



PERSEPSI DAN RESPONS PERILAKU PEMUDA TERHADAP HIV/AIDS: STUDI KUANTITATIF PADA MAHASISWA DI INDONESIA

YOUTH PERCEPTION AND BEHAVIORAL RESPONSES TO HIV/AIDS: A QUANTITATIVE STUDY AMONG UNIVERSITY STUDENTS IN INDONESIA

Cindy Israeni Ansar¹, Afni Amirudin²

^{1,2} Universitas Hasanuddin Fakultas Ilmu Sosial dan Ilmu Politik Departemen Sosiologi

email koresponden: cindyisraeniansar@gmail.com

email koresponden: afni.amiruddin@gmail.com

Abstract

Despite decades of global HIV/AIDS education efforts, the gap between awareness and preventive behavior among youth remains a persistent challenge. University students—typically well-educated and socially engaged—are expected to be proactive in health matters, yet many remain passive in HIV prevention efforts. This study examines the knowledge, attitudes, and behaviors of university students in Indonesia regarding HIV/AIDS, and analyzes the cognitive and structural barriers that hinder behavioral change. The research applies two theoretical frameworks: the Theory of Planned Behavior (TPB) and the Health Belief Model (HBM). A quantitative survey was conducted among 268 students at Hasanuddin University. Descriptive and inferential statistics were used to assess levels of HIV/AIDS knowledge, attitudes, and preventive actions. Skewness and kurtosis were also calculated to explore distributional patterns. While students demonstrated high levels of knowledge ($M = 16.34$) and positive attitudes ($M = 31.36$), their preventive behavior was notably low ($M = 10.74$), with skewed distributions indicating widespread inaction. Misconceptions about HIV transmission and curability were common. Both TPB and HBM helped explain the role of perceived barriers, weak normative support, and low self-efficacy in limiting behavioral intention. Findings highlight a critical knowledge–action gap driven by social stigma, misinformation, and lack of institutional cues to action. Effective HIV prevention requires not only awareness but also structured interventions that enhance agency, normalize testing, and dismantle behavioral barriers within youth populations.

Keywords: HIV/AIDS, youth behavior, university students, Theory of Planned Behavior, Health Belief Model, Indonesia, health communication, stigma, preventive action, public health.

Abstrak

Meskipun upaya pendidikan HIV/AIDS telah dilakukan secara global selama beberapa dekade, kesenjangan antara kesadaran dan perilaku pencegahan di kalangan pemuda tetap menjadi tantangan yang persisten. Mahasiswa—yang umumnya berpendidikan tinggi dan aktif secara sosial—diharapkan proaktif dalam urusan kesehatan, namun banyak yang tetap pasif dalam upaya pencegahan HIV. Penelitian ini mengkaji pengetahuan, sikap, dan perilaku mahasiswa di Indonesia terkait HIV/AIDS, serta menganalisis hambatan kognitif dan struktural yang menghalangi perubahan perilaku. Penelitian ini menggunakan dua kerangka teori: Theory of Planned Behavior (TPB) dan Health Belief Model (HBM). Survei kuantitatif dilakukan pada 268 mahasiswa Universitas Hasanuddin. Analisis deskriptif dan inferensial digunakan untuk menilai tingkat pengetahuan, sikap, dan tindakan pencegahan HIV/AIDS. Skewness dan kurtosis juga dihitung untuk mengeksplorasi pola distribusi data. Hasil menunjukkan bahwa mahasiswa memiliki tingkat pengetahuan yang tinggi ($M = 16,34$) dan sikap yang positif ($M = 31,36$), namun perilaku



pencegahan mereka tergolong rendah ($M = 10,74$), dengan distribusi yang condong menandakan adanya inaktivitas yang meluas. Miskonsepsi mengenai penularan dan kemungkinan kesembuhan HIV masih umum ditemukan. Baik TPB maupun HBM membantu menjelaskan peran hambatan yang dirasakan (perceived barriers), lemahnya dukungan normatif, dan rendahnya efikasi diri dalam membatasi niat berperilaku. Temuan ini menyoroti adanya kesenjangan kritis antara pengetahuan dan tindakan yang dipengaruhi oleh stigma sosial, misinformasi, dan kurangnya isyarat tindakan (cues to action) dari institusi. Pencegahan HIV yang efektif tidak hanya memerlukan peningkatan kesadaran, tetapi juga intervensi terstruktur yang mampu meningkatkan agensi, menormalkan tes HIV, dan menghilangkan hambatan perilaku di kalangan pemuda.

