

FACTORS RELATED TO THE AWARENESS AND BEHAVIOR OF MARIJUANA USE AMONG UNIVERSITY STUDENTS IN CAPITAL HANOI, VIETNAM

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Abstract

The increasing use of addictive substances, especially marijuana, among university students has increased the burden of disease and social issues. However, the specific data about the prevalence and factors relating to marijuana use among university students is still limited. This study aims to provide the initial research literature about factors affecting the awareness and behavior of marijuana use among university students in Hanoi. The study employed two primary methods: a survey questionnaire and an in-depth interview with a sample of 324 diverse university students. According to research findings, students are generally uncertain about the effects of marijuana and take a neutral stance on its social acceptability. The overall prevalence of marijuana use among university students in Hanoi is 7.4%, of which the rate of use in males is 9.4% and in females is 4.1%. Marijuana use is also influenced by peers' behavior, and parents' false perception of their children's drug prevention capability and marijuana's accessibility may also play a factor.

Keywords: Awareness About Marijuana; Marijuana Use Behavior; University Student

1. INTRODUCTION

According to the latest World Drug Report from the United Nations Office on Drugs and Crime (UNODC-2023), the number of drug users increased from 240 million in 2011 to 296 million in 2021. In the United States, more than 106,000 people died from drug overdoses in 2021 (Spencer et al., 2022). Drug use has increased the burden of disease and social issues linked. Johnston & Malley et al., (2011) stated that marijuana use is associated with both short and long-term consequences, including poor academic performance, impaired cognitive function, attention and memory deficits, respiratory problems, and increased heart rate, etc. Long-term marijuana usage can even lead to addiction, with initiation in adolescence connected to greater rates of addiction, detrimental effects on brain development as well as lifetime learning (Bray et al., 2000). Marijuana users frequently face adverse health, psychosocial, and legal outcomes throughout young adulthood and may have difficulty achieving common developmental tasks such as college graduation, marriage, and stable employment (Schulenberg et al., 2005). Therefore, young marijuana users have a high risk of facing serious long-term consequences.

International epidemiological research has focused on substance abuse among young people, particularly university students, who are at a higher risk of substance abuse due to their educational pursuits (Johnston, 2005). Alcohol consumption and illegal drug use among university and college students are on the rise, particularly in nations where preventive measures are aimed at specific populations (Simons et al., 2005). This may be attributed to the fact that college years are characterized by transition,

intense academic pressures, independence, and separation from parental supervision. During this time, there are more chances to experiment with psychoactive substances, such as marijuana. This issue is crucial when targeting young people, particularly college students, because they change their habits rapidly and are receptive to new influences (Read et al., 2002).

Many studies have been conducted over time to discover the antecedents of marijuana use behavior. Social acceptability, perception of risks and rewards, and expressing these opinions on social media influence marijuana use behavior (Ennett et al., 2008). Among these factors, perceptions of risk often vary by sex and age, with women and minorities tending to rate risk higher than white men (Slovic, 2000). According to the Centers for Disease Control and Prevention, marijuana is the most commonly used illegal drug in the United States; 48.2 million people, or about 18% of Americans, used it at least once in 2019. In particular, the number of American college students who have used marijuana increased from 2016's 39% to 44% in 2020 (Schulenberg et al., 2021). Several epidemiological studies have also been performed in different countries to estimate the prevalence of illicit drug use in college students. In a study conducted in the United Kingdom, 5% of university students reported regularly using illicit drugs and 25% reported using them occasionally (El Ansari et al., 2015). Meanwhile, the prevalence of illicit drug use among university students in the ASEAN region varies by country, from as low as 0.2% in Cambodia to as high as 46% in Laos (Yi et al., 2017).

Although marijuana is on the list of addictive substances that are illegal in Vietnam, there are a certain number of people, including adolescents, who use marijuana here. However, the specific data about its prevalence or causal factors is still limited, especially among university students, as it is still a taboo topic to the majority. This circumstance motivated us to research more about the issue of marijuana usage among students. This study aims to investigate (1) marijuana's prevalence among Hanoian university students (2) other factors relating to marijuana use and awareness of Hanoian university students.

2. METHODS

2.1. Document analysis method

We read books and documents, analyze and synthesize theories, classify and systematize theories. These documents are used as previous authors' research findings. Most documents are sociological research works on culture, health, general sociological theory, etc. The topic also selectively considers information from textbooks, specialized journals, social statistics, other sources on the Internet, etc. However, scholarly research studies published in books or reputable journals are prioritized.

