

KNOWLEDGE, ATTITUDE, AND PRACTICES ON HIV/AIDS AMONG SENIOR HIGH STUDENTS OF DR. CECILIO PUTONG NATIONAL HIGH SCHOOL

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ABSTRACT

Article History

Submission: 16 May 2025
Revised: 8 August 2025
Accepted: 19 December 2025
Publication: 18 January 2026

Keywords— HIV/AIDS, Knowledge–Attitude–Practice (KAP), Senior High School Students, Descriptive–Correlational Design, Adolescent Health, Preventive Practices, Philippines

The purpose of this study was to investigate the knowledge, attitudes, and practices (KAP) regarding HIV/AIDS among senior high school students at Dr. Cecilio Putong National High School during the 2023–2024 academic year. A quantitative descriptive–correlational design was used, and 325 randomly selected students were asked to complete a modified questionnaire based on Akello, Ogendi, and Asweto (2023). Descriptive statistics, weighted means, chi-square tests, and Spearman’s rho correlation were used to analyze the

data. Most respondents were 18–19 years old (92.9%) and mainly enrolled in the Technical-Vocational-Livelihood strand. They showed moderate knowledge of HIV/AIDS transmission, prevention, and control, along



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with positive attitudes and preventive practices. Statistical analysis found no significant relationship between knowledge and attitude or between knowledge and practice. However, attitude and practice were substantially correlated, indicating that positive attitudes were associated with improved HIV/AIDS-related behaviors. Academic strand and year level were also strongly associated with the various KAP domains. These data indicate that information alone may not result in preventative measures among teenagers, whereas attitudes are strongly associated with HIV/AIDS-related health behaviors. The findings emphasize the need for school-based interventions that focus on attitude building, stigma reduction, behavioral reinforcement, and information distribution for improving HIV/AIDS prevention among senior high school students.

INTRODUCTION

The human immunodeficiency virus (HIV) is a formidable pathogen that targets and undermines the intricate workings of the body's immune system. Acquired immunodeficiency syndrome (AIDS) represents the pinnacle of disease progression, signifying the most advanced stage thereof (World Health Organization, 2023). It represents the culmination of a progressive HIV infection, which can emerge following a protracted duration of neglect in those who have not received appropriate medical intervention (World Health Organization, 2021). Approximately 76 million individuals have contracted the human immunodeficiency virus (HIV), resulting in the unfortunate demise of 33 million individuals due to infections associated with HIV/acquired immunodeficiency syndrome (AIDS). Furthermore, the estimated number of individuals now living with HIV stands at 38.0 million, with a range of 31.6 million to 44.5 million. The global population of individuals aged 15-49 who are now living with HIV (World Health Organization, 2019) consists of around 5 million young people between the ages of 15 and 25 (World Health Organization, 2018). Within the Southeast Asia area, specifically in 11 countries, there are an estimated 3.8 million individuals in this age group living with HIV. These statistics are provided by the World Health Organization (UNAIDS, 2018).

The Republic of the Philippines has witnessed a remarkable surge of 174% in the incidence of novel HIV/AIDS cases since the year 2010, thereby establishing itself as one of the most rapidly advancing nations in terms of growth rate within the Asia-Pacific Region (UNAIDS, 2018). Approximately 80% of newly contracted infections occurred among individuals aged 15-34. Furthermore, the median age at diagnosis was 28 years. The epidemiological data about individuals diagnosed with HIV/AIDS in the Philippines reveal a conspicuous preponderance of the male gender within this afflicted population. The Philippines has the fastest-growing HIV epidemic in the Western Pacific, rising to 174% between 2010 and 2017. A total of 1047 new cases were

