

Strengthening Student Capacity as Agents of Change in HIV/AIDS Prevention

Yanni^{1*}, Reski Amaliyasari², Eni Priska Dewi Silaban³, João de Jesus Arcanjo⁴, Tomás António C. F. G. Ribeiro⁵, Euclidio Dos Santos⁶, Ummu Muntamah⁷
Universitas Ngudi Waluyo

Corresponding Author: Yanni yanniayi2@gmail.com

ARTICLE INFO

Keywords: Capacity Building, Students, HIV/AIDS Prevention

Received : 2 October

Revised : 23 November

Accepted: 29 Desember

©2025 Yanni, Amaliyasari, Silaban, Arcanjo, Ribeiro, Santos: This is an open-access article distributed under the terms of the [Creative Commons Atribusi 4.0 Internasional](https://creativecommons.org/licenses/by/4.0/).



ABSTRACT

Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) remains one of the biggest public health challenges in the world, including in Indonesia. The objective of this community service program is to strengthen the capacity of students at the University of North Kalimantan as agents of change in HIV/AIDS prevention through TB-HIV screening and HIV/AIDS awareness activities. The activity was held on December 1, 2025, at the Tanjung Selor Women's Building, involving 101 students and cross-sectoral support, including the Health Office and speakers from Timor Leste. The intervention was carried out in three stages: (1) coordination and licensing with the campus, health office, professional organizations, and venue providers; (2) implementation of TB screening through interviews using screening forms, HIV screening through blood sampling, and hybrid HIV/AIDS awareness raising using lectures and discussions with presentation media and leaflets; (3) evaluation through pre-tests and post-tests to measure the effectiveness of awareness raising in increasing student knowledge. The pretest results showed that prior to the socialization, most students (81.2%) already had good knowledge about HIV/AIDS, while 12.9% were in the adequate category and 5.9% were still in the poor category. After the awareness campaign, there was a more positive shift, with an increase in the proportion of good knowledge to 85% and adequate knowledge to 15%, and no students remaining in the poor knowledge category. These findings indicate that HIV/AIDS awareness campaigns are effective in increasing knowledge, particularly among groups that initially had low knowledge, while also reinforcing the role of health education as a key strategy in preventing and reducing stigma against people living with ODHA on campus

INTRODUCTION

Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) remains one of the biggest public health challenges in the world, including in Indonesia. Human Immunodeficiency Virus (HIV) is a type of virus that can infect white blood cells that attack the human immune system. It is this HIV virus that can cause a cluster of symptoms from a weakened immune system called AIDS (Acquired Immunodeficiency Syndrome) (Pravitasari, 2024; Leli, 2022).

Indonesia is among the countries with the highest number of people living with HIV (PLHIV) in the Asia-Pacific region. According to UNAIDS, in 2023, there are an estimated 570,000 adults and children living with HIV (PLHIV) in Indonesia, with a national prevalence of 0.3%. There are an estimated 28,000 new HIV infections in Indonesia, with about 49% of them occurring in the 15-24 age group in the same year. In 2023, only 77% of ODHIV were aware of their HIV status and treatment coverage was 45%. (Ministry of Health, 2025).

According to a World Health Organization report, approximately 39 million people were living with HIV in 2022, with 1.3 million new cases in the same year (WHO, 2023). Despite various prevention and treatment efforts over the past few decades, HIV continues to spread, especially among children and adolescents (Nurwati, 2020). Globally, there have been 6,000 cases of children infected with HIV.

Based on an analysis of 2024 reporting data in the North Kalimantan Province HIV/AIDS information system, Tarakan City ranks first with the highest number of HIV/AIDS patients, namely 770 out of 1,637 cases in North Kalimantan Province. In 2024, there were 6.6% of HIV cases in people aged ≤ 19 years in North Kalimantan Province and 8% in Tarakan City (North Kalimantan Provincial Health Office, 2025). This phenomenon indicates that adolescents and young adults, including university students, are vulnerable to HIV infection (Wilandika, 2020). The high incidence of HIV/AIDS is due to a lack of knowledge about HIV/AIDS among adolescents and university students (Pravitasari, 2024).

Experts say that adolescents are at high risk of engaging in unhealthy behaviors due to emotional instability and the urge to try new things that accompany the transition from childhood to adulthood (Baderiah 2019; Nasution et al. 2024; Mediawati, 2022). The vulnerability of the student group stems from a lack of adequate knowledge about the transmission, prevention, and impact of HIV/AIDS (Pravitasari, 2024). This low level of knowledge shapes incorrect attitudes and leads to risky behavior (Martilova, 2020). This condition indicates that young people, who should be the future generation of the nation, are actually at high risk of HIV infection due to their low level of knowledge, lack of awareness of safe behavior, and the existence of stigma and discrimination.

