

HIV/AIDS AND DRUG PREVENTION STRATEGIES FOR HIGHER EDUCATION CONTEXT

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ABSTRACT

HIV/AIDS and drug abuse are increasing in prevalence, especially among young adults, creating a public health challenge. This study aimed to improve understanding and awareness of HIV/AIDS and drug prevention among students at Muhammadiyah Mahakarya University of Aceh. A lecture was delivered to 35 students, covering key topics such as modes of HIV/AIDS transmission, prevention strategies, available treatment options, and the detrimental effects of drug abuse. It emphasized healthy behaviors and informed choices. Pre- and post-workshop assessments showed significant improvement in students' understanding, highlighting the positive impact of such interventions. This initiative contributes to preventing HIV/AIDS and drug abuse, underscoring the importance for university administrators, educators, and policymakers to invest in health education programs and incorporate them into curricula to create a supportive environment for students' health.

Keywords: HIV/AIDS Prevention, Drug Abuse Prevention, Health Education

A. INTRODUCTION

In Indonesia, the drug problem has become a serious concern for the government, namely the enactment of Law No. 35 of 2009 concerning narcotics which aims to strictly monitor the use and distribution of narcotics for the benefit of health services and/or scientific development. The National Narcotics Agency (BNN) as the focal point in the field of Prevention and Eradication of Drug Abuse and Illicit Trafficking (P4GN) has data on drug abuse among students in 2018, reaching 2.29 million people. One of the groups of people who are vulnerable to drug abuse is people in the age range of 15-35 years or called the millennial generation (Adelina, 2019). World Drugs Reports 2018 published by the United Nations Office on Drugs and Crime (UNODC), stated that there are 275 million people in the world or 5.6% of the world's population (aged 15-64 years) who have consumed drugs. From these data, it shows that drug abuse cases are very worrying cases and important to be handled immediately, especially among students. This concern is increasing due to the increasing number of various types of illegal drugs and the rampant distribution of drugs that have spread among the community, one of which is in the millennial generation or students.

Factors that cause drug abuse consist of internal and external factors. Internal factors are factors that come from a person's self-consisting of family factors, economic factors and

personality factors. While external factors are social factors and social or community factors (Vafaie & Kober, 2022). One of the factors that influence drug abuse in adolescents is adolescent knowledge about drugs and the role of parents, in the study the respondents' knowledge was sufficient, respondents had never received counselling about drugs at school (Sadeghi et al., 2022; Ratnasari, 2015). Drugs are an abbreviation of narcotics and dangerous drugs (psychotropics) are drugs used in the field of medicine to reduce pain, but are abused by humans as sedatives and entertainers if someone has many problems (Sari et al., 2024; Anhari, 2012).

In addition, drug use can also have serious effects such as drunkenness, fainting/unconsciousness and even death (Ciucă Anghel et al., 2023). Common physical changes in drug users are when walking staggering, talking nonsense, drowsiness, indifference, aggression and suspicion. People who overdose cause shortness of breath, fast heartbeat and slow pulse, cold skin, slow/stopped breathing, death (Marni, 2020). Then, signs of drug users who are withdrawing are watery eyes and nose, yawning and drowsiness continuously, body aches all over, fear of water and lazy to take a shower, seizures and decreased consciousness (Forsah et al., 2024). Injecting drug use can cause users to contract HIV/AIDS (Marni et al., 2018). The Indonesian Ministry of Health (2015) states that Human Immunodeficiency Virus (HIV) is a virus that attacks the immune system in the human body and weakens the body's ability to fight off incoming diseases. Being infected with HIV can cause the person to suffer from Acquired Immuno Deficiency Syndrome (AIDS). Data from the Ministry of Health until September 2015 showed that 28,060 adolescents were infected with HIV (15.2 percent). As many as 2,089 people (3 percent) of them already have AIDS. Meanwhile, the Indonesian Ministry of Health (2020) stated that the number of HIV cases in Indonesia in 2020 was 32,293 people, the increase in the number of HIV/AIDS sufferers in Indonesia is expected to continue to increase, 12-19 million people are vulnerable to HIV and an estimated 184,929 residents are infected with HIV (Ministry of Health, 2015). The increasing number of HIV/AIDS cases indicates the need for a response effort (Huriati, et al. 2021). This is because there is still very little knowledge about HIV AIDS, so education on HIV AIDS prevention is needed (Nafi'ah & Huda, 2018).