recorded in August 2018. Despite the national HIV prevalence being less than 1%, 84% of new infections are acquired by men who have sex with other men (Ganguanco, 2019). As of June 2020, the estimated number of individuals residing in the Philippines who have contracted the Human Immunodeficiency Virus (HIV) ranges from 110,000 to 120,000. Regrettably, only a mere 68% of this population, which amounts to approximately 78,000 individuals, have undergone HIV testing and are aware of their current HIV status. It is worth noting that the first case of HIV in the Philippines was identified in 1984 (UNAIDS, 2018). Even though the figure above appears relatively small in light of the country's total population of more than 109 million individuals (DOH Epidemiology Bureau, 2023), it is crucial to acknowledge that the prevailing social stigma, sociopolitical circumstances, and impediments to accessing healthcare facilities are contributing significantly to the proliferation of the disease within underprivileged communities. According to projections, there is expected to be a 200% rise in the population of individuals living with HIV (PLHIV), rising from 158,400 in 2022 to 364,000 by 2030 (Philippine Statistics Authority, 2023).

In Central Visayas, a cumulative total of 8,861 cases of AIDS from 1984 until September 2022 has been recorded. According to the most recent data, the calculation above indicates that Cebu accounted for 7,785 cases, Bohol for 426, Negros Oriental for 424, and Siquijor for 26. During the same time frame, 7,939 males and 731 females were infected with the virus described above. The 25-34 age group has the highest infection rate, with 4,124 cases. Of the total number of HIV and AIDS cases reported in the region, 491 individuals have succumbed to the disease. The data indicate that 134 fatalities occurred between January and September 2022, with 39 deaths occurring only in September 2022 (Regional Epidemiology and Surveillance Unit of the DOH-7, 2022).

The Department of Health (DOH) is considering offering HIV services at primary healthcare facilities in light of the 3,410 new cases and 82 reported deaths that were reported between January and March 2024. According to data from the HIV & AIDS and Antiretroviral Therapy (ART) Registry of the Philippines (HARP), there were 129,772 cumulatively diagnosed HIV cases between 1984 and March 2024. MSM accounted for almost 89% of new infections, with individuals aged 15 to 24 accounting for 47%. There were 1,224 new cases and 12 recorded deaths in March 2024. In March 2024, people aged 25 to 34 accounted for nearly half (46%) of newly reported cases (DOH, 2024).

Knowledge is critical for achieving optimal health. Attitude formation is not primarily determined by the amount of information received but rather by how that respondent obtained that knowledge. Boosting public awareness of HIV/AIDS can be a robust tool for fostering positive attitudes and establishing safe practices. Consequently, it is imperative to possess a comprehensive understanding of the knowledge, attitudes, and practices (KAPs) prevalent in

a given population to effectively design and implement measures to curb or prevent HIV transmission.

Theoretical Background. According to Nola Pender's Health Promotion Model, health behavior is conceptualized as the result of interactions among individual characteristics, behavior-specific cognitions, and situational influences, providing a framework for explaining and predicting engagement in health-promoting activities (Pender, Murdaugh, & Parsons, 2011).

Albert Bandura's Social Cognitive Theory emphasizes the significance of social influence and the effects of both external and internal social reinforcement. Social Cognitive Theory (SCT) examines how individuals acquire and maintain behavior, taking into account the social context in which it occurs. It considers an individual's past experiences, which shape the likelihood of engaging in certain actions. These experiences shape reinforcements, expectations, and expectancies, thereby influencing an individual's motivation and likelihood of engaging in specific behaviors (Schwarzer & Luszczynska, 2005).

Related Studies. In 2015, the research conducted by Terán Calderón, Gorena Urizar, González Blázquez, Alejos Ferreras, Rubio, Bolumar Montrull, and del Amo Valero examined HIV/AIDS knowledge, attitudes, and practices in Sucre, Bolivia. While HIV infection is rare, discriminatory beliefs towards those with the virus persist, influenced by factors like gender and socioeconomic status. Despite no positive HIV tests among respondents, 67% lacked understanding of transmission and prevention. Additionally, 85% displayed discriminatory attitudes, linked to rural residency, low education, and income. Unsafe sexual practices were reported by 10%, with risk factors varying by urban or rural residence, gender, age, and marital status (Terán Calderón, Gorena Urizar, González Blázquez, Alejos Ferreras, Rubio, Bolumar Montrull, & del Amo Valero, 2015).