The management of HIV/AIDS is not only related to health aspects, but also involves social, economic, and cultural dimensions (Fadhila, 2022). Stigma and discrimination against people living with HIV/AIDS (PLWHA) due to myths and misconceptions are major obstacles to prevention, early detection, and treatment (Utami, 2020; Alaydrus, 2020). HIV/AIDS management requires a comprehensive approach that includes prevention, health promotion, early detection, treatment, counseling, and protection of the human rights of PLWHA. At this point, the role of the younger generation, especially students, becomes very important. Students have intellectual capacity, access to information, and extensive social networks, making them potential drivers of change in community attitudes and behaviors related to HIV/AIDS (Manurung, 2019; Amalia et al, 2023).

Knowledge is one of the reinforcing factors that can influence attitude change, so that attitudes based on knowledge are better than those not based on knowledge (Martilova, 2020). With their intellectual potential and access to extensive information, students can be the main drivers in disseminating reliable information, overcoming stigma, and promoting safe behavior. This capacity building needs to be done comprehensively, including the delivery of accurate knowledge, the formation of positive attitudes, and training in communication and educational skills (Tahir, 2021).

Strengthening the capacity of students as agents of change in HIV/AIDS prevention is aimed at equipping them with the right knowledge, positive attitudes, and practical skills. Through this approach, students are expected to become effective peer educators, credible disseminators of information, and drivers of an inclusive and stigma-free campus environment.

Based on the above phenomenon, it is necessary to strengthen student capacity related to HIV/AIDS to increase knowledge and awareness in efforts to prevent and combat HIV/AIDS in a campus environment that is free from stigma and discrimination.

METHODOLOGY

The community service activity (HIV screening and HIV/AIDS awareness campaign for students at the University of Kaltara) was held at the Tanjung Selor Women's Building on December 1, 2025. The community service activity was attended by 101 students from the University of North Kalimantan. The community service was carried out in 3 stages, namely: The first stage was to coordinate with the University of Kaltara campus regarding the target of the activity, which was students, the Bulungan District Health Office, the IDI Professional Organization, and the Timor Leste Health Agency regarding requests for speakers and the venue for the activity. The second stage is the implementation of community service activities, namely TB and HIV screening

and HIV/AIDS awareness activities for students at the University of North Kalimantan on December 1, 2025. The TB screening activity was conducted using an interview method with the TB Screening Form, while the HIV screening involved blood sampling, with the test results read by the staff and communicated to the screening participants. The HIV/AIDS awareness campaign was conducted in a hybrid format, beginning with a pretest to assess the students' level of knowledge before the HIV/AIDS awareness session. The third stage involves conducting an evaluation by administering a post-test to students to measure the effectiveness of the awareness campaign in increasing students' knowledge about HIV/AIDS after the campaign, as well as compiling a report on the activity results. The facilities and infrastructure used in this community service program include a Meeting License (Zoom), PowerPoint, and leaflets.

RESULT AND DISCUSSION

The implementation of TB-HIV screening and HIV/AIDS awareness activities as an effort to increase students' knowledge about HIV/AIDS was held on December 1, 2025, at 8:00 AM WITA at the Tanjung Selor Women's Building in a hybrid format using a Zoom meeting license because one of the speakers was from another country, namely Timor Leste, with PowerPoint and leaflets used as media for the awareness campaign.

Preparation Stage

This community service activity was held at the Tanjung Selor Women's Building, attended by 101 students. Prior to conducting the TB-HIV screening and awareness campaign, permission was obtained from the university administration and the Bulungan District Health Office. This was done to ensure the smooth running of the activity and to obtain support from the university and the Bulungan District Health Office as the venue for the community service activity. Permits are one form of regulatory and control functions exercised by the government over activities carried out by the community (Syafudin, 2016).

The material presented in this socialization consisted of the HIV/AIDS situation in North Kalimantan province, particularly in Bulungan district, basic information on HIV/AIDS, and best practices for HIV prevention in Timor Leste. The material was delivered in a hybrid format, where participants and speakers were directly involved in the HIV/AIDS awareness activities both offline and online, using lectures and discussions with PowerPoint presentations and leaflets.

Implementation Stage

The TB-HIV screening and awareness activities were carried out on December 1, 2025, with 101 students participating in TB screening and blood sampling for HIV screening. The TB screening was conducted through interviews using the TB Screening Form, while HIV screening involved blood sample

collection. The test results were read by the staff and communicated to the participants. The HIV/AIDS awareness campaign began with a pre-test to assess the students' knowledge level before the HIV/AIDS awareness session was delivered.

The material was delivered in a hybrid format using lectures and active discussions, which actively involved participants in the learning process to discuss and share their initial knowledge. The delivery of material with an understanding of HIV/AIDS is expected to equip students as agents of change in HIV/AIDS prevention with the right knowledge, positive attitudes, and practical skills to become effective peer educators, credible information disseminators, and drivers of an inclusive and stigma-free campus environment.

After the material presentation, the same students took a post-test by filling out the same questions as the pre-test on Google Forms. Subsequently, the students made a statement of Student Commitment against Stigma by signing an Anti-Stigma statement letter.