The purpose of the document analysis method is to understand theoretical issues about the cognitive and behavioral status of subjects using addictive substances (especially marijuana among university students); find a reasonable method and approach to the research; compare and evaluate the results of previous researches; and compare and contrast the results of previous research with our own.

2.2. Participant observation method

During the research, we joined marijuana-using friend groups to observe the behavior of those who purchase and sell marijuana. We sat down with them so they would feel at ease and show us their most natural behavior. The entire process from the first step of marijuana use to normal functioning is observed, including the transaction, timing, and invitations to use marijuana itself. Observation provides researchers with specific documents and intuitive feelings, but it also has a significant scientific significance and gives science real-world values. In this research, observation is used in part to identify research problems and test hypotheses.

2.3. In-depth interview method

On the basis of the research topic, we proceeded to build a framework to guide in-depth interviews to look deeper into the patterns and trends among the research subject. We used a sample structure of 8 in-depth interviews corresponding to university students from the first year to the fifth year, so all groups are properly represented.

2.4. Questionnaire interview method

Combining the results from previous methods of research, i.e. reading original documents and interview results, we built a semi-structured questionnaire to collect information on a large scale on the awareness and behavior of students using marijuana in Hanoi. The quantitative research results will be processed on IBM SPSS Statistics 24.0 software to confirm or refute the hypotheses made after the interview.

2.5. Sampling method

This study employs a snowball sampling method, in which participants were students from major universities in Hanoi, including those affiliated with Hanoi National University, University of Economics and Business, National Economics University, Foreign Trade University, Hanoi University, University of Science and Technology, and others. These schools are located in Hanoi's central districts. This research was conducted from September to November 2022. It is the time when university students do not have exams, so their psychological state is not a significant barrier to participation in this study. Approximately 500 students were invited to participate in this study. Only those who expressed an interest and agreement to participate in the study were polled. All procedures follow ethical guidelines in social science research.

Table 1: Sample structure

	Components	N	Percent
Gender	Male	203	62.7%
	Female	121	37.3%
Place of birth	City	176	54.3%
	Urban	148	45.7%
University student	Freshman	35	10.8%
	Sophomore	62	19.1%
	Third-year	126	38.9%
	Fourth-year	62	19.1%
	Fifth-year	10	3.1%
	Other	29	9.0%

Details of the sample structure are presented in Table 1. Of the 500 students invited to participate in the survey, 324 students completed the questionnaire, giving the study a response rate of 64.8%. The sample of 324 students included 203 males (accounting for 62.7%) and 121 females (accounting for 37.3%) with a mean age of 20.9 (SD = 1.2, range of 18–24 years old). The study's participant students' demographics were consistent with those of the schools where they attended.

3. RESULTS AND DISCUSSION

3.1. Marijuana awareness among university students in Hanoi

During the brief and in-depth interviews, university students were asked what they knew about marijuana. The majority of them said it was a stimulant. Only a small percentage of those polled know what is in marijuana. They responded based on their experiences with marijuana. Most people are unable to find the words that they believe best describe how they feel. Since describing how simple shifts in perception or emotional state can be difficult, people who use marijuana create their own jargon to describe the effects of marijuana. The most frequently used word is "high".

Table 2: Effect of marijuana on health

Effect	Mean	SD
1. Affecting the central nervous system	3.64	0.67
2. Increasing risk of respiratory diseases due to decreased immunity	3.25	0.72
3. Affecting the circulatory system (red eyes, heart palpitations)	3.48	0.69
4. Loss of behavioral control (due to hallucinations after using marijuana)	3.83	0.63
5. No effect on health	2.52	0.76
6. Reducing pain	3.74	0.57
7. Preventing some cancers	2.92	0.54

SD: Standard deviation

When asked about the health effects of marijuana, participants were given the choices from 1 to 5 (Strongly Disagree - Disagree - Hesitate - Agree - Strongly Agree). In particular, the first option, "marijuana has an effect on the central nervous system" has an average value of 3.64 (see Table 2). In a new study using Magnetic Resonance Imaging (MRI), researchers reported a lower percentage of gray matter and a higher percentage of white matter in the brain when using marijuana in adolescents who started smoking marijuana before 17 years old (Wilson et al., 2000). This result is particularly alarming because it could indicate disrupted brain development rather than atrophy. Previous studies investigating the effects of marijuana on development have shown that there is a persistent effect on cognitive and psychoactive performance in people who start using marijuana during adolescence. Data showed that individuals with more persistent marijuana dependence have a marked decline in intelligence quotient (IQ), which significantly affects overall IQ (Meier et al., 2012). Furthermore, evidence suggests that overall IQ deficits are not fully reversible after cessation of use (1 year), particularly in adolescent-onset marijuana users (Meier et al. 2012).