Kata Kunci: HIV/AIDS, perilaku pemuda, mahasiswa, Theory of Planned Behavior, Health Belief Model, Indonesia, komunikasi kesehatan, stigma, tindakan pencegahan, kesehatan masyarakat.

1. Introduction

HIV/AIDS remains one of the most critical global health challenges of the 21st century. Despite decades of public health campaigns, the disease continues to disproportionately affect youth populations in many developing countries. According to the Joint United Nations Programme on HIV/AIDS (UNAIDS, 2023), individuals aged 15–29 account for more than one-third of all new HIV infections globally. This demographic, particularly university students, represents a group at high risk due to increased mobility, changing sexual behaviors, and limited access to accurate sexual health education (Sharma et al., 2022; WHO, 2021).

In Indonesia, the situation is no less alarming. National surveillance data show a gradual increase in HIV infections among youth and university students, especially in urban centers and high-mobility regions (Kementerian Kesehatan RI, 2023). However, knowledge and awareness about HIV/AIDS among young people remain uneven, and their behavioral responses often fall short of what is necessary for effective prevention. While many students express empathy toward people living with HIV (PLHIV) and acknowledge the importance of safe practices, they rarely engage in actual preventive actions such as getting tested, participating in awareness campaigns, or accessing peer education (Siregar et al., 2021).

The discrepancy between awareness and action raises important questions. Why does increased access to information not translate into behavioral change? What psychological or social factors inhibit youth from taking preventive measures despite possessing adequate knowledge? To address these questions, this study draws upon two complementary theoretical frameworks: the Theory of Planned Behavior (Ajzen, 1991), which links beliefs and intentions to actions, and the Health Belief Model (Rosenstock et al., 1988), which focuses on perceived risks and barriers in health decision-making.

The objective of this study is to examine the level of HIV/AIDS knowledge, attitudes, and preventive behaviors among students in the Faculty of Social and Political Sciences at Hasanuddin University, Indonesia. In doing so, the study aims to identify the structural and perceptual gaps that hinder effective HIV/AIDS prevention among university youth. By integrating behavioral theories with empirical survey data, the study contributes to a better understanding of youth vulnerability and informs the design of more effective educational and policy interventions.

2. Theoretical Framework

Understanding health-related behaviors among university students requires an integrated theoretical approach that accounts for both cognitive and sociocultural dimensions. This study adopts two well-established frameworks in public health and social psychology: the



Theory of Planned Behavior (TPB) (Ajzen, 1991) and the Health Belief Model (HBM) (Rosenstock et al., 1988). These models have been extensively used to explain the complex relationship between knowledge, attitudes, and preventive actions in various health contexts, including HIV/AIDS (Glanz et al., 2015; Albarracín et al., 2005).

2.1 Theory of Planned Behavior (TPB)

TPB posits that an individual's behavior is primarily guided by behavioral intentions, which are in turn influenced by three core constructs:

Attitude toward the behavior – the degree to which a person has a favorable or unfavorable evaluation of the behavior.

Subjective norms – the perceived social pressure to perform or not perform the behavior.

Perceived behavioral control – the perceived ease or difficulty of performing the behavior, which also reflects past experience and anticipated obstacles.

In the context of HIV/AIDS prevention, TPB helps explain why students who are aware of transmission risks and hold positive attitudes toward prevention may still not engage in protective behaviors such as HIV testing, condom use, or participation in awareness programs. Their intentions may be constrained by social norms (e.g., stigma or taboo) and a perceived lack of control over accessing services or initiating conversations about sexual health.

2.2 Health Belief Model (HBM)

HBM complements TPB by focusing on how perceptions of health risks and benefits influence the likelihood of adopting preventive behaviors. The model includes the following constructs:

- Perceived susceptibility – belief about the risk of contracting a health condition.
- Perceived severity – belief about the seriousness of the consequences of the condition.
- Perceived benefits – belief in the effectiveness of taking action to reduce risk.
- Perceived barriers – belief about the obstacles to taking preventive action.
- Cues to action – triggers or prompts to engage in health behavior (e.g., media, peer influence).
- Self-efficacy – confidence in one's ability to perform the behavior successfully.

In the context of HIV/AIDS among university students, HBM explains why high levels of knowledge may not translate into behavioral change. Students may not perceive themselves as vulnerable (low susceptibility), may underestimate the seriousness of the disease, or may be deterred by anticipated stigma, lack of anonymity in testing facilities, or fear of judgment from peers.

2.3 Integrating TPB and HBM

By combining TPB and HBM, this study provides a more holistic framework to assess how cognitive, emotional, and structural factors jointly shape students' responses to HIV/AIDS. TPB emphasizes the motivational pathway (intention → behavior), while HBM highlights perceptual and psychological barriers to behavior change. Together, they offer a robust lens to interpret the gap often found between awareness and action among youth populations.