Service-Learning Results

Pre-test and Post-test Results on Knowledge about HIV/AIDS

Results of an assessment of students' knowledge about HIV/AIDS before and after receiving information about HIV/AIDS. Of the 101 students who attended and took the pre-test, the results were as follows:

Table 1. Service-Learning Results

	Insufficient Knowledge (≤ 55)	Adequate Knowledge (56 - 75)	Good Knowledge (76-100)
Pretest	6 People (5,9%)	13 People (12,9 %)	82 People (81,2 %)
Posttest	0 %	15 People (15 %)	86 People (85 %)

Based on the table above, it shows the scores and percentages of students before and after HIV/AIDS socialization, which are divided into three criteria, namely good knowledge level with a score range of 76-100, adequate knowledge level with a score range of 56-75, and poor knowledge level with a score range of ≤ 55 .

Discussion

The results obtained from 101 students show that the students' level of knowledge is already quite high, with the majority of students, namely 82 people (81.2%), having a good level of knowledge about HIV/AIDS. This shows that before the intervention, the majority of participants already had a basic knowledge of this topic, with 13 people (12.9%) having an adequate level of knowledge. This group is a potential target for improving their scores through socialization, and there were 6 people (5.9%) who still had a low level of knowledge. Although the

percentage is small, this group needs more attention because a lack of understanding can potentially lead to inappropriate behavior or misinformation.

After conducting an HIV/AIDS awareness campaign among 101 students, there was a significant increase in the distribution of scores, with the number of students with a good level of knowledge increasing to 86 (85%). This represents an increase of 3.8% (from 81.2% to 85%). The number of students with adequate knowledge also increased to 15 (15%), and the most notable result was that there were no students with poor knowledge, with 0% of students scoring ≤ 55 . This means that the 6 students who were previously in the poor category had successfully improved their scores to at least the adequate category.

The research by Liu et al. (2020) also supports the results of this study, namely that 2,165 and 2,062 new students were recruited before and after the HIV/AIDS health education program. There was a significant increase in awareness about HIV/AIDS after the health education intervention, increasing from 48.59% (95% confidence interval: 46.47% to 50.72%) to 76.24% (95% confidence interval: 74.35% to 78.06%). Students from the Hui and Tibetan ethnic groups, as well as those who were prejudiced against people living with HIV/AIDS, showed lower levels of knowledge about HIV/AIDS compared to others.

Smith et al. (2014) reinforce the explanation that these students may have limited understanding of risk factors, how diseases spread, and the health and social consequences of certain sexual behaviors. For public health workers who have received training on healthy sexuality and safe sex practices, this behavior may seem like basic knowledge, but young adults who have not been exposed to this information may not fully understand the associated risks. Studies on human sexuality influence various academic fields, but discussions about it are often limited to health departments and student health clinics. Health education for students is important to increase knowledge about HIV in order to change behavior to prevent transmission and change negative stigma towards people living with HIV.

CONCLUSION AND RECOMEMENDATION

Based on the results of community service activities conducted by students of the Public Health Master's program at Ngudi Waluyo University for students at Kaltara University in North Kalimantan Province, the majority of Kaltara University students (81.2%) already had a good level of knowledge about HIV/AIDS before the socialization program was conducted. However, 18.8% of students still had knowledge at the Sufficient (12.9%) and Insufficient (5.9%) levels.

The socialization activity proved effective in increasing students' knowledge levels. This effectiveness was demonstrated by an increase in the percentage of

students with Good knowledge (from 81.2% to 85%) and, most significantly, the elimination of students with Poor knowledge (down from 5.9% to 0%).

There was a positive shift in the overall score distribution, indicating that the socialization successfully provided adequate information, especially to the group that previously had the lowest level of understanding.

ACKNOWLEDGMENT

We would like to express our gratitude to the Rector, Dean, Head of Study Program of Ngudi Waluyo University, North Kalimantan Provincial Health Office, Bulungan Regency Health Office, Timor Leste Health Office, IDI Professional Organization, and the entire academic community of Kaltara University for their assistance in this community service program.

REFERENCES

- Caprara, G. V., & Zimbardo, P. G. (2004). Personalizing politics: A congruency model of political preference. *American Psychologist*. <https://doi.org/10.1037/0003-066X.59.7.581>
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*. <https://doi.org/10.1037/0003-066X.55.1.34>
- Haerani, S., Parmitasari, R. D. A., Aponno, E. H., & Aunalal, Z. I. (2019). Moderating effects of age on personality, driving behavior towards driving outcomes. *International Journal of Human Rights in Healthcare*. <https://doi.org/10.1108/IJHRH-08-2017-0040>
- Lusardi, A., Mitchell, O. S., & Curto, V. (2010). Financial literacy among the young: Evidence and implications. *National Bureau of Economic Research*, 358–380. Retrieved from <https://www.nber.org/papers/w15352.pdf>
- Sabri, M. F., & MacDonald, M. (2010). Savings Behavior and Financial Problems among College Students: The Role of Financial Literacy in Malaysia | Sabri | Cross-cultural Communication. *Crosscultural Communication*. <https://doi.org/10.3968>