

Overview Smoking Behavior and Quality of Life of Sports Department Students, Faculty of Sports Science, Universitas Negeri Malang

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ARTICLE INFO	ABSTRACT
<p>ORCHID ID Author 1: https://orcid.org/0009-0008-6569-1064 Author 2: https://orcid.org/0000-0003-4380-6154 Author 3: https://orcid.org/0000-0002-0341-1302 Author 4: - Author 5: - Author 6: https://orcid.org/0009-0001-7504-8178 Author 7: - Author 8: - Author 9: -</p>	<p>According to the results of the Global Adult Tobacco Survey (GATS) in 2021, there has been a considerable increase in the number of adult smokers over the past ten years, rising from 60.3 million in 2011 to 69.1 million in 2021, an increase of 8.8 million individuals. This study aims to compare the quality of life between actively smoking students and those who are exposed to passive smoking, examining their physical, psychological, social, and environmental health effects. The study utilized a sample of 100 respondents who completed a questionnaire on cigarette use and the WHOQOL quality of life assessment, covering variables such as cigarette type, disruption in daily activities, desire to quit smoking, cigarette consumption, and attitudes towards smoking bans in public places. Calculation of the WHOQOL score revealed that 60 percent of non-smoking student respondents reported a good quality of life. These findings underscore the critical need for enhanced health awareness programs and stricter smoking regulations within the university to foster a healthier environment. The study's insights highlight the importance of developing targeted interventions and policies to reduce smoking rates among students to enhance their overall quality of life.</p>
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1. Introduction

From the perspective of global health challenges, the current tobacco pandemic is a significant problem that requires substantial and all-encompassing attention. The World Health Organization (WHO) identified this issue in 2021, noting that the smoking epidemic has resulted in more than 7 million deaths each year, with more than 8 million of those deaths directly attributable to smoking habit. There are 1.3 billion smokers globally that consist of 942 million men and 175 million women (Salsabila et al., 2022). According to the results of the Global Adult Tobacco Survey (GATS) in 2021, there has been a considerable increase in the

number of adult smokers over the past ten years, going from 60.3 million in 2011 to 69.1 million in 2021, a rise of 8.8 million persons.

Several studies have shown that smoking can be harmful to one's health in both the short and long term (Satyana et al., 2020). The carcinogen in cigarettes is one of the most toxic substances. Carcinogens are chemicals that are frequently present in radiation and viruses. This chemical has a reputation for having the potential to cause cancer (Siloam Hospital, 2023). Additionally, the notion that smoking behavior affects more than just one party needs to be emphasized. People near smokers may experience the harmful effects of passive smoking because carbon monoxide from cigarette smoke can diffuse through the air (Hanifah & Hamdan, 2021). If humans inhale these two substances, they will trigger organ damage and decrease the function of the organs of the heart, blood vessels, and respiratory system. As a result, it will be more difficult for the body to fight disease germs in the surrounding environment because it has to deal with organ damage and fight toxins from exposure to cigarette smoke (Oktaviyanti et al., 2023).

Currently, smoking is not just a problem among adults; it is also a problem among kids and teenagers. Smoking rates between the ages of 15 and 24 have significantly increased over the past ten years, with male smoking rates rising from 51.7% to 53.6% and from 0.1% to 1.6% in 2021 (World Health Organization, 2021). East Java province is one of the regions in Indonesia that shows an increase in smoking prevalence. It reached 27.78% to 28.51% in the last two years (Badan Pusat Statistik, 2022). Malang City, one of the cities in East Java province, is in the spotlight due to its relatively high rate of smokers between the ages of 15 and 24. The percentage of smokers between the ages of 15 and 24 reached 17.91% (Survei Sosial Ekonomi Nasional (Susenas), 2021). The teenage group in Malang city is the age group most involved in smoking behavior, according to the survey results and data recapitulation.

Previous research has focused on comparing the quality of life of smoking and non-smoking sports students. Cigarette smoke has no negative impact on the lives of active smokers. On the other hand, cigarette smoke can create a variety of health concerns for passive smokers nearby, including lung cancer, heart disease, and asthma (Noviyanti and Dai, 2020). Not only that, but cigarette smoke might also bother others while they engage in healthy lifestyle activities. So, it turns out this study provides a new perspective by assessing not only the quality of life of sports students who smoke and do not smoke but also sports students who are passive smokers (Noviyanti & Dai RM, 2020). This study's presence seeks to compare the quality of life of students who smoke actively and students who smoke passively in terms of physical, psychological, social, and environmental health to examine the effects of smoking. It is intended that scholars can contribute to raising student awareness and understanding through health promotion initiatives considering the findings of this analysis. Through these initiatives, students can become conscious, and it is hoped that students can modify their health behavior to improve.