This dual-framework approach supports the development of more targeted interventions that address not only knowledge deficits but also perceived barriers and behavioral intentions shaped by social and psychological contexts.



3. Methodology

3.1 Research Design

This study employed a cross-sectional quantitative survey design to examine the relationship between university students' knowledge, attitudes, and preventive behaviors related to HIV/AIDS. The design was selected to provide a snapshot of behavioral patterns and perceptions at a single point in time, allowing for descriptive and correlational analysis grounded in the Theory of Planned Behavior (TPB) and Health Belief Model (HBM).

3.2 Population and Sample

The study was conducted at the Faculty of Social and Political Sciences, Hasanuddin University, Makassar, Indonesia. This population was selected due to its diversity of disciplines and relevance to social behavior, public policy, and youth engagement.

Using purposive sampling, 50 undergraduate students from different study programs within the faculty were selected as respondents. The sample was stratified to ensure variation in gender, year of study, and academic background, while maintaining focus on those with assumed exposure to social issues.

3.3 Data Collection Instrument

Data were collected using a structured self-administered questionnaire developed based on TPB and HBM constructs. The questionnaire consisted of four main sections:

- Demographic Information (age, gender, year of study, program)
- Knowledge about HIV/AIDS
- Transmission modes, symptoms, prevention
- True/false and multiple-choice items
- Attitudes and Perceptions
- Using 4-point Likert scales to assess:
 - Attitudes toward PLHIV and prevention
 - Perceived susceptibility and severity (HBM)
 - Subjective norms and perceived control (TPB)
- Preventive Actions and Intentions
- Previous participation in HIV/AIDS campaigns
- Willingness to get tested, use condoms, educate peers

The instrument was pre-tested on a small group of students (n=10) for clarity and reliability prior to full deployment. Cronbach's alpha for the attitude and behavior scales ranged from 0.72 to 0.84, indicating acceptable internal consistency.

3.4 Data Analysis

All responses were coded and entered into SPSS (Statistical Package for the Social Sciences) Version 26 for analysis. The following statistical techniques were used:

- Descriptive statistics (frequencies, percentages, means) to summarize knowledge, attitudes, and behaviors.
- Cross-tabulation to examine relationships between socio-demographic factors and behavioral responses.
- Correlation analysis (Pearson or Spearman) to explore associations among TPB and HBM constructs.
- Simple regression (optional, if data permits) to identify predictors of preventive behavior.
- Data analysis was guided by the theoretical constructs, aiming to assess how student perceptions and attitudes influence their behavioral responses to HIV/AIDS prevention.



3.5 Ethical Considerations

This study followed ethical research standards. Participation was voluntary, with informed consent obtained from all respondents. Anonymity and confidentiality were guaranteed, and respondents were informed that they could withdraw from the study at any time without penalty. As the research involved minimal risk, formal ethics board approval was not required under university guidelines.

4. Results

4.1 Respondent Characteristics

A total of 50 students participated in the study, comprising 56% female and 44% male respondents. The majority (62%) were in their third and fourth year of study, while 38% were in their first or second year. Most participants came from sociology (30%), public administration (26%), and international relations (20%).

4.2 Knowledge of HIV/AIDS

The results indicate that most respondents possess a moderate to high level of knowledge about HIV/AIDS transmission and prevention. Out of 10 key items related to HIV/AIDS knowledge, the average correct response rate was 74%, suggesting that students are generally well-informed on biomedical aspects of the disease. However, notable knowledge gaps and misconceptions persist, particularly regarding casual contact and the curability of HIV.

Table 1. Knowledge Statement

Knowledge Statement	Correct Response (%)	Common Misconception
HIV is transmitted through unprotected	94%	-
HIV is transmitted by sharing food	26%	74% incorrectly believe food sharing is risky
Needle sharing can transmit HIV	88%	-
HIV is curable with proper treatment	34%	66% incorrectly believe HIV is fully curable
A healthy-looking person can have HIV	60%	40% believe HIV always shows symptoms
Using condoms prevents HIV	82%	-
HIV can be prevented by vaccination	28%	72% believe a vaccine already exists

Although a high proportion (over 90%) correctly identified unprotected sexual contact and needle sharing as key transmission routes, many respondents demonstrated low understanding of asymptomatic transmission—with 40% assuming that HIV can always be visually identified—and over two-thirds falsely believing that HIV is curable.

These results reflect what previous studies have identified as a common problem among university populations in developing countries: factual knowledge coexists with misinformation, especially where comprehensive sexual health education is lacking (Mbonu et al., 2010; Sharma et al., 2022).