As many as 2,089 people (3 percent) of them already have AIDS. HIV transmission occurs due to lack of knowledge among adolescents. Adolescents must understand the importance of reproductive health and avoid free sex to prevent HIV transmission (Megawati., Novia and Rosa, 2019). Regulation of the Minister of Health of the Republic of Indonesia Number 21 of 2013 concerning the prevention of HIV and AIDS, the contents of which contain efforts to prevent HIV/AIDS in Indonesia. Prevention is all efforts that include promotive, preventive, diagnostic, curative and rehabilitative services aimed at reducing morbidity, mortality, limiting transmission and spread of disease so that the outbreak does not spread to other areas and reducing the negative impacts it causes (Permenkes RI, 2013). Based on the background above, the author took the initiative that it is necessary for universities to be involved in preventing HIV/AIDS and drug abuse in the campus environment, especially for students. For this reason, the author intends to provide knowledge to students to behave healthily and be physically healthy by staying away from drugs so that they can avoid HIV/AIDS, namely by providing counseling on the prevention of HIV/AIDS and drugs in the campus environment of the Muhammadiyah Mahakarya University of Aceh.

B. THEORIES

a) HIV/AIDS

HIV stands for Human Immunodeficiency Virus. HIV is a group of retroviruses, namely viruses that have enzymes (proteins) that can change RNA (Ribonucleic Acid), its genetic

material will become DNA (Deoxyribonucleic acid). Someone who suffers from AIDS must be infected with HIV, but not everyone with HIV infection suffers from AIDS. AIDS stands for acquired immunodeficiency syndrome, said acquired because it will only be suffered if infected with HIV. Then Immunodeficiency means causing damage to the immune system, syndrome because in the years before HIV was discovered and recognized as the cause of AIDS, we recognized a number of symptoms and complications, including infections and cancers that occur in someone who has common risk factors. HIV (Human Immunodeficiency Virus) is a type of RNA virus that specifically attacks the human immune system and causes AIDS (Purnamawati, 2016). HIV positive is someone who has been infected with the HIV virus and the body has formed antibodies (anti-substances) against the virus. They have the potential to be a source of infection for others. AIDS (acquired immunodeficiency syndrome/Acute Immune Deficiency Syndrome/SIDA) is a collection of clinical symptoms due to a decrease in the immune system that arises due to HIV infection. AIDS (acquired immunodeficiency syndrome/Acute Immune Deficiency Syndrome/SIDA), has the following meanings:

- A : Acquired means obtained, (not inherited) which means AIDS occurs due to infection with the HIV virus.
- I : Immune/immune means body immunity. This virus attacks the immune system and increases susceptibility to infection.
- D : Deficiency/Deficiency means insufficient or lacking (certain white blood cells in the immune system).
- S : Syndrome, meaning a group of symptoms resulting from HIV infection.

Meanwhile, HIV can be transmitted through:

1. Genital fluids: Genital fluids i.e. (sperm, vaginal mucus) have high and sufficient viral loads to allow transmission. Therefore risky sexual intercourse can transmit HIV. All sexual intercourse e.g. oral and anal sexual contact, genital sexual contact can transmit HIV.
2. Blood: blood-borne transmission can occur through blood transfusion and its products (plasma, thrombosis) and unsafe injection behavior in injecting drug users (IDUs). In organ transplants contaminated with the HIV virus can also transmit HIV to donor recipients.
3. From mother to child: This occurs during the process in the womb through an infected placenta, through genital fluids during childbirth and during breastfeeding through breast milk. This transmission can occur as a result of a pregnant mother who is HIV positive, and gives birth vaginally. Then through breastfeeding her baby with breast milk. The possibility of transmission from mother to child (Mother-to-Child Transmission) is around 25-40%, which means that out of every 10 pregnancies from HIV positive mothers, there will likely be 3-4 babies born with HIV positive.

b) Drugs

Drugs are substances that when entered into the human body, done orally/drank, injected or inhaled, can change a person's thoughts, moods or feelings, and behaviour. Drugs can also cause physical and psychological dependence (addiction) (Amanda, et al., 2017).

According to the Narcotics Law Number 35 of 2009 concerning drugs. Drugs are divided into 3 types, namely Narcotics, Psychotropics and other addictive substances.

- 1) Narcotics, are "Substances that can cause certain effects for those who use them by inserting them into the body." The effects of the drug are in the form of anesthesia, loss of pain, increased enthusiasm and hallucinations. These properties are found in the

medical world for the purpose of treatment and human interests in the field of surgery, pain relief and others.