2. Method

This study was conducted in July 2023 at Faculty of Sports Science, Universitas Negeri Malang. It was an observational analytical study with a cross-sectional design. The population of this study was students majoring in sports, namely from the Sports Science study program, Sports Coaching Education study program, and Physical Education, Health, and Recreation study program, who were members of student organizations. Respondents were selected using

a voluntary sampling method. The number of samples used in this research was 100 respondents.

The data were collected through an online survey. The respondents could fill in the form between July 4 and July 18, 2023. Quality of life was the dependent variable measured by the WHOQOL BREF questionnaire. This instrument measured individual perceptions about various aspects of life-related to the quality of life, such as physical health, psychological well-being, social support, physical environment, and spirituality (Harper et al., 1998). Respondents were classified as having a high quality of life if their score was ≥ 67 , moderate if the score was between ≥ 33 and < 67 , and low if the score was < 33 (World Health Organization, 2012). Data on respondent characteristics (age, gender, department, information exposure) and smoking behavior were also collected. Descriptive analysis was performed to present the distribution of respondents based on their smoking behavior and the quality of life between active smokers and non-smokers. This study passed the ethical review with number 0015/HRECC.FODM/1/2024 from Faculty of Dentistry, Universitas Airlangga,

3. Result and Discussion

3.1 Characteristic of Respondents

Of the hundred students who participated in this study, most of them were aged 21-23 years (57%), male (75%), and from the Department of Physical Education, Health, and Recreation (48%). Based on the history of smoking behavior, 48% of the respondents were active smokers. The majority of the students have accessed information about the dangers of smoking (88%). The distribution of respondent's characteristics is presented in Table 1.

Table 1. Characteristics of respondents

Variable	Frequency (n)	Percentage (%)
Age		
18 - 20 years	43	43.0
21 - 23 years	57	57.0
Gender		
Male	75	75.0
Female	25	25.0
Department		
Physical Education, Sport, Health and Recreation	48	48.0
Sport Coaching Education	24	24.0
Sport Science	28	28.0
Smoking Behavior		
Smoking	48	48.0
Do not smoking	30	30.0
Have stopped smoking	22	22.0
Information exposure		
Have ever obtained or accessed information	88	88.0
Never get or access information	12	12.0

Total	100	100.0
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Source: Primary Data, 2024

3.2 Smoking behavior among active smokers

Based on the type of cigarettes consumed, most of the respondents were conventional cigarette smokers (62.5%). A conventional cigarette is made of dry tobacco leaves wrapped in cylinders of paper that range in length from 70 to 120 mm and have a 10 mm diameter. It is typically smoked by burning one end and sucking through the mouth of the other (Glantz & Bareham, 2018). The next most widely consumed type of cigarette was the electronic cigarette. As many as 25% of respondents consumed this type of cigarette. Electronic smoking is also dangerous, although it can be considered a safer alternative to smoking tobacco, e-cigarettes still contain nicotine and other chemicals that can harm health and reduce a person's quality of life (Qanash et al., 2019). Meanwhile, 25% of respondents reported being conventional and electronic smokers (Table 2).

Table 2. Distribution of respondents' smoking habits

Variables	Frequency (n)	Percentage (%)
Type of cigarettes		
Conventional cigarettes	30	62.5
Electric cigarettes	12	25.0
Conventional and electric cigarettes	6	12.5
Disruption in daily activities		
Almost everyday	1	2.0
Several times a week	5	10.4
Once a week	5	10.4
Several times a month	36	77.2
Desire to quit smoking		
Yes	14	29.1
No	34	70.9
Cigarette Consumption		
10 sticks/day	46	95.8
20 sticks/day	2	4.2
30 sticks/day	-	-
31 sticks/day	-	-
Attitudes Against Smoking Prohibition in Public Spaces		
Agree	36	79.1
Disagree	12	20.9
Total	48	100.0

