



ORIGINAL ARTICLE

Overview of Psychoactive Substance Use Among Medical Students

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ABSTRACT

Background: Psychoactive substance abuse is a global health problem with physical, psychological, and social impacts. Final-year students are a vulnerable group to psychoactive substance use due to academic demands, stress, and environmental factors. However, research on the profile of psychoactive substance use among medical students is still limited, particularly at the University of Jambi.

Research Objective: To determine the profile of psychoactive substance use among students preparing their thesis proposals in the Medical Study Program at the University of Jambi in 2025.

Methods: This study used a descriptive design with a qualitative approach and was conducted from February to May 2025 at the Faculty of Medicine and Medicine, UNJA. A sample of 139 students was determined using the Slovin formula. The research instrument used the Indonesian version of the WHO-ASSIST questionnaire and was analyzed univariately to obtain the frequency distribution of psychoactive substance use.

Results: Of the total person, 20 had used psychoactive substances in their lifetime, with the most common types of substances being cigarettes, alcohol, inhalants, and sedatives/sleeping pills. Use in the past 3 months was found in 14 individuals, predominantly cigarettes and alcohol. Three individuals reported receiving attention from others regarding their substance use habits, and three had unsuccessfully attempted to quit. No intravenous drug use was found. The most common substances used were cigarettes (14 individuals) and alcohol (8 individuals).

Conclusion: Final-year medical students at the University of Jambi were found to have a history of psychoactive substance use, with the highest prevalence being cigarettes and alcohol. These results indicate the need for education and interventions to prevent psychoactive substance abuse in academic settings.

Keywords: Psychoactive substances, WHO-ASSIST, Students, Cigarettes, Alcohol, University of Jambi.



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INTRODUCTION

Psychoactive substances are chemicals that affect the nervous system and spinal cord, affecting thoughts, feelings, behavior, perception, and consciousness. Psychoactive substances are classified based on their effects on the central nervous system into stimulants, depressants, and hallucinogens (1). Examples of psychoactive substances include caffeine, alcohol, nicotine, and marijuana. Newer psychoactive substances include synthetic cannabinoids, stimulants, benzodiazepines, opioids, hallucinogens, and dissociatives (2). Psychoactive substances are included in psychotropics, as regulated by Law Number 5 of 1997 concerning Psychotropics, which defines substances or drugs, whether natural or synthetic, as non-narcotics, that have psychoactive properties through selective effects on the central nervous system, causing changes in mental activity and behavior (3).

According to the World Health Organization (WHO), alcohol, tobacco, and illicit drugs have been identified as one of the 20 major risk factors for health problems. Furthermore, the WHO has implemented a health approach to screening for alcohol and illicit drug abuse and early intervention for these problems (4). The approach employed reliable and valid screening instruments that can be used by primary healthcare services and public health facilities (5).

In Jambi Province, 29,997 people used ecstasy, 29,074,594 grams of marijuana, and

512,622.94 grams of narcotics. The Jambi Regional Police successfully saved 404,410 lives (6).

Furthermore, the prevalence of psychoactive substance use among adolescents, with drug abuse cases in Indonesia continuing to rise year after year, is significant (7). Research conducted by Carla Raymondalexas Marchira of the Psychiatry Department at the Faculty of Medicine, Gadjah Mada University (UGM), who conducted a screening study on D3 students at the Faculty of Engineering, using the WHO-ASSIST screening, revealed that the most commonly used addictive substances in the last three months were cigarettes (69.77%) and alcohol (29.07%) (8). Although the majority fall into the low- to moderate-risk category, this phenomenon indicates that psychoactive substance use remains quite high among young academics. Among medical students, excessive use of cigarettes, coffee, and sleeping pills is often considered "normal" as a way to cope with the burden of study. However, these habits can develop into addictive behaviors without self-control and adequate environmental support (9).

In addition to internal factors such as stress and the desire to improve academic performance, external factors also play a significant role (10). A permissive social environment regarding smoking and alcohol, easy access through social media or online stores, and a lack of education about the dangers of non-narcotic psychoactive

substances are major contributors to the increasing prevalence of substance abuse among college students. Lack of parental supervision, as most students live in boarding houses or far from their families, further exacerbates this situation (11).

College students are one of the population groups vulnerable to the use of psychoactive substances. The college period, especially in the final year, is marked by various psychological pressures such as academic stress, achievement demands, and social pressure from the environment (11). Stress can be defined as a pressure or something that makes an individual feel depressed (12). Adolescence is the period between puberty and adulthood (13). For medical students, this burden is more complex because it is accompanied by professional responsibilities, a busy lecture schedule, and moral demands to maintain the image as a prospective health worker (14). Moreover, the thesis requires skills and often experiences difficulties in data processing. This pressure often causes anxiety, sleep disorders, and mental fatigue that can trigger the use of psychoactive substances to help relaxation or improve concentration (15).

Final-semester students often experience higher levels of stress than first-semester students due to heightened anxiety about achieving good grades and graduating on time. Stress is further exacerbated by the requirement to write a thesis in the final semester, as it demonstrates academic ability

related to research related to the problem being discussed and is a requirement for graduation (16).