The study conducted by Tarkang, Lutala, and Dzah (2019) found that 61.6% of Senior High School students in Sekondi-Takoradi, Ghana, had a high level of HIV/AIDS knowledge, while 58.5% displayed positive attitudes towards those with HIV. However, 79.1% engaged in risky HIV-related practices. The study underscores the need for culturally and age-specific HIV education targeting urban youth, addressing misconceptions, negative attitudes, and risky behaviors (Tarkang, Lutala, Dzah, & 2019).

The research conducted by Youssef, Hallit, Sacre, Salameh, Cherfan, Akel, and Hleyhel (2021) examined HIV/AIDS knowledge, attitudes, and practices among individuals in Lebanon. They found that greater knowledge correlated with more positive attitudes, while older age and identifying as Muslim were associated with more negative attitudes. Positive attitudes were linked to better practices, with females, those with secondary education, and Muslim identification showing poorer practices. The study underscores the need for educational initiatives, advocacy, and policies to reduce HIV stigma, thereby facilitating treatment initiation and stigma-reduction efforts (Youssef, Hallit, Sacre, Salameh, Cherfan, Akel, & Hleyhel, 2021).

The study titled “Knowledge, Attitudes, and Practices of HIV-Positive Adolescents Related to HIV/AIDS Prevention in Abidjan (Côte d’Ivoire)” was conducted by Kouamé et al. (2020). Of the 50 participants (average age 16), 38% were orphans, 58% had completed secondary education, and 42% had parents who were separated. While 62% were unaware of their infection, 54% reported sexual activity. Despite 72% knowing transmission and prevention methods, misconceptions persisted, such as a 68% transmission rate among HIV-positive adolescents and a 40% belief in HIV/AIDS being incurable. Additionally, 42% believed individuals on antiretroviral therapy could transmit the infection. Notably, 58% of those in relationships engaged in unprotected sex, and all avoided discussing HIV with friends and family. The study underscores inadequate HIV/AIDS knowledge, attitudes, and practices among HIV-positive adolescents, highlighting the need for tailored therapeutic education programs (Kouamé et al., 2020).

The research study conducted by Amiri et al. (2020) titled “Knowledge, Attitude, and Practice of Nursing and Medical Students regarding HIV/AIDS and Hepatitis”. Only 12.3% demonstrated high knowledge, while 34% showed effective prevention practices. Although expertise, age, and education showed correlation, no clear link was found between practice and attitude. To improve disease prevention and care, Shahroud University of Medical Sciences should prioritize AIDS and hepatitis education in student internship programs through workshops and conferences before and during clinical work (Amiri et al., 2020).

The Problem. The incidence of HIV/AIDS continuously increases. The acquisition and dissemination of knowledge, along with the cultivation of attitudes and the implementation of practices about the human immunodeficiency virus and acquired immunodeficiency syndrome (AIDS), are fundamental pillars in the ongoing battle against this affliction. This study assessed HIV/AIDS knowledge, attitudes, and practices of Dr. Cecilio Putong National High School Senior High School students during School Year 2023–2024. The study findings served as the basis for crafting the Health Teaching Plan.

Specifically, it sought to answer the following questions:

1. Profile of the respondents in terms of age, gender, civil status, year level, and strand?
2. What is the respondent’s level of knowledge about HIV/AIDS in terms of the route of Transmission and Prevention and Control?
3. What is the respondents’ level of attitudes towards HIV/AIDS?
4. What is the respondents’ level of practice on HIV/AIDS?
5. Is there a significant relationship between the respondents’ profiles and the respondents’ levels of knowledge, attitude, and practices?
6. Is there a significant correlation between the Knowledge and

- Attitude, Knowledge and Practices, and Attitude and Practices?
7. What health-teaching plan can be proposed based on the findings of the study?