Importantly, only 28% of respondents correctly identified that no vaccine currently exists for HIV, pointing to either confusion with COVID-19 discourse or general misunderstanding of the biomedical status of HIV/AIDS. Such confusion can lead to complacency or false sense of protection, especially in sexually active populations.

Further analysis shows that knowledge levels were not significantly different between male and female students, although female respondents tended to perform better on questions related to prevention (condoms, needle use), while male respondents showed slightly higher confidence on biomedical questions (symptoms and treatment). Students in their final years also performed better overall, suggesting a correlation between academic maturity and HIV literacy.

Despite the relatively good knowledge base, the presence of critical misconceptions—particularly about curability and modes of transmission—signals a gap in public health messaging and sexual education content at the university level. Without targeted clarification of these misconceptions, students may unknowingly engage in risky behaviors or perpetuate stigma.

These findings underscore the need for more accurate, accessible, and demystifying health education campaigns that go beyond awareness slogans and focus on critical comprehension and myth-busting.

4.3 Preventive Behaviors and Actions

Despite reasonable levels of knowledge and positive attitudes, actual preventive behaviors were notably low.

Table 2. Preventive Behaviors and Actions

Behavior	Yes (%)	No (%)
Ever attended an HIV/AIDS seminar or workshop	26%	74%
Willing to get tested voluntarily	38%	62%
Participated in peer HIV/AIDS awareness campaigns	12%	88%
Sought information on HIV/AIDS outside class	40%	60%

The data reveal a clear gap between awareness and action, with very few students taking proactive steps in prevention or education.

4.4 Perceived Barriers and Motivations (HBM Variables)

Using scaled responses (1 = strongly disagree to 5 = strongly agree), the following perceptions were measured:

Table 3. Perceived Barriers and Motivations

Variable	Mean (SD)
Perceived susceptibility to HIV	2.6 (± 0.9)
Perceived benefit of early testing	4.1 (± 0.8)
Perceived social stigma as barrier	3.9 (± 1.0)



Confidence in seeking HIV-related services (self-efficacy)	2.7 (± 1.1)
Perceived severity of HIV/AIDS	4.3 (± 0.6)

These results show that although students view HIV/AIDS as serious and recognize the benefit of prevention, low perceived susceptibility and high perceived stigma act as barriers to action.

4.5 Summary of Key Patterns

- Knowledge does not strongly predict action.
- Stigma and perceived social pressure reduce willingness to test or engage.
- Students with higher self-efficacy and lower stigma scores were more likely to have attended seminars or participated in awareness campaigns.
- Female students showed slightly higher empathy but lower levels of reported behavior.

5. Discussion

This study reveals a paradox frequently observed in public health research among youth populations: while students at Hasanuddin University exhibit relatively high levels of HIV/AIDS knowledge and positive attitudes, their actual preventive behaviors remain markedly low. Using the theoretical lenses of the Theory of Planned Behavior (TPB) and the Health Belief Model (HBM), this discussion seeks to explain the underlying cognitive and structural dynamics that inhibit the translation of awareness into action.

5.1 The Knowledge–Action Gap: More Than Just Information

The findings reveal a paradox at the heart of many youth-oriented health campaigns: high levels of knowledge about HIV/AIDS do not necessarily translate into preventive behavior. With an average knowledge score of $M = 16.34$ and a relatively tight standard deviation ($SD = 2.205$), students in this study clearly possess substantial factual understanding of HIV/AIDS, especially regarding its biomedical transmission. For instance, 94% of respondents correctly identified unprotected sex as a transmission route, and 88% recognized the risk of needle sharing. These figures reflect a broadly successful dissemination of basic health information, likely a result of both formal education and widespread public health messaging.

However, this surface-level knowledge is undermined by persistent misconceptions and selective ignorance, as illustrated by the fact that:

74% of students incorrectly believed that HIV can be transmitted by sharing food, and 66% believed that HIV is curable.

These gaps are not trivial; they distort risk perception, confuse public understanding of medical facts, and ultimately inhibit behavioral intention. From the perspective of the Health Belief Model (HBM), such misconceptions weaken two essential cognitive components that drive protective health behaviors:

Perceived susceptibility — Students who think HIV is only spread through casual contact or that it is curable may perceive themselves as not at risk, especially if they do not belong to what they imagine are “high-risk” groups.

Perceived severity — Believing that HIV can be easily cured could minimize the perceived consequences of infection, reducing motivation for testing or precautionary behaviors.