Most students are aware that marijuana has a significant impact on the circulatory system and causes loss of behavioral control. On the question of how marijuana affects the circulatory system, 56.8% of respondents agreed. With the option of losing behavioral control, most of the attendants chose 4 (Agree). This is because these are

the most direct and clear effects marijuana users experience. In an in-depth interview, we asked a student how he felt when marijuana affected him: "I felt that at that time my heart was beating very fast, at first I was a little uncomfortable, my head was a little wobbly, my eyes feel like they are dilated. I opened my eyes wide, but in fact, I could only see a certain point. Looking at the surrounding scenery, I see a distorted shape, what is far becomes near, and the feeling is very intense". Within minutes, your heart rate can increase by 20 to 50 beats per minute. Tachycardia can last up to 3 hours. If you have cardiovascular disease, a prolonged increase in your heart rate can increase your risk of a heart attack. One of the obvious signs after using marijuana is bloodshot eyes because marijuana causes the blood vessels in the eyes to dilate. Delta-9 tetrahydrocannabinol (THC), identified as the major active component in Marijuana, can reduce pressure in the eye, relieving the symptoms of glaucoma in a few hours. THC can also make the dopamine system in the body more active, leading to feelings of excitement and restlessness. This excitement makes disturbances in the coordination of visual-mechanical and emotional activities appear in the user's body in reaction time (Miler et al., 2018). Distortions in the concept of time, vision (seeing distorted images) and auditory (hearing unusual noises) can occur with marijuana users. It will cause the user to lose control of their behavior due to such hallucinations.

Marijuana can weaken immunity, increasing the risk of respiratory diseases. The mean value of this opinion is 3.04. Scientists have shown that inhaled particles, gases, and heat over time can cause disease. Tobacco smoke and marijuana smoke contain very similar components, suggesting that the possibility of both contributing to lung disease is very high (Iversen, 2000). Many chronic marijuana smokers are still too young to have serious lung problems. Through in-depth interviews, a person shared with me that "I am a smoker of marijuana because lately I have too many deadlines. But I haven't felt any problems with the respiratory system, after smoking, only coughing which may be due to choking, but I have not seen any signs." However, chronic marijuana users reported adverse respiratory symptoms, including cough, phlegm, wheezing, and bronchitis.

In this perception question, the choice "No health effects" had a mean value of 2.52, with 46.0% choosing answer 3, 4, or 5 (Hesitate – Agree – Strongly Agree). It can be seen that a noticeable portion of the surveyed students, both former and non-users of marijuana, either are uncertain about the effects or believe there are none. Based on these results, it can be concluded that the students are only scratching the surface of marijuana in terms of how it affects the mental and emotional health of users.

3.2. Prevalence and factors related to the behavior of marijuana use among university students in Hanoi

❖ Prevalence of marijuana use

Survey results on marijuana use prevalence among university students in Hanoi are presented in Table 3. The results showed that 24 students (accounting for 7.4%) had ever used marijuana. This can be considered a quite high rate, considering the social and legal scene in Vietnam and some other close regions. This survey result is higher than that in Cambodia and Malaysia. This result is also higher than previous research in Vietnam showing increasing marijuana use among university students in Vietnam (Yi et al., 2017).

The high prevalence of marijuana use among college students may be due to the fact that the college years are a period characterized by transitions, intense academic pressure, and independence and separation from parents' supervision.