RESEARCH METHODOLOGY

This study employed a quantitative descriptive-correlational approach using a standard questionnaire modified by the researchers from Akello, Ogendi, and Asweto (2023). The respondents in the study are senior high school students at DCPNHS. The study includes senior high school regular Students enrolled in the 2023-2024 school year, aged 18 years and above. Excluded from the study are the irregular senior high students of DCPHS. Three hundred twenty-five (325) respondents were randomly selected to take part in the study. The sample size was computed based on a 5% margin of error and a 95% confidence interval. The study used a modified questionnaire from Akello, Ogendi, and Asweto (2023). The research instrument distributed to the respondents will have four sections. The first section will be the respondents' demographic profile, including age, sex, civil status, year level, and academic strand. The second section looked into the knowledge level in the transmission and prevention control of HIV/AIDS. It consists of 8 questions that respondents will answer. The third section measures respondents' attitudes toward HIV/AIDS, comprising 17 questions, while the fourth section assesses HIV/AIDS-related practices, comprising 5 questions. The tool was assessed for face validity by having individual experts in the field review its items. The instrument was pilot-tested with 10 respondents who met the inclusion criteria described in this study. The data were coded and subjected to a Cronbach's alpha test to assess internal consistency. Respondents who participated in the pilot testing were excluded from the final data distribution. The Cronbach's alphas for the Level of Knowledge (Transmission) (.787), Level of Knowledge (Prevention and Control) (.768), Level of Attitude (.866), and Level of Practices (.754) are reported.

Ethical Consideration. The study underwent the Research Ethics Committee's review procedures before the actual conduct of the study. After obtaining ethics clearance to conduct the study, the researchers secured the necessary permissions and consent from the Dean of the College of Nursing and the Vice-President for Academics of the University of Bohol. Before distributing the questionnaire, approval letters were obtained from the head of the Department of Education and the Principal of DCPNHS. The respondents were given brief instructions on data gathering, and the informed consent citation was explained. Part of informed consent is the assurance that participants have the autonomy to decide whether to participate. The study's respondents are assured that their participation will cause no harm, whether psychological, physical, legal, social, or reputational. Their participation will not directly benefit the respondents. The researchers prioritized ensuring

the respondent's confidentiality, consistent with nonmaleficence, to protect the participant's reputation and identity, including the information collected through the research instrument. The information collected by the researchers will be kept private and not shared outside the research. The results of this research will be used solely for research purposes. The researchers emphasized that respondents' participation would be voluntary and that they could withdraw at any time. If the respondents are willing to participate, they will be asked to sign a consent form indicating their consent to participate in the study. Appropriate health and safety protocols will be observed before the study. The researcher's contact numbers were provided to the respondents in case they needed further clarification regarding the research.

Statistical Treatment of Data. This study used the Statistical Package for the Social Sciences (SPSS) to perform quantitative analyses and to interpret the collected data. The gathered data were subjected to a normality test to determine the appropriate statistical tools. The Normality Test results revealed that the variables were skewed. Hence, nonparametric tests will be used to analyze the relationship between the variables. The percentage formula was used to analyze the respondents' profile age, gender, civil status, year level, and strand, as well as the frequency of their answers on the listed items in the questionnaire, by ranking from the highest to lowest weighted mean. The weighted mean was used to measure the central tendency of respondents' levels of knowledge, attitudes, and practices. It was calculated by multiplying the weight associated with a particular case or outcome.

To address the study's inferential questions, the chi-square test was used to examine the relationships between gender and knowledge, attitude, and practices; civil status and knowledge, attitude, and practices; year level and knowledge, attitude, and practices; strand and knowledge; and attitude and practices. To test the significant correlations between age and knowledge, attitude, and practices, and between knowledge and attitude, Knowledge and practices, and Attitude and practices, Spearman's rho or Pearson product-moment correlation was used.

