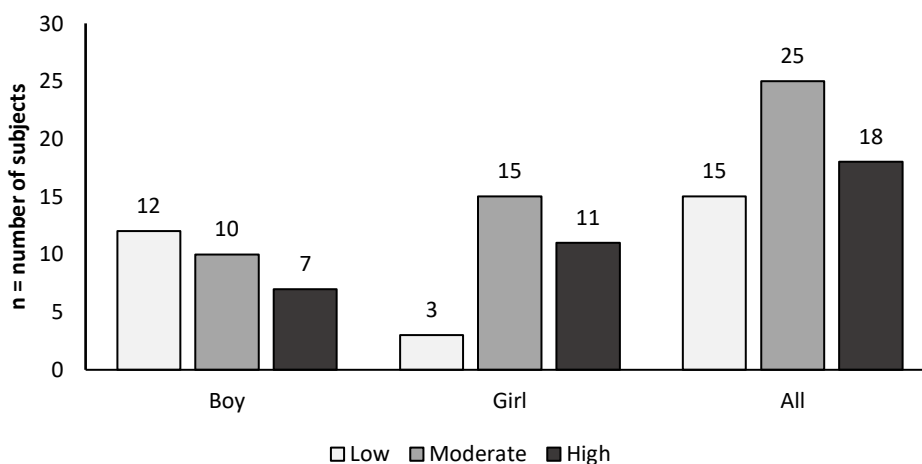


Fig 1. Physical Activity Category Chart

From the graph above, it can be seen that the majority of students have a moderate level of physical activity. Then, Spearman rho rank correlation analysis was conducted to see the correlation between physical activity and student life satisfaction in terms of METs lift and physical activity level category. The results of the analysis can be seen in the table below.

Table 2. Spearman Rho Rank Correlation Test Results

Variable	Rank spearman's rho	
	r	Sig. (2-tailed)
METs – Student Life Satisfaction	0.875	0.000*
PA Category – Student Life Satisfaction	0.929	0.000*

\* there is a significant correlation (p<0.05)

#### 4. Discussion

This study discusses the correlation between physical activity and life satisfaction in junior high school students using IPAQ. Where gender differences in physical activity experience a significant correlation. The graph shows that physical activity in junior high school students is at a moderate level. Previous research has also found that the magnitude of gender differences in physical activity is moderate. The reason for gender differences is due to different physical activity motivations (Komarudin et al., 2023; Melin et al., 2003). Previous research shows that life satisfaction is affected by excessive stress. In addition, previous research found that there is a correlation

between stress and life satisfaction that is very closely correlated and causes different sleep quality (Extremera et al., 2009; F. Wang & Boros, 2019).

In this study, the Spearman test showed a correlation between physical activity and the level of life satisfaction. Based on the data obtained, the sig value.  $0.000 < 0.05$ , which means that there is a significant correlation between physical activity and life satisfaction of junior high school students. Life satisfaction comes from the truth that someone has done their best to achieve something that has become the initial goal. The results obtained in this study are in line with other studies that show a strong relationship between physical activity and one's life satisfaction (Maher et al., 2015b; Skalacka & Błońska, 2023; Urchaga et al., 2020). A person will feel more satisfied with their life if they are more regular in exercising (Hermawansyah et al., 2021; Pierannunzio et al., 2022). Research conducted on 2345 healthy subjects, showed that physical activity has a significant relationship with life satisfaction and happiness in various age categories, both in youth, middle-aged, and older adults (An et al., 2020).

Physical activity has an important role to play in helping people combat negative emotions, reduce levels of depression, and reduce levels of suicidal behavior with the aim of improving life satisfaction. This vital role cannot be separated from the evidence that low life satisfaction is one of the factors that lead to negative emotional conditions (Bastian et al., 2014; Y. Wang & Peng, 2017). According to previous research conducted on student subjects in college, students who are active in physical exercise have high life satisfaction (Zhou et al., 2023). From the results of previous research, it strengthens the theory that there is a strong link between physical activity and life satisfaction in students, including students in junior high school. If a person has positive satisfaction in their life, either only in certain components or overall in their life, then it can be an important factor in achieving life goals (Maher et al., 2015a; Slavinski et al., 2021).

There are many obstacles, difficulties, conflicts, and negative changes that young adolescents face that will make their satisfaction in life decrease. Some factors that can affect life satisfaction include health, work, family, friends, and financial situation (İnan & Koç, 2021). Social support is also a protective factor in increasing life satisfaction by reducing perceived stress (Jhang, 2019). Research conducted by Meyer et al. (2021) physical activity has a function to reduce the impact of stress on life satisfaction if they get the motivation to do physical activity from their inner drive (intrinsic motivation).

Academic stress for students has attracted considerable attention. It can cause decreased life satisfaction affecting sleep quality and leading to health problems (F. Wang & Boros, 2019). Previous research provides additional evidence that life satisfaction is also related to high academic achievement, to achieve high academics, health becomes the basis for students to pursue this achievement (Renshaw & Cohen, 2014). Students who have high fitness tend to be able to map out goals and avoid excessive stress (O'Sullivan, 2011; Ojeda et al., 2011). Physical activity has various benefits for brain health and can improve academic abilities for students (Papasideris et al., 2021). Several studies have stated that physical activity has a positive effect on cardiorespiratory fitness (Rodriguez et al., 2020). Physical activity has been found to improve academic achievement including extracurricular activities (Li & Zhang, 2022). Thus, it is known that children as students are at risk of experiencing academic stress, but this can be prevented if children have a physically active lifestyle. This is supported by the fact that physical activity is highly recommended for students as it has many holistic benefits, including physical and mental health aspects, as well as academic performance.

The limitation of this study is that the participants in this study are the minimum number of research subjects because the research subjects used are only junior high school students in one school. The instrument used to measure the level of physical activity still uses a self-report questionnaire, it is recommended for future research to use accelerometers (Sasaki et al., 2016). Another limitation of the current study is that it has not examined

gender differences in the correlation between physical activity and life satisfaction among students. So, in the future, it is expected to increase the number of research participants and compare them between genders, both men and women.

## 5. Kesimpulan dan Saran

According to the results and discussions that have been carried out in this study, the conclusion is that physical activity has a significant correlation with student's life satisfaction with a positive correlation direction. The higher the level of physical activity, the higher the level of life satisfaction of the students. The results of this study are a good reference, both for teachers, headmasters, and other stakeholders. So that students become more understanding and aware to live actively in order to have good life satisfaction. As is known, this research is still very limited in terms of research subjects, so it is recommended for future research to increase the research population.

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