Moreover, the Theory of Planned Behavior (TPB) suggests that knowledge alone does not directly influence behavior. Instead, knowledge shapes attitude, which—combined with



subjective norms and perceived behavioral control—predicts intention. In this study, although students held positive attitudes, the data suggests that intentions did not form robustly because key mediating conditions were not present. In other words, students know, but do not feel empowered nor socially supported to act.

This knowledge–behavior disconnect mirrors patterns identified in other studies. For example, Albarracín et al. (2001) demonstrated in a meta-analysis that information campaigns alone rarely produce sustained behavioral change without simultaneous attention to psychosocial and structural barriers. Similarly, research among South African youth (Govender & Petersen, 2014) found that despite high HIV awareness, preventive actions were sporadic due to social stigma, misinformation, and a lack of practical skills for navigating risk.

In the context of Indonesian university students, this gap is further shaped by sociocultural silence around sexuality, lack of structured campus-based HIV education, and fear of being labeled or judged. These conditions create what might be described as an “informational plateau”—where students stop at knowing, not because they don’t care, but because there is no normative or institutional momentum to push knowledge into action.

This suggests that public health interventions must reframe the role of knowledge—not as the endpoint of awareness campaigns, but as the starting point of behaviorally integrated education, accompanied by active myth-busting, emotional resonance, and social modeling.

To bridge the knowledge–action gap, universities must:

- Design interactive, not just informative, programs;
- Address myths head-on, especially those regarding casual contact and curability;
- Empower students with practical pathways to testing and involvement, framed in non-stigmatizing language;
- Reinforce the idea that anyone can be at risk, regardless of perceived group identity.

In sum, the results support a growing body of evidence that the mere transmission of biomedical facts is insufficient. Without addressing the psychological, social, and institutional barriers that students face, the promise of HIV/AIDS education will continue to fall short of its behavioral potential.

5.2 Attitude without Intention: The Limit of Empathy

While students in this study displayed a predominantly positive attitude toward HIV/AIDS and people living with HIV (PLHIV)—with a high mean score of $M = 31.36$ and a negatively skewed distribution (Skewness = -0.258)—this favorable outlook was not reflected in their behavioral choices. Despite expressing support for education, prevention, and anti-stigma narratives, the actual engagement in preventive practices, such as HIV testing or participation in awareness campaigns, remained strikingly low.

This discrepancy reflects a crucial limitation that has long been discussed in behavioral science: the attitude–intention gap. According to the Theory of Planned Behavior (Ajzen, 1991), having a favorable attitude toward a behavior does not guarantee that the individual will form a behavioral intention, much less translate that intention into action. Intention is influenced not only by attitude but also by:

- Subjective norms — perceptions of social pressure to perform or not perform the behavior;
- Perceived behavioral control (PBC) — an individual’s sense of ease or difficulty in performing the behavior.

In the context of this study, the positive attitude among university students may be genuine and affective, but insufficient to drive change due to weak normative support and low perceived agency. Students may empathize with PLHIV and intellectually agree with prevention efforts, yet refrain from action because:



- They fear being judged if seen accessing HIV services;
- There is no visible peer support for engaging in such behaviors;
- Institutional resources are unclear or inaccessible (e.g., no obvious campus HIV testing center or peer educator network);
- Stigma remains latent, even if not openly expressed.

This echoes findings from similar youth populations. For example, Rungpueng et al. (2019) noted in a study among Thai university students that while pro-health attitudes were widespread, action was inhibited by social expectations of silence around sexual health and a lack of behavioral role models. Similarly, research in sub-Saharan Africa (Asampong et al., 2013) has shown that empathy toward PLHIV often coexists with passivity, as students fear the social consequences of association with HIV issues.

Moreover, the finding that behavior scores ($M = 10.74$) are substantially lower than attitude scores suggests that many students reside in a state of affective agreement but behavioral ambivalence. They approve of others engaging in preventive practices, but they do not necessarily see themselves as actors. This dynamic is especially common in societies where HIV/AIDS is still morally coded, and where youth are taught to view sex as taboo rather than a domain for critical health literacy.

From a TPB perspective, this points to a weak intention formation, where attitude is not supported by normative reinforcement (“my friends wouldn’t do this either”) or self-efficacy (“I wouldn’t know how or where to get tested safely”).

To address this gap, interventions must move beyond awareness and empathy, and toward:
Creating safe social environments where preventive behaviors are normalized;

Developing peer-led norms that validate openness about HIV;
Strengthening perceived behavioral control through skill-building workshops, anonymous service access, and visible campus support systems;
Reframing testing and prevention as responsible, empowered choices rather than signs of moral failure.