Table 3: Prevalence of marijuana use among university students in Hanoi

During your lifetime, have you ever used marijuana?	N	Percent
Never used	300	92.6%
Have used	24	7.4%
Total	324	100%

N: number of participants

❖ **Purpose of marijuana use**

When asked about the main purpose of marijuana use by students, the most chosen answer was "Experience a new feeling" accounting for 29.2%, followed by "Study, research better" accounting for 25.0% (see Table 4). Some students believe that using marijuana increases their ability to concentrate and stimulates their minds to be more creative. Through our short interviews and in-depth interviews, a student shared "I only use marijuana when my work is overloaded and I have to meet deadlines in a hurry. Besides, I don't use it for fun, nor do I use it for relaxation. When using marijuana, I will feel more involved in work, I just keep writing and not being affected by external factors. At the moment everything in my brain comes out, but when it comes to creativity, I don't see it. Because after re-reading, I only see that what I wrote is a synthesis of what I have read. I finished writing the research theory system after just one night of smoking marijuana". The nature of the measures may have contributed to marijuana users' unexpectedly superior performance. However, these findings do not imply that marijuana users perform better academically than others. Some studies on the effects of marijuana on learning and studying have refuted the theory that marijuana helps study and research better (Jacobus et al., 2009).

Table 4. Main purpose of marijuana use

Main purpose of using marijuana	N	Percent
Study, research better	6	25,0%
Stimulate creativity and imagination	2	8,3%
Reduce stress in life	3	12,5%
Satisfy entertainment needs	3	12,5%
Experience a new feeling	7	29,2%
Use for healing spirit	1	4,2%
Other	2	8,3%
Total	24	100%

Only a small percentage of students (about 8.3%) feel their creativity and imagination stimulated. "Sometimes you use marijuana to enjoy art", one of the students interviewed said. Another student shared: "I don't listen to music like everyone else; instead, I enjoy looking at abstract paintings. I frequently see Van Gogh paintings that are difficult to understand, but after smoking marijuana, I truly understand the title and content of the painting. Understanding such a work of art is hardly pleasurable".

The purpose of "Reduce stress in life " and "Satisfy entertainment needs" both account for 12.5%. Some students offer excuses such as boredom or peer pressure. They desire change in their lives. They feel that using marijuana is an easy way to relax and

pass the time. As reported by Tart (1971), marijuana use improves the user's mood. Another study of 100 people who had used the drug at least 50 times found that there was a feeling of relaxation after smoking (Weller & Halikas, 1982). More than 2,500 veterans who have smoked marijuana at least five times report positive effects. Over 90% of people surveyed said the drug made them feel calm or relaxed. More than 60% said the drug made them feel euphoric (Lyons, 1997). These reactions are likely to lead to continued drug use.

❖ **Frequency of marijuana use**

The frequency of marijuana use was assessed with one question, “How often do you use it per week, month, year?”. Based on the numbers given by the students, we calculated the average frequency and specific quantification in 3 categories: Less than, Equal to, and More than 2 times/month.

As shown in Table 5, of the 24 people who used marijuana, 4 people (accounting for 16.7%) responded that they used marijuana twice a month. This was followed by those who had used and never used it again at 5 people (accounting for 20.8%), then those who used marijuana less than twice a month at 7 people (accounting for 29.2%). And the highest rate is more than 2 times/month at 8 people (accounting for 33.3%). Thus, only about 1/5 of people have ever used marijuana and never use it again, while the number of people who use it more than twice a month accounts for the highest percentage among marijuana users.

Table 5: Frequency of marijuana use

Frequency of marijuana use	N	Percent
Used to use it and don't use it anymore	5	20,8%
Less than 2 times/month	7	29,2%
Equal to 2 times/month	4	16,7%
More than 2 times/month	8	33,3%
Total	24	100%

Teens who are unaware of or have never witnessed or experienced the negative consequences of marijuana use may be more likely to experiment with the drug. People who are aware of the negative effects of marijuana use, or who have witnessed or experienced negative effects, can adjust their beliefs to serve their own habits through the use of self-protection and self-enhancement mechanisms. (Gerrard et al., 1996).