RESULTS AND DISCUSSION

Table 1 presents the demographic profile of the respondents. In terms of age, data reveals that out of three hundred twenty-five respondents, three hundred two or (92.9%) are between the ages 18 and 19 years old, twenty-one or (6.5%) are between ages 20 and 24 years old, while only one or (.3%) are between ages 30 and 34 years old, and 35 years old and above.

Regarding gender, data reveal in Table 1 that out of three hundred twenty-five respondents, two hundred forty-eight (76.3%) are heterosexual, fifty-five (16.9%) are homosexual, and twenty-two (6.8%) are asexual. In terms of civil status, of the 325, 321 (98.9%) are single, and 4 (1.2%) are married.

Conversely, at the year level shown in Table 1, of the 325 respondents, 293 (90.2%) are in grade 12 and 32 (9.8%) are in grade 11. As for strands, data reveal that of the three hundred twenty-five, the majority are from the Technical-Vocational Livelihood (TVL) strand, representing one hundred eighty-five (56.9%). Sixty (18.5%) are from Humanities and Social Sciences (HUMSS), while only ten (3.1%) are from Art and Design, and one (.3%) is from the General Academic Strand (GAS).

Table 2 presents the respondents' level of knowledge regarding the disease's route of transmission. Results revealed that the majority of the respondents believe "having sexual intercourse with more than one partner can increase a person's chance of being infected with HIV," with a weighted mean of 3.44 derived as strongly agree and interpreted as highly knowledgeable. Engaging in multiple sexual partnerships is associated with early sexual activities, a more significant number of lifetime partners, frequent sexual intercourse, and a lack of protection, such as low condom use. Engaging in multiple sexual relationships can lead to a higher likelihood of contracting sexually transmitted infections (STIs) such as HIV, unintended pregnancies, as well as potential psychological and substance use issues (Sentis et al., 2019).

Respondents believed as well that a "person cannot get HIV by bathing in the same place as a person who has HIV," with a weighted mean of 3.23, derived as moderately agree and interpreted as moderately knowledgeable. The virus has a short lifespan outside the body and cannot thrive in water. Therefore, someone cannot acquire HIV through activities such as swimming, drinking, bathing, or any other water-related activities. In addition, it is essential to note that HIV cannot be transmitted through activities such as sharing food, using shared toilets or bathroom facilities, or coming into contact with saliva, sweat, or tears (CDC, 2021).

The least believed by the respondents in the route of transmission is the statement that "people are likely not to get HIV by deep kissing, putting their tongue in their partner's mouth, if their partner has HIV," with a weighted mean of 2.57, derived as moderately agree and interpreted as moderately knowledgeable. HIV cannot survive for extended periods outside of the human body, nor can it replicate without a human host. The transmission of HIV does not occur through mosquitoes, ticks, or other insects, nor saliva, tears, or sweat. It is not transmitted through acts such as hugging, shaking hands, sharing toilets, sharing dishes, or closed-mouth or "social" kissing with someone who has HIV. Other sexual activities that do not involve the exchange of body fluids, such as touching, also do not transmit the virus. HIV is not transmitted through the air (CDC, 2021).

However, in the aspect of prevention and control, the majority of the respondents believe that "taking a test for HIV one week after having sex will not tell a person if she or he has HIV," with a weighted mean of 2.45, which is interpreted as agree and knowledgeable. It was followed by respondents who believed that "there is no vaccine for HIV," with a weighted mean of

2.42, interpreted as agree and coded as knowledgeable. The window period for an HIV test is the duration from HIV exposure up to the time when a test can identify HIV in your body. The window period varies depending on the specific HIV test used. A rapid antigen/antibody test conducted using blood from a finger stick can typically identify HIV between 18 and 90 days following exposure. A lab test that utilizes blood from a vein can typically identify HIV between 18 and 45 days following exposure. A nucleic acid test (NAT) is typically capable of detecting HIV within a period of 10 to 33 days following exposure (CDC, 2022).