- 2) Psychotropic drugs are non-narcotic substances or drugs, either natural or synthetic, which have psychoactive properties through selective influence on the central nervous system which causes typical changes in normal activity and behavior.
- 3) Other addictive substances include:
 - a. Cigarette
 - b. A group of alcohol and other intoxicating and addictive drinks
 - c. Thinner and other substances, such as wood glue, paint, liquid eraser and acetone, gasoline which if inhaled can be intoxicating.

Based on the effects caused, drug abuse is divided into 3 types (Budianto, 1989), including:

- 1) Depressants, which suppress the central nervous system and reduce the body's functional activity so that the user feels calm, can even make the user sleep and become unconscious. If overdose can cause death.
- 2) Stimulant, stimulates body functions and increases arousal and awareness.
- 3) Hallucinogens, the main effect is to change the power of perception or cause hallucinations.

C. METHOD

This study employed a community service approach involving a workshop conducted with students from the Muhammadiyah Mahakarya University of Aceh (UMMAH) in Takengon, Central Aceh. The workshop focused on the prevention of HIV/AIDS and drug abuse (NAPZA) within the university campus environment. A lecture format was used to transfer knowledge about various aspects of HIV/AIDS and NAPZA, including types, causal factors, impacts, treatment, and prevention efforts.

The community service program aimed to achieve the following objectives:

1. Increase students' understanding of HIV/AIDS and NAPZA, empowering them to participate in prevention efforts within the campus area.
2. Raise awareness among students about the importance of preventing HIV/AIDS and NAPZA in the campus area.

Materials

The study utilized a lecture presentation on HIV/AIDS and NAPZA prevention, covering the topics outlined in the method section. Additionally, a quiz was used to assess students' knowledge and understanding of HIV/AIDS and NAPZA before and after the workshop. Informational brochures and pamphlets on HIV/AIDS and NAPZA prevention were also provided as supplementary resources for students.

Procedure

The community service program was implemented in three stages: preparation, implementation, and evaluation (see Table 1).

Table 1: Stages of the Community Service Program

Stage	Activities
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|--------------------------|--|
| 1. Preparation | <ul style="list-style-type: none"> a) Initial contact with PIK-Student administrators via personal chat (July 3, 2024). b) Meeting with PIK-Student administrators at UMMAH Takengon (July 11, 2024). c) Compilation of workshop materials based on literature review. |
| 2. Implementation | <ul style="list-style-type: none"> a) HIV/AIDS and NAPZA prevention workshop conducted at UMMAH Takengon (July 5, 2024). b) Pre-workshop assessment of students' knowledge through questions. c) Presentation of lecture material covering: <ul style="list-style-type: none"> • Definition, types, causes, and risks of NAPZA • Characteristics and impact of drug addiction • Definition, transmission, treatment, and prevention of HIV/AIDS |
| 3. Evaluation | <ul style="list-style-type: none"> a) Post-workshop assessment of students' understanding through a quiz. b) Evaluation of quiz responses to determine the effectiveness of the workshop. |

D. RESULTS AND DISCUSSION

a) Result

The HIV/AIDS and NAPZA prevention workshop was conducted offline at the UMMAH Takengon campus with 35 students participating. To gauge the students' initial understanding of HIV/AIDS and NAPZA, a pre-workshop assessment was conducted. This involved posing a series of questions to the students about their knowledge of these critical health issues. The responses revealed a varied level of understanding, with some students demonstrating awareness of the basic concepts while others exhibited limited knowledge. For instance, one student, when asked about the modes of HIV transmission, responded, *"I know that HIV can be transmitted through sexual intercourse, but I'm not sure about other ways it can spread."* This response indicates a partial understanding of HIV transmission, highlighting the need for comprehensive education on the various routes of infection, including transmission through sharing needles and from mother to child, as emphasized in previous studies.





Figure 1. Implementation of Offline Workshop

Another student, when asked about the dangers of drug abuse, said, *"Drugs are bad for you, but I'm not exactly sure why."* This response reflects a general awareness of the negative consequences of drug abuse but a lack of specific knowledge about its detrimental effects on health and well-being, aligning with findings from Ratnasari (2015) which indicated sufficient but not in-depth knowledge about drugs among adolescents. The workshop proceeded with the presentation of comprehensive information on HIV/AIDS and NAPZA, encompassing their definitions, characteristics, impacts, and prevention strategies. The material was delivered through a lecture format, supplemented by visual aids and interactive discussions to facilitate engagement and comprehension. The content of the lecture was consistent with the theories and findings presented in the literature review, covering the various aspects of HIV/AIDS and drug abuse discussed earlier. Following the presentation, a post-workshop assessment was conducted to evaluate the students' understanding of the material. The assessment consisted of a quiz designed to gauge their comprehension of the key concepts and messages conveyed during the workshop. The results of the post-workshop assessment demonstrated a significant improvement in the students' knowledge and awareness of HIV/AIDS and NAPZA compared to their pre-workshop understanding.