❖ **The relationship between marijuana use behavior and gender**

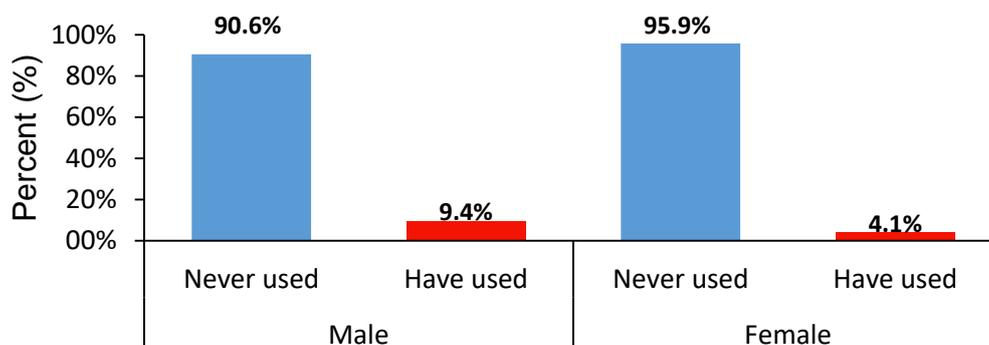


Figure 1: Relationship between marijuana use and gender

There are gender differences in marijuana use. Statistics show that up to 19 people who have ever used marijuana are males, accounting for 9.4%. Meanwhile, the rate of marijuana use in females is only 4.1% (corresponding to 5 people) (see Figure 1). It showed that the percentage of males who have used marijuana is higher than that of females.

Previous research on both alcohol and marijuana use among men and women has found that women perceive more severe psychosocial risks and consequences than men (Foster et al., 2015). Specifically, women exhibit higher sensitivity to the acute effects of marijuana (Cooper & Haney, 2014), and are more vulnerable to dangerous neurodevelopmental effects of prolonged marijuana use (McQueeney et al., 2011). They found that marijuana use reduces quality of life and comes with greater social stigma. (Lev-Ran et al., 2012)

Gender is an expression of a set of biological and social factors, according to current empirical research on marijuana use among college students. Peer influence can also be mentioned in relation to marijuana use. Men are more likely than women to accept marijuana offers from their friends. Men's willingness to take risks is sometimes greater than that of women.

However, the smoking and drinking rates of female adolescents have increased over the past five decades (Schaap et al., 2009). The increasing social affluence in Western nations has spawned a distinct field of youth culture, characterized by distinct products, fashions, and leisure activities such as dancing and partying. These encourage the use of tobacco, alcohol, and other drugs. Besides that, the emancipation of women creates new work and leisure opportunities, allowing women to explore public spaces like pubs, bars, and clubs (Kuntsche et al., 2010). Recent research indicates that adolescent males have higher rates of substance abuse, but the gap between males and females is narrowing (Morton et al., 2009).

Although gender is a significant factor in substance use, the trend toward closing the gender gap in smoking and drinking has never been studied in relation to marijuana use in Vietnam.

❖ ***The influence of family and friends on the use of marijuana by university students***

For the question "When you use marijuana, with whom do you use it most often?", the results presented in Table 6 show that students often use marijuana in 2 main settings: with friends or alone. In particular, students who use marijuana with friends accounted for the largest percentage (at 45.83%), followed by those who do so alone (at 33.33%). A significant number of users also reported that they first used marijuana per the suggestion of their friends. This showed that peer influence is believed to be the most important psychosocial risk factor for adolescent trials with marijuana.

Table 6: Frequent companion in using marijuana

Use marijuana with	N	Percent
Alone	8	33.33%
With friends	11	45.83%
With a boyfriend or girlfriend	1	4.17%
With brothers/sisters	1	4.17%
With strangers (Example: In a party)	2	8.33%
Other	1	4.17%
Total	24	100%

Recent studies have demonstrated the importance of parents discussing specific substance use topics with their children. Miller & Dodd (2004) found that parents use personal anecdotes or examples to illustrate the negative consequences of excessive substance use. Referring to the negative results of their previous use have resulted in effective recommendations (Hazelden, 2012). However, no prior research has examined the relationship between parental references to the negative consequences of their own substance use and adolescents' attitudes and behaviors regarding substance use (Hazelden, 2012).

In surveys and in-depth interviews, more than 95% of students reported that their parents are unaware that they use marijuana. Particularly in Vietnam, where marijuana is still regarded as a prohibited substance, parents will only advise their children not to use it. Therefore, they are less likely to about its specific harmful effects. And many people believe that their children will not dare to use it because it is so dangerous. During brief conversations with the parents of the interviewees, we asked, "Do you think your child uses marijuana?" They replied, "Never. That's something I never thought of. With them banned, they wouldn't know where to buy them. I also told them, no matter what, to stay away from those things. So they probably wouldn't dare to use it." Parents believe that their children have sufficient knowledge and skills to recognize and avoid using it. They have a lot of faith in their children when it comes to drug prevention, especially marijuana.