Moreover, there are currently no vaccines available to prevent or treat HIV. However, individuals living with HIV can significantly benefit from vaccines that protect against other diseases, mainly because they are more susceptible to them. All adults with HIV are advised to receive the following vaccines: COVID-19, hepatitis A, hepatitis B, human papillomavirus (HPV) (for individuals up to age 26), influenza (flu), meningococcal, pneumococcal (pneumonia), tetanus, diphtheria, and pertussis (a single vaccine provides protection against these three diseases), and zoster (shingles) (for individuals ages 18 and older), (NIH's Office of AIDS Research, 2023).

On the other hand, the respondents least believed that “applying baby oil in condoms will not lower the chance of getting HIV,” with a weighted mean of 2.04, interpreted as agree and knowledgeable. Using condoms correctly is crucial for their effectiveness, and this includes choosing the appropriate size. Condoms vary in dimensions, so some exploration is needed to find the best fit. It is advisable to refrain from using oil-based lubricants, such as Vaseline or baby oil, as they can compromise the integrity of the condom and raise the risk of it tearing. Opting for water-based lubricants, which are widely available in supermarkets and pharmacies, is advisable (National Health Service, 2022).

The respondent's level of knowledge, the overall composite mean for transmission route and prevention and control, is 2.75, indicating moderately agree and interpreted as moderately knowledgeable. Based on the data analysis and interpretation of our research findings, it can be concluded that participants exhibit a moderately knowledgeable level of understanding regarding HIV/AIDS. Despite not reaching an advanced level of knowledge, the overall findings suggest a fundamental grasp of critical concepts related to HIV/AIDS transmission, prevention, and control. This level of knowledge, while not comprehensive, still holds significant implications for public health initiatives and educational interventions. As it reveals a moderately knowledgeable level of understanding among participants regarding HIV/AIDS, there is room for improvement.

Table 3 shows the level of attitude; the majority of the respondents believed that “most people think that having HIV is not a matter of bad luck” (WM= 3.09) and that most people believe that someone with HIV should not be ashamed of themselves,” (WM = 2.85), which was interpreted as moderately agree and interpreted as a good attitude.

People living with HIV/AIDS often experience a sense of helplessness when it comes to providing for their families. They have let others down and have brought about unfortunate circumstances and embarrassment to their family members. At times, individuals may express deep concerns about spreading infections to others. Several respondents expressed concerns about the potential transmission of the virus to their family members, particularly their loved ones and the youngest members of their household. People living with HIV/AIDS often believe that they should not share their drinks and food with others. Individuals living with HIV placed a great deal of blame on their HIV status. Individuals living with HIV who internalize society's negative perceptions may unfairly shoulder the blame for the intolerance they face, mistakenly believing they deserve mistreatment (Sultana, 2014).

However, the majority disagree that "it is safe for a person with HIV to look after somebody else's children" (WM=1.67), interpreted as having a very poor attitude. AIDS is not a contagious disease. It is not transmitted through activities like swimming in the same pond, caring for a child, or coughing. However, careful observation indicates that it is highly transmissible. It can spread quickly when an individual who is unaware of their HIV status interacts with others or engages in unprotected sexual activity. Some people may hesitate to change this risky behavior because they fear arousing suspicion and facing stigma. This is the source of affliction. People living with HIV/AIDS often experience feelings of shame and encounter stigmatizing attitudes, and face (Sultana, 2014).

In Table 3, Level of Attitude, the overall composite mean is 2.50, indicating a moderately agree attitude. A moderate attitude towards the level of attitudes on HIV/AIDS suggests receptiveness, openness, and potential receptivity to related interventions or messages. Such attitudes foster positive behavior change and facilitate initiatives to address the issue. As indicated by the composite mean, participants' moderately agreeable attitude underscores a cheerful disposition.