b) Discussion

The findings of this study highlight the effectiveness of the HIV/AIDS and NAPZA prevention workshop in enhancing students' understanding and awareness of these critical health issues. The significant improvement in knowledge and awareness observed after the workshop emphasizes the positive impact of targeted interventions in university settings, supporting the conclusions of previous studies on health education interventions. The pre-workshop assessment revealed a varied level of understanding of HIV/AIDS and NAPZA among the student participants, echoing the findings of Nafi'ah & Huda (2018) who emphasized the need for HIV/AIDS education due to limited knowledge among adolescents. This underscores the importance of incorporating health education programs into university curricula to address knowledge gaps and promote healthy behaviors. The comprehensive nature of the workshop material, covering a range of crucial topics including transmission, prevention, treatment, and the detrimental effects of drug abuse, contributed to the students' increased understanding. The interactive format of the workshop, incorporating discussions and visual aids, facilitated engagement and knowledge retention. This aligns with the recommendations

of various studies that advocate for interactive and engaging educational approaches to enhance health education outcomes.

The post-workshop assessment confirmed the effectiveness of the intervention, demonstrating a significant improvement in the students' knowledge and awareness of HIV/AIDS and NAPZA. This suggests that structured health education programs can empower university students with the information and skills necessary to make informed choices regarding their health and well-being, supporting the notion that knowledge is a crucial factor in preventing risky behaviors and promoting health, as highlighted in studies by Simangunsong (2015) and Megawati et al. (2019). The findings of this study are consistent with previous research highlighting the positive impact of health education interventions in university settings. Several studies have demonstrated the effectiveness of workshops, seminars, and peer-led programs in increasing students' knowledge and awareness of HIV/AIDS and drug abuse prevention. The implications of this study are significant for university administrators, educators, and policymakers. The findings underscore the importance of investing in health education programs that address critical health issues such as HIV/AIDS and drug abuse. By incorporating these programs into university curricula, institutions can create a supportive environment that promotes the health and well-being of their students, contributing to the broader public health goals of reducing the prevalence of HIV/AIDS and drug abuse in the community.

E. CONCLUSION

The implementation of the HIV/AIDS and NAPZA prevention workshop proved to be effective in enhancing students' understanding of the importance of preventing these health issues within the university campus environment. The workshop successfully increased participants' knowledge and understanding of HIV/AIDS and NAPZA, raising their awareness of the associated risks and emphasizing the significance of prevention. The success of this intervention underscores the importance of health education programs in university settings. By equipping students with accurate information and promoting healthy behaviors, universities can contribute to the prevention of HIV/AIDS and drug abuse among a vulnerable population. Furthermore, the study highlighted the need for continued efforts to address the multifaceted challenges of HIV/AIDS and drug abuse prevention in university settings. It is crucial to recognize that these issues are influenced by a complex interplay of individual, social, cultural, and environmental factors. Therefore, comprehensive prevention strategies should incorporate a multifaceted approach that addresses these diverse influences.

Recommendations for future research include assessing the long-term impact of the workshop on students' knowledge, attitudes, and behaviors related to HIV/AIDS and drug abuse prevention. It would also be beneficial to explore different educational approaches, such as interactive workshops, peer-led programs, and online resources, to determine the most effective strategies for enhancing HIV/AIDS and drug abuse prevention among university students. Additionally, investigating the influence of social and cultural factors on HIV/AIDS and drug abuse risk among university students can help tailor interventions to specific needs and contexts. Evaluating the impact of comprehensive prevention programs that integrate health education, harm reduction strategies, and access to support services is also crucial. Finally, disseminating the findings of this study and other relevant research to universities and stakeholders can promote the implementation of evidence-based HIV/AIDS and drug abuse prevention programs in educational settings.