3.3. Student perspectives on whether or not marijuana should be accepted

According to Vietnam's current law, marijuana is still a controlled substance; its distribution and use are prohibited. Therefore, we asked the participants, "Do you think the fact that young people today are using marijuana a lot should be acceptable?"

The students we interviewed shared:

"I think people should have a better view of marijuana use. My friends who played with me were very comfortable, and no one associated moral values with marijuana use".

"I feel normal. But of course, I was still afraid of my parents or family members finding out. My friends are happy to invite each other, and those on tight deadlines sometimes smoke together. As for adults, I think when they hear about it, they will immediately say that we are spoiled".

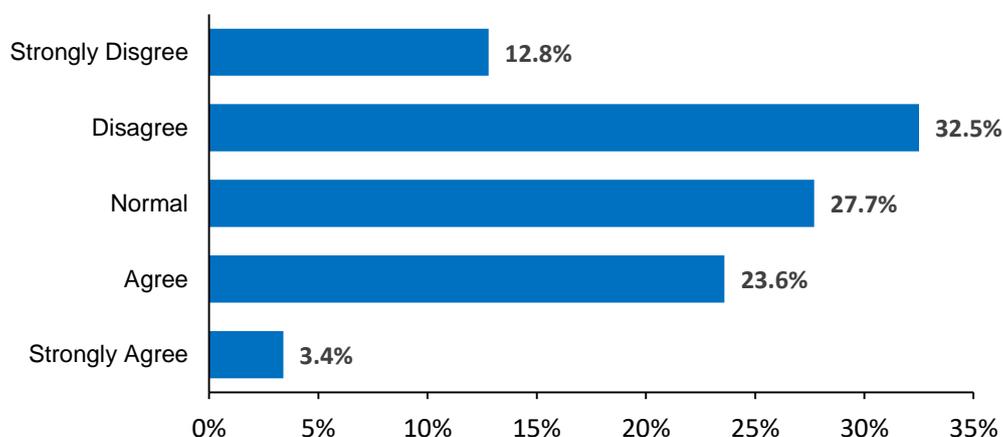


Figure 2: Student perspectives on whether or not marijuana should be accepted

The survey results presented in Figure 2 showed that 23.6% of respondents agree with the above statement, demonstrating that a significant number of young people generally have a very positive view of marijuana use, especially now that many countries in the world have legalized marijuana. The proportion of students who disagreed was 32.5%. However, among those who chose the "disagree" opinion, there are still people who have used marijuana. This could be because they are still afraid that they will be judged by the people around them. Based on my observations and interviews, we can conclude that there is informal social control affecting the students' marijuana use behavior. But it seems that control is getting looser, and over time it will no longer control the behavior of teenagers.

4. CONCLUSIONS AND RECOMMENDATIONS

This study evaluated awareness about marijuana as well as the prevalence and factors related to the behavior of marijuana use among university students in Hanoi. The study indicated that the prevalence of students who use marijuana is relatively high and could be increasing. Marijuana is often used for stress relieving, or entertainment, but the most common misuse is to increase academic capability and experience a new feeling. We also noticed a relationship between gender and marijuana use: women often perceive higher risks linked with its use and are less likely to consume marijuana, though this composition is beginning to change. Finally, we found that marijuana use is influenced by peers' behavior. Parents' false perception of their children's drug prevention capability and marijuana's accessibility may also play a factor. These findings imply the need for advocacy and education campaigns that realistically address the dangers of cannabis use for both adults and adolescents, including the potential for addiction. The results of this study also contribute information to help universities and policymakers give effective substance abuse prevention programs on university campuses, especially as countries move toward legalizing marijuana for recreational use.

This preliminary research indicated that university students in Hanoi use marijuana. Despite the fact that data collection has been done carefully to minimize errors, these numbers cannot be relied upon to accurately represent the number of people who use marijuana. On the other hand, this study was based on a small sample size so the results cannot be considered representative of marijuana use among university students in Hanoi. Instead, it only describes the proportion of people who are willing to admit that they have used marijuana. As an insight into the normative role of marijuana use among these urban youth, however, this study would act as the initial research literature on marijuana use, opening up promising avenues for further research.

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