Table 4 shows the level of practice; it was found that respondents choose their sexual partners wisely (WM 3.63) and that respondents believed that engaging in multiple sexual partners increases the risk of getting HIV infection (WM 3.3), interpreted as very good practices. It is crucial to communicate your HIV status to sexual partners and individuals who have shared needles, regardless of any discomfort one may feel. Engaging in open and honest conversations about HIV status enables the individual to prioritize their well-being (CDC, 2017). Research indicates a correlation between having multiple sexual partners and a higher likelihood of being HIV positive. Additionally, individuals with multiple sex partners face an increased risk of contracting HIV and other sexually transmitted infections compared to those who have only one sexual partner. In addition, individuals with a history of sexually transmitted infections, engaging in brief relationships, and harboring suspicions of infidelity in their current partner were likely to engage in multiple

sexual relationships (Dorina et al., 2014).

Taking medications that prevent HIV infection before or after unprotected sexual activity with an HIV-infected person got the lowest weighted mean of 2.78, which was interpreted as moderately agree and interpreted as good practices. Pre-exposure prophylaxis, or PrEP, is the use of medication to ward against HIV infection. When used as directed, PrEP is very successful at preventing HIV. 99% fewer people obtain HIV through sex when they use PrEP. PrEP, at least 74%, lowers the risk of HIV infection from injectable drug usage. If PrEP is not taken as directed, its effectiveness is reduced. Condom use is crucial for protecting against other STDs, even though PrEP solely offers HIV protection. In the case that PrEP is not taken as directed, using condoms is also crucial to preventing HIV (CDC, 2022).

The respondents' level of practice is Good, with an overall composite mean of 3.208. It can be concluded that respondents exhibit a positive perception regarding HIV/AIDS-related practices. This moderately agreeable stance suggests that respondents generally endorse good practices associated with HIV/AIDS transmission, prevention, and control. The interpretation of this composite indicates good practices and underscores the importance of acknowledging and reinforcing positive behaviors and attitudes among senior high school students at DCPNHS. A positive perception towards HIV/AIDS-related practices is critical for promoting effective prevention strategies, reducing stigma, and enhancing access to care and support services.

CORRELATION BETWEEN THE RESPONDENTS' PROFILES AND THEIR LEVEL OF KNOWLEDGE, ATTITUDES, AND PRACTICES

Table 5 revealed that the p-value of the respondent's age (.553), sex (.793), civil status (.470), and year level (.605) is higher than the 0.05 level of significance, indicating that there is no association between the variables. This indicates that the respondents' age, gender, and civil status are not associated with their level of knowledge. However, a significant correlation between strand and level of knowledge was noted ($p = .001$; test statistic = 43.818), which is lower than the 0.05 significance level. In the research conducted by Virtucio and Villafuerte (2020) entitled *The Influence of Age, Sex, and Strand on the Knowledge of HIV/AIDS among Senior High School Students: An Assessment*. The significance of their study was that the between-group comparison using ANOVA was tested at $p < 0.05$ and $p < 0.01$. It is evident that there was a notable disparity in the level of knowledge among the respondents, as indicated by the statistical analysis ($f\text{-value}=8.031$, $p\text{-value}=.000$). Their findings revealed a notable disparity ($p\text{-value}=.000$) in the understanding of HIV/AIDS among Senior High School students when categorized based on the strands of HUMSS, ABM, and STEM (Virtucio, Villafuerte, 2020).

Table 5. *Correlation of Respondents' Profiles and Level of Knowledge, Attitude, and Practices*

| Variables | Statistical Test Used | Test Value | P- Value | Decision | Interpretation |
|-------------------------|-----------------------|------------|----------|----------------------------|---|
| Strand and Knowledge | Chi-Square Tests | 40.355 | .002 | Reject the null hypothesis | There is a significant relationship between the variables |
| Strand and Attitude | Chi-Square Tests | 43.818 | .001 | Reject the null hypothesis | There is a significant relationship between the variables |
| Year Level and Practice | Chi-Square Tests | 10.347 | .016 | Reject the null hypothesis | There is a significant relationship between the variables |
| Strand and Practice | Chi-Square Tests | 29.616 | .041 | Reject the null hypothesis | There is a significant relationship between the variables |