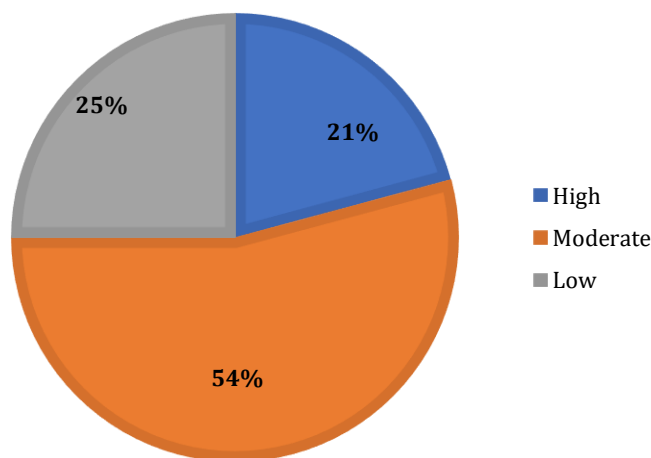
Source: Primary Data, 2024

Smoker respondents reported that they experienced the adverse effects of smoking. Most of them admitted to experiencing disruption in daily activities several times a month (77.2%). However, as many as 70.9% of smoker respondents stated that they had no intention to stop smoking. Based on the number of cigarettes consumed, almost all smoker respondents

consumed approximately ten cigarettes a day (95.8%). It is classified as light smokers. Someone who smokes no more than ten cigarettes a day is defined as a light smoker (Shiffman, 1989). Most respondents have a positive attitude towards regulations regarding smoking. As many as 79.1% of respondents support implementing a regulation forbidding smoking in public areas. This regulation is referred to as the No-Smoking Area. Law Number 36 of 2009 Concerning Health and Government Regulation Number 109 of 2012 Concerning the Control of Materials Containing Addictive Substances in the Form of Tobacco Products for Health requires decision-makers, in this case local governments, to safeguard their citizens from the risks of smoking by implementing No-Smoking Area in their areas. Health service spaces, teaching and learning environments, children's play areas, places of worship, public transportation, businesses, public places, and other designated locations must all have smoking-free zones (Undang-Undang Republik Indonesia Nomor 17 Tahun 2023, 2023). All data about the distribution of respondent's smoking behavior can be seen in Table 2.

3.3 Quality of Life

The proportion of each quality life category among smoker respondents is shown in Figure 1. More than half of smoker respondents had moderate quality of life (54%). They reported that they did not feel the side effects of smoking at the moment. It was also related to the time they started smoking, the number of cigarettes consumed, and how long they have had the smoking habit.



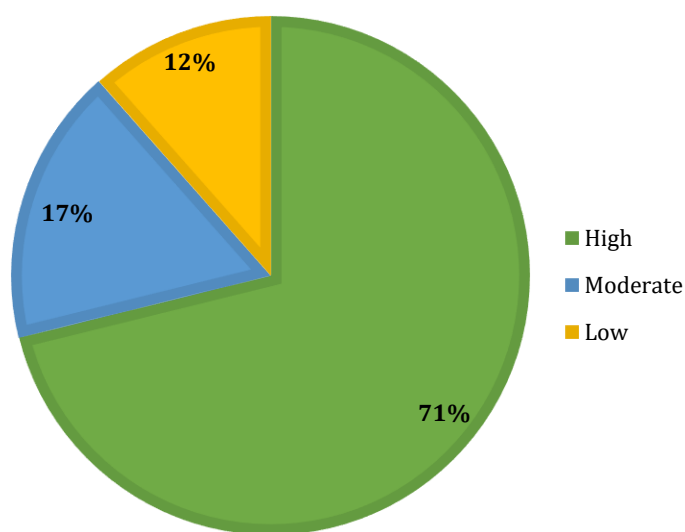
Source: Primary Data, 2024

Figure 1. Quality of life among smoker respondents

Smoking habits and quality of life have various background factors. Smoking behavior symbolizes showing maturity, strength, leadership, and attractiveness to opponents. type, apart from that, smoking aims to seek comfort because smoking can reduce tension and increase concentration (Manitik et al., 2020). This may explain the differences in the results of the analysis obtained by researchers and previous researchers, where there was no relationship between psychological dimensions and smoking behavior due to the influence of individual motivation to smoke, as explained above. Research conducted on groups of teenagers in Surabaya found several social identities that formed where smoking is a measure of a person's maturity, which can also increase self-confidence; teenage smokers also tend to

be open and easygoing with their friends in the same environment. Apart from that, some feel that smoking can relieve stress and depression (Nugroho, 2017).