The use of psychoactive substances is one way for students to calm themselves and their minds. Furthermore, there is limited research on psychoactive substance use among students. Therefore, the author was interested in learning more about the Overview of Psychoactive Substance Use Among Students in the Medical Study Program at Jambi University in 2025.

METHOD

This study used a descriptive design with a qualitative approach and was conducted from February to May 2025 at the Faculty of Medicine and Medicine, UNJA. A sample of 139 students was determined using the Slovin formula. The research instrument used the Indonesian version of the WHO-ASSIST questionnaire and was analyzed univariately to obtain the frequency distribution of psychoactive substance use.

RESULT AND DISCUSSION

The results of this study show that the most commonly used addictive substances are cigarettes (8.05%), alcohol (4.02%) and sedatives or sleeping pills (1.72%) with the majority being older teenagers and students, and the majority living in out-of-town students (boarding houses).

In terms of gender, psychoactive substance users included 36 male

respondents and 138 female respondents. This can occur in both sexes, but they have different characteristics and risk factors. In general, the prevalence of psychoactive substance abuse is higher in men than in

women. This is related to social and cultural factors that are more permissive towards risky behavior in men, such as the urge to show courage, peer pressure, and a tendency to try new things.

Table 1. Univariate Analysis

Characteristics of Study Subjects	Distribution (n)	Distribution (%)
Age		
Early Adolescence	17	0.10
Late Adolescence	157	90.00
Gender		
Male	38	21.84
Female	136	78.16
Place of Residence		
Boarding house (rented room)	141	81.03
Living with parents	33	18.97
Type of Psychoactive Substance		
Cigarettes	14	8.05
Alcohol	7	4.02
Inhalants	1	0.58
Sedatives	3	1.72
Not using any	149	85.63

In terms of age, there were 17 respondents in early adolescence and 157 respondents, with the majority aged 20–21 years old, classified as late adolescence, the transition from adolescence to adulthood (16). At this stage, individuals are searching for identity and independence (determining the direction of life, career, and social relationships), tending to try new things, including risky behaviors such as substance use, and experiencing environmental pressures (college, work, relationships) that

can lead to emotional stress. Furthermore, based on student residence, 141 respondents lived in boarding houses and 33 respondents lived with their parents. The most common use of psychoactive substances was in boarding houses, as they were children living away from parental supervision. Alcohol and cigarette abuse can begin with following social circles and addictive habits, such as trying to satisfy curiosity about these substances.

Based on the type of substance used, respondents who smoked cigarettes were moderate. Cigarettes are very dangerous for human health because they affect health and activate macrophages in the human body(17). Acute respiratory disease is one of the 10 most common diseases in Indonesia, with one of the causes being smoking. Furthermore, smoking is also a major trigger for cancer and asthma in a person(18). Pregnant women must have adequate nutrition, as the nutrients they obtain will be used for themselves and their fetus. Pregnant women essentially require additional nutrition, but what is often deficient is energy, protein, and certain minerals, such as iron. If the habit of using psychoactive substances continues into pregnancy, it can lead to pregnancy complications such as placenta previa, placental abruption, and miscarriage because the harmful chemicals from cigarettes enter the bloodstream(19).

The risk level of dependence on cigarettes, alcohol, and sleeping pills or sedatives among students in the Medical Study Program at the University of Jambi in 2025 was divided into low, medium, and high risk. Students with low-risk ASSIST scores for all types of addictive substances should receive feedback on their scores and information related to the type of addictive substance used(20). Students with moderate-risk ASSIST scores for all types of addictive substances should receive

feedback on their scores and brief intervention (21). Students whose scores indicate they are high-risk should receive intensive treatment, which can begin with feedback on their scores and brief intervention (22).

To the agencies and related parties engaged in efforts to overcome the abuse of alcohol, cigarettes and addictive substances for adolescents, especially for students, must improve counseling programs, promotions, counseling and socialization on the prevention of alcohol consumption, cigarette use and addictive substances through interventions or the presentation of posters and leaflets so that information about the dangers of using psychoactive substances is conveyed (23,24). Further research, it is hoped to increase the number of research samples by conducting screening on the use of psychoactive substances in students in the Medical Study Program, University of Jambi so that early detection can be carried out so that prevention and intervention can be carried out earlier (25).

CONCLUSION

The description of the most commonly used types of psychoactive substances are cigarettes, alcohol, tranquilizers or sleeping pills with the risk level of dependence on cigarette use among students in the medical study program class of 2022 and 2023 who are preparing thesis proposals, the majority are in the moderate

category, while for the use of alcohol and tranquilizers or sleeping pills, the majority are in the low category of the older adolescent group and the majority of students who use cigarettes, alcohol and tranquilizers or sleeping pills are students who live in boarding houses. To the relevant agencies and parties, take a good approach with a good environmental strategy so that they can quickly prevent the use of psychoactive substances early¹⁰. Researchers can also conduct Focus Group

Discussions (FGDs) so they can find out more about the reasons respondents use them and provide solutions so they do not use them¹¹. Then, to agencies engaged in efforts to overcome the abuse of alcohol, cigarettes and addictive substances for adolescents, especially for students, they must increase promotional programs, counseling and socialization about preventing alcohol consumption, cigarette use and addictive substances through interventions or presentation of posters and leaflets.

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