The correlation between the respondent's Profile and Attitude Level. The data revealed no significant correlation between the respondents' profiles, specifically their age, gender, civil status, and year level. However, a significant correlation between strand and level of attitude was noted, with a p-value of (.001) and a t-value of 43.818. The study conducted by Alhasawi et al. (2019) titled "Assessing HIV/AIDS Knowledge, Awareness, and Attitudes among Senior High School Students in Kuwait" found a significant correlation between the level of attitude and the Strand of Sciences, with a p-value of 0.008 and a test value of 2.633. However, students in the science stream displayed a notably positive attitude toward individuals of this nature (Alhasawi et al., 2019).

The correlation between Profile and Level of Practice revealed that no significant correlation was found between the respondent's age, gender, or civil status and the respondent's level of practice, but a significant correlation exists between the Year Level and the Level of Practice (p-value= .016; test value =10.347); and between strand and Level of Attitude (p-value= .041" and test value=29.616). A cross-sectional study conducted in an underdeveloped, high-risk region of Iran found that most students (74.5%; 95% CI: 72.0, 77.0) reported using a protective measure against risky behaviors at least once. A strong correlation was found between students' understanding, by year level, and their perception of risky practices (p = 0.001). However, the analysis reveals a discernible correlation between year level and the level of practices regarding HIV/AIDS among the respondents. Several factors may contribute to this correlation. Firstly, as students progress through their academic years, they are exposed to a more comprehensive curriculum that includes health education, including topics related to HIV/AIDS. Increased exposure to information and resources likely equips students in Grade 12 with a greater understanding of HIV/AIDS and its associated practices. Furthermore, the

correlation between strand and level of practice may reflect a developmental pattern, in which older students demonstrate greater maturity, responsibility, and autonomy in managing their health behaviors, including those related to HIV/AIDS (Mohamadian, Sharifi, Hassanzadeh, Mohebbi-Nodezh, and Vardanjani, 2023).

ASSOCIATION OF KNOWLEDGE & ATTITUDE, KNOWLEDGE & PRACTICES, AND ATTITUDE & PRACTICES ON HIV/AIDS

The relationship between the respondent's level of Knowledge, Attitude, and practices. The data in Table 6 show that there is no significant relationship between knowledge and attitude (p -value = .862; test statistic = .010). A study conducted by Nubed and Akoachere in 2016, which examined the Knowledge, Attitudes, and Practices regarding HIV/AIDS among senior secondary school students in Fako Division, Southwest Region, Cameroon, revealed a noteworthy correlation between knowledge and attitude, indicating a positive relationship ($r = +0.456$, $P = 0.000$). The study finds that individuals with moderate and high levels of knowledge generally hold more positive attitudes than those with lower levels. According to the study, 62.1% of participants demonstrated a high level of knowledge, scoring 75% or higher. A considerable portion (34.3%) fell into the medium-level category, with scores ranging from 51% to 74%. A small percentage, 3.4%, had a low level of knowledge, with scores below 50% when it came to HIV/AIDS. Only 52.5% of students displayed favorable attitudes toward PLHIV. Almost half of the participants held negative attitudes (Nubed, Akoachere, 2016).

Table 6. *Correlation of Respondents' Level of Knowledge, Attitude, and Practices*

| Variables | Statistical Test Used | Test Value | P-value | Decision | Interpretation |
|------------------------|-----------------------|------------|---------|--------------------------------------|--|
| Knowledge and Attitude | Spearman's rho | .010 | .862 | Failed to reject the null hypothesis | There is no significant relationship between the variables |
| Knowledge and Practice | Spearman's rho | .075 | .180 | Failed to reject the null hypothesis | There is no significant relationship between the variables |
| Attitude and Practice | Spearman's