Active smokers have a higher prevalence of experiencing respiratory symptoms, lung function abnormalities, and higher mortality than non-smokers. The risk of developing diseases caused by smoking depends on the smoking dose, the age at which one starts smoking, the number of cigarettes smoked per day, and the duration of smoking (Nugraha, 2012). The higher a person's degree of smoking, the more that person will be exposed to substances that are considered toxic by the body and respiratory tract, which will lead to a faster decline in lung function compared to non-smokers (Rabe et al., 2007). This finding is in line with a previous study that reported that one of the risk factors that cause lung disease is pollution obtained both from outside and inside (factory fumes, mines, vehicle fumes, etc.) and smoking. Smoking is the most common cause of lung disease. Active smokers can experience mucus hypersecretion and chronic airway obstruction (Oemiati, 2013). Another study also reported that active smokers have a higher prevalence of experiencing respiratory disorders, and smoking can affect the quality of life (Nugraha, 2012). Patients who still smoke have a chance are more likely to experience poor quality of life compared to patients who do not smoke, and patients who smoke with very heavy intensity are more likely to experience poor quality of life than patients who smoke with light intensity (Pontolawokang & Gansalangi, 2018).



Source: Primary Data, 2024

Figure 2. Quality of life among non-smoker respondents

The proportion of each quality life category among non-smoker respondents is shown in Figure 2. Almost three-quarters of non-smoker respondents had a good quality of life (71%). This finding indicates that the quality of life among non-smoker respondents was relatively higher than that of smoker respondents. Based on Figure 1, we can see that only 21% of smoker respondents had a good quality of life. Several factors influence the quality of life in humans, including independence, expressing a sense of satisfaction, psychological well-being, and Physical and Mental Health (Hatsukami et al., 2007).

Active smokers are those who actively smoke directly from their tobacco cigarettes, while passive smokers are people around them who are exposed to and accidentally inhale cigarette smoke. Although both are equally detrimental to health, passive smoking is more dangerous to health. It is because someone who smokes only a tiny portion of the smoke enters the body and lungs. Meanwhile, the remaining smoke exhaled flies into the air and can be directly inhaled by other people as passive smokers. According to WHO, around 1.2 million people die every year from cigarette smoke, even if they don't smoke. Of at least 7,000 chemicals in cigarette smoke, at least 250 are known to be detrimental to health. The harmful particles in cigarettes can stay in the air for several hours or longer. It's not just smoke that is the focus of danger. Still, residue that remains on hair, clothes, carpets, or sofas also poses a risk of danger from cigarette smoke for passive smokers, especially children. There is no doubt about the dangers of smoking for health (Varghese & Muntode Gharde, 2023).

Cigarette smoke contains more than 7,000 chemicals, including nicotine, tar, carbon monoxide, and various additives. When someone inhales cigarette smoke, these substances will enter the lungs and spread throughout the body through the bloodstream. It can cause a variety of health problems, including heart disease, lung cancer, and decreased lung function. Passive smokers are also at risk of experiencing the impact of cigarette smoke on quality of life. Even if someone doesn't smoke, inhaling cigarette smoke from nearby smokers can increase the risk of health problems and reduce quality of life. Frequently inhaling cigarette smoke can increase the risk of developing lung cancer by 20-30% (Kementerian Kesehatan Republik Indonesia, 2022).

The study reveals that non-smoking students have a better quality of life regarding physical, psychological, social, and environmental health than their smoking peers. However, the study has several limitations, including a small sample size, a cross-sectional design, and restrictions on a single university, which may limit the generalizability of the findings.

4. Conclusion

The study found significant differences in quality of life between smokers and non-smokers. Almost three-quarters of non-smoking respondents have a good quality of life, compared to only 21% of smoking respondents. These findings underscore the critical need for enhanced health awareness programs and stricter smoking regulations within the university to promote a healthier environment. Moreover, the study's insights highlight the importance of developing targeted interventions and policies to reduce smoking rates among students to improve their overall quality of life. By implementing comprehensive strategies that combine awareness campaigns and stringent enforcement of smoking policies, universities can foster a supportive environment that prioritizes their student body's well-being and long-term health outcomes.

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