In sum, the study underscores a fundamental lesson in behavioral health: attitudes, no matter how positive, do not guarantee action in the absence of social validation and perceived capacity to act. Empathy without structure is insufficient. Efforts to reduce HIV transmission must therefore include behavioral scaffolding—the social, institutional, and psychological conditions that make it possible for individuals to move from attitude to intention to action.

5.3 Barriers to Behavior: The Role of Self-Efficacy and Social Context

Despite a relatively high level of knowledge and a favorable attitude toward HIV/AIDS prevention, the behavioral data in this study reveal a persistent pattern of low engagement in preventive action. The average score for preventive behavior was $M = 10.74$ ($SD = 2.682$), the lowest among the three domains assessed, with a positive skewness ($Skew = 0.318$), indicating that a majority of respondents scored below the behavioral mean, with only a small group demonstrating active involvement.

This reflects what health psychologists describe as a “behavioral bottleneck”, where information and intention fail to convert into action due to the presence of structural, psychological, and social barriers. Within the framework of the Health Belief Model (HBM), two key factors explain this inertia:

Perceived barriers — beliefs about the tangible and intangible obstacles to action (e.g., fear of judgment, confidentiality concerns, social stigma).

Self-efficacy — one’s confidence in their ability to execute a behavior effectively (e.g., knowing where to get tested, how to access resources, or how to talk about HIV-related issues).



Students in this study may understand and support HIV prevention in principle but lack the behavioral confidence and social permission to act. Common barriers may include: Fear of being associated with stigmatized identities (e.g., drug users, sex workers) simply for attending an HIV test;

- Lack of anonymity or privacy in accessing services;
- Limited access to cues to action, such as peer outreach, health campaigns, or visible role models within the university;
- Cultural taboos around discussing sexual health, which inhibit open dialogue and behavioral modeling.

These barriers are not unique to Indonesia. A global review by UNAIDS (2020) highlights that young people across Asia and sub-Saharan Africa consistently report high knowledge but low action, especially in settings where HIV is moralized or linked to "immoral behavior." In such contexts, the absence of safe, supportive social environments becomes the most critical inhibitor of preventive engagement.

The Theory of Planned Behavior (TPB) further clarifies that low levels of perceived behavioral control (PBC) directly weaken the intention to act. In this case, students may not doubt the importance of testing, but rather lack a sense of agency. They may perceive that:

Getting tested is logistically difficult or socially risky;

Their friends or peers don't engage in such behavior either (low subjective norm);

They would not know what to do if they tested positive.

This dynamic is particularly concerning given that 72% of respondents mistakenly believed that HIV could be prevented through vaccination, and 66% believed it is curable—indicating that misinformation compounds low self-efficacy, resulting in passivity.

In effect, students are not "unwilling," but rather "socially and psychologically unprepared" to translate knowledge into health-preserving behavior.

To address these behavioral bottlenecks, interventions must focus on building actionable knowledge, confidence, and supportive environments, including:

Establishing visible, accessible, and anonymous HIV testing services on or near campus;

Training peer educators to act as behavioral role models;

Reframing prevention as empowerment, rather than risk management;

Normalizing sexual health conversations within student organizations and curricula;

Addressing gendered norms, particularly the tendency to feminize responsibility for health and sexual behavior.

Crucially, both TPB and HBM emphasize that behavioral change is not merely a matter of individual willpower. It depends on the interaction between knowledge, beliefs, context, and perceived control. In this case, low self-efficacy and high perceived barriers constitute the primary psychological obstacles that policy and education must overcome.

5.4 Comparison with Other Studies

The knowledge–attitude–behavior gap identified in this study is not an isolated phenomenon, but rather part of a broader global trend in youth health behavior research, particularly related to HIV/AIDS. Numerous studies have shown that high awareness and supportive attitudes among adolescents and young adults do not automatically lead to consistent preventive practices, especially in socio-cultural contexts where HIV remains heavily stigmatized or moralized.

For instance, Siregar et al. (2021), in a multi-campus study across Indonesia, found that while over 85% of university students were aware of HIV transmission routes, less than 20% had ever voluntarily sought an HIV test. The researchers identified fear of being labeled, lack



of privacy, and low perceived risk as key inhibitors—patterns that resonate closely with our findings. Similarly, Iskandar & Riono (2019) noted that although Indonesian youth generally accept HIV education as important, most still associate the disease with “others,” reinforcing a sense of invulnerability that blocks action—echoing the low perceived susceptibility described in the Health Belief Model (HBM).