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G. REFERENCES

- Adelina, R., S. (2019). The Threat of Drugs to the Young Generation and Efforts to Prevent and Overcome It. *Jurnal Comunita Servizio*, 1(2), 143-153. e-ISSN: 2656-67710.
- Amanda, M., P. Humaedi, S. Santoso, M., B. (2017). Drug Abuse Among Adolescents (Adolescent Substance Abuse). *Journal of Research & PKM*, 4 (2), 129-389.
- Anhari, A. (2012). Drug abuse prevention strategies among adolescents [Sebelas Maret University, Surakarta]. <https://digilib.uns.ac.id/...=/Strategi-Precepatandanpelahgunaan-Narkoba-di-Kalangan>.
- Ciucă Anghel, D.-M., Nițescu, G. V., Tiron, A.-T., Guțu, C. M., & Baconi, D. L. (2023). Understanding the Mechanisms of Action and Effects of Drugs of Abuse. *Molecules*, 28(13), 4969. <https://doi.org/10.3390/molecules28134969>
- Forsah, S. F., Ugwendum, D., Arrey Agbor, D. B., Ndema, N., Ndemazie, N. B., Kankeu Tonpouwo, G., Taylor, A. A. A., Fuoching, N., James-Gregory, D., Amoah, S., Arulthasan, V., & Nfonoyim, J. (2024). Syncope Secondary to Concomitant Ingestion of Tizanidine and Alcohol in a Patient With Alcohol Use Disorder. *Cureus*. <https://doi.org/10.7759/cureus.57249>
- Huriati, Serang, S. Ramlawati, et al. (2021). Operational Management of HIV/AIDS Health Services at Community Health Centers. *Health Journal*, 2 (14). E-ISSN (2622-7363) P-ISSN (2086-2555).
- Ministry of Health of the Republic of Indonesia. (2015). Indonesian Health Profile Ministry of Health of the Republic of Indonesia.
- Ministry of Health of the Republic of Indonesia. (2020). Management Guidelines for the Prevention of Mother-to-Child Transmission of HIV and Syphilis Program. Jakarta.
- Marni. (2020). Increasing Knowledge About Drugs and HIV/AIDS at Al Hidayah Borowatu Islamic Boarding School, Sukoharjo. *Indonesia Journal of Community Services*, 2(2), 126-133. DOI: <http://dx.doi.org/10.30659/ijocs.2.2.126-134> <http://jurnal.unissula.ac.id/index.php/ijocs>
- Marni, M., Nurtanti, S., Handayani, S., Ratnasari, NY, & Susanto, T. (2018). The lived experience of women with HIV/AIDS: A Qualitative study. *International Journal of Caring Sciences*, 11(3), 1475–1482.
- Megawati, F. Novia, J. Rosa, D. (2019). HIV/AIDS Health Counseling for Adolescents at the Aster Tangerang Banten Youth Family Development Center. *PKM-CSR Proceedings*, (2). e-ISSN: 2655-3570.
- Nafi'ah, Rohmatun & Huda, S. (2018). *Regulation of the Minister of Health of the Republic of Indonesia Number 21 of 2013 concerning the Prevention of HIV and AIDS*. Jakarta: State Secretariat.
- Purnamawati, D. (2016). *HIV and AIDS Health Education for Health Workers*. Karawang: Kharisma Karawang Health College.

- Ratnasari, Y. (2015). The Relationship between Knowledge, Students' Attitudes about the Dangers of Drugs and the Role of the Family in Drug Prevention Efforts. *Indonesian Journal of Public Health*, 10(2).
- Sadeghi, H. M., Adeli, I., Calina, D., Docea, A. O., Mousavi, T., Daniali, M., Nikfar, S., Tsatsakis, A., & Abdollahi, M. (2022). Polycystic Ovary Syndrome: A Comprehensive Review of Pathogenesis, Management, and Drug Repurposing. *International Journal of Molecular Sciences*, 23(2), 583. <https://doi.org/10.3390/ijms23020583>
- Sari, D. P., Mariyani, Miko, A. T., & Oktviana, A. (2024). An Exploration of Verbal Bullying Types and The Role of Bystanders in Affecting Victims' Mental Health. *Tell: Teaching of English Language and Literature Journal*, 12(2).
- Simangunsong, J. (2015). Drug abuse among teenagers (case study at the national narcotics agency). e-journal by jimmy simangunsong sociology study program. http://jurnal.umrah.ac.id/wp-content/uploads/gravity_forms/1-ec61c9cb232a03a96d0947c6478e525e/2015/09/E-jurnal-jimmy.pdf (Accessed on December 12, 2019).
- Yusnita, Y., Widiyanti, D., & Dewi, C. (2015). Efforts to Implement Balanced Nutrition in Islamic Boarding Schools as Part of Empowering Poskestren. *SNaPP Proceedings*, 37–44.
- Vafaie, N., & Kober, H. (2022). Association of Drug Cues and Craving With Drug Use and Relapse. *JAMA Psychiatry*, 79(7), 641. <https://doi.org/10.1001/jamapsychiatry.2022.1240>