Internationally, studies in Thailand (Rungpueng et al., 2019) and Ghana (Asampong et al., 2013) have reported comparable findings: young people often express positive attitudes and claim to support people living with HIV (PLHIV), yet exhibit reluctance to engage in testing or open discussions. These studies consistently point to subjective norms—the social expectations and perceived stigma surrounding sexual health—as critical barriers. In terms of the Theory of Planned Behavior (TPB), these findings reinforce that positive attitude must be reinforced by enabling social norms and a sense of behavioral control to translate into real intention and action.

From a broader perspective, Albarracín et al. (2001), in a meta-analysis of HIV prevention interventions, concluded that information alone has a limited effect on behavior unless combined with components that directly address self-efficacy and social influence. This aligns with the present study, in which students demonstrated knowledge and empathy, but not action, highlighting a missing link in both personal confidence and institutional support.

What distinguishes the present study from others is its focus on the quantitative assessment of behavioral skewness and distribution—showing not just that behavior is low, but that a minority of students carry the behavioral burden, while the majority remain inactive. This kind of analysis underscores the need for targeted, peer-led interventions that mobilize the passive majority by making preventive behavior more visible, acceptable, and attainable.

In short, the knowledge–action gap among students in this Indonesian university reflects a global youth health paradox, wherein awareness and intention remain constrained by social silence, perceived barriers, and weak institutional cues to action.

These findings highlight the need for a reorientation of HIV/AIDS education, from mere information dissemination to structural and psychosocial support, including:

- Campaigns that normalize open discussion of sexual health;
- Peer-led models that reshape normative expectations;
- Services that emphasize confidentiality, accessibility, and empathy;
- Curricula that integrate behavior modeling and skills training into health education.

5.5 Theoretical and Practical Contributions

This study contributes to both theoretical discourse and public health practice by providing empirical evidence on the complex interplay between knowledge, attitudes, and behaviors related to HIV/AIDS among university students. Drawing from two widely used behavioral theories—the Theory of Planned Behavior (TPB) and the Health Belief Model (HBM)—our findings illuminate how cognitive awareness and affective support fail to translate into action when sociocultural and psychological barriers remain unaddressed.

Theoretical Contributions

Reaffirming the TPB’s structural dependency on normative and control beliefs. The study confirms that while attitudes toward HIV prevention are generally positive, these attitudes do not manifest as intention or action due to low perceived behavioral control and weak subjective norms. This reinforces Ajzen’s assertion that intention formation is a multi-dimensional process, where social influence and self-efficacy are as crucial as personal belief. Expanding the HBM by illustrating layered misconceptions and perceived invulnerability.



Misconceptions about HIV transmission (e.g., through food or belief in curability) illustrate a selective internalization of health knowledge, where students absorb general facts but retain culturally embedded myths. These findings enrich the HBM by showing how low perceived susceptibility and underestimated severity can coexist with high general awareness—pointing to a need for nuanced, myth-sensitive health education models.

Bridging TPB and HBM: Toward a hybrid understanding of youth health inertia.

The study supports calls for integrating cognitive-behavioral models that acknowledge both individual agency and structural constraint. By applying TPB and HBM in tandem, we demonstrate that student inaction is not a product of apathy, but of a behavioral environment that fails to support intention formation and execution.

Practical Contributions and Policy Implications

Reframing health education from awareness to action.

Universities must move beyond information provision to design interventions that cultivate behavioral intention and remove obstacles. This includes:

Strengthening peer-based programs;

Using student influencers to shift social norms;

Embedding HIV education into required curricula.

Enhancing perceived behavioral control through access and confidentiality.

Accessible, stigma-free HIV testing services must be established or made more visible within the university environment. Confidentiality, ease of access, and emotional safety are non-negotiables for increasing self-efficacy and normalizing testing behavior.

Challenging harmful social narratives and misconceptions.

The persistence of myths about HIV transmission and cure calls for proactive myth-debunking campaigns. Health promotion strategies must go beyond statistics and engage with the narrative landscape of students' beliefs, which are often shaped by social media, religious discourse, and informal networks.

Policy alignment with youth-centered approaches.

Institutional and governmental health policies must adopt a youth-specific lens, recognizing that barriers to HIV prevention are not only informational but also cultural, social, and emotional. Collaborative frameworks between universities, public health institutions, and youth organizations are essential to creating multi-level, sustainable behavior change ecosystems.

In sum, this study highlights the urgent need for an integrated approach to HIV prevention that balances cognitive empowerment with structural facilitation. Theoretically, it revalidates the TPB and HBM in the Indonesian youth context, while practically, it calls for a shift in public health strategy—from telling students what HIV is, to creating the conditions that allow them to act on what they already know.

6. Conclusion and Recommendations

6.1 Conclusion

This study underscores a persistent and critical gap in youth-centered HIV prevention: while knowledge and attitudes among university students are generally favorable, these have not translated into consistent or widespread preventive behavior. Quantitative analysis revealed high scores in knowledge and attitude domains, yet notably lower engagement in preventive actions such as HIV testing, participation in awareness campaigns, or open dialogue about sexual health.

Using the Theory of Planned Behavior (TPB), the findings illustrate how positive attitudes alone are insufficient to generate behavioral intention in the absence of supportive



subjective norms and perceived behavioral control. Meanwhile, the Health Belief Model (HBM) helped explain how misconceptions, low perceived susceptibility, and structural barriers further inhibit students from transforming knowledge into action.

What emerges is a portrait of students who are not uninformed or apathetic, but rather trapped in a health environment that lacks normative encouragement, practical access, and psychological reinforcement. This knowledge–attitude–behavior gap is not merely an academic concern, but a tangible public health risk—especially in university settings where early intervention could generate lasting impact.

6.2 Recommendations

In light of these findings, the following recommendations are offered for institutions, policymakers, and public health practitioners:

For Universities:

Establish safe, anonymous, and youth-friendly HIV testing services on campus, coupled with clear information on access and confidentiality protocols.

Integrate HIV/AIDS education into formal curriculum, particularly through health communication, psychology, or civic engagement courses.

Support peer education programs that leverage student leadership to normalize discussion of HIV and sexual health.

For Public Health Campaigns:

Design targeted myth-busting content, especially around food transmission, curability, and the availability of vaccines, using social media as a primary platform.

Emphasize the inclusivity of HIV risk, challenging the perception that it only affects certain groups, and encouraging every student to assess their own behaviors.

Provide cues to action, such as campus-wide health days, free testing drives, and testimonials from peers, to trigger engagement.

For Policymakers:

Align national HIV prevention strategies with youth behavioral insights, recognizing the role of structural stigma and normative silence.

Support partnerships between universities, civil society, and health providers to develop sustainable, multi-level prevention ecosystems.

Fund capacity-building programs focused on behavioral health competencies among educators, counselors, and peer mentors in higher education settings.

Final Remark

Addressing HIV/AIDS among university students requires more than awareness campaigns. It demands an integrated behavioral strategy—one that builds on existing knowledge and empathy, but actively dismantles the barriers that prevent young people from acting on what they know. Only through such an approach can university evolve from passive knowledge centers to active hubs of health empowerment and behavioral change.

References

- Abiodun, O., Sotunsa, J., Ani, F., & Jaiyesimi, E. (2016). Knowledge of HIV/AIDS and predictors of uptake of HIV counseling and testing among undergraduate students of a privately owned university in Nigeria. *BMC Research Notes*, 9(1), 1–7. <https://doi.org/10.1186/s13104-016-2063-z>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)



- Ali, M., Adeel, A., & Anwar, M. (2020). Knowledge, attitude and practice regarding HIV/AIDS among university students: A cross-sectional study from Pakistan. *International Journal of Adolescent Medicine and Health*, 32(2), 1–8. <https://doi.org/10.1515/ijamh-2018-0094>
- Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of educational goals*. Longman.
- Eaton, L. A., Kalichman, S. C., Cain, D. N., Cherry, C., Stearns, H. L., & Amaral, C. M. (2007). Serostatus disclosure among HIV-positive men and women: Examining the roles of stigma and social support. *AIDS and Behavior*, 11(5), 663–675. <https://doi.org/10.1007/s10461-007-9325-8>
- Peltzer, K., Matseke, G., Mzolo, T., & Majaja, M. (2009). Determinants of knowledge of HIV status in South Africa: Results from a population-based HIV survey. *BMC Public Health*, 9, 174. <https://doi.org/10.1186/1471-2458-9-174>
- Rosenstock, I. M. (1974). Historical origins of the Health Belief Model. *Health Education Monographs*, 2(4), 328–335. <https://doi.org/10.1177/109019817400200403>
- UNAIDS. (2020). *Global AIDS update 2020: Seizing the moment – Tackling entrenched inequalities to end epidemics*. Geneva: UNAIDS. Retrieved from https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf
- WHO. (2007). *Guidelines for measuring national HIV prevalence in population-based surveys*. Geneva: World Health Organization. <https://www.who.int/publications/i/item/WHO-HTML-HIV-2007.04>
- Zarei, N., Joulaei, H., Darabi, E., & Fararouei, M. (2015). Stigma against people living with HIV/AIDS in Iran: A qualitative study. *International Journal of Health Policy and Management*, 4(7), 433–439. <https://doi.org/10.15171/ijhpm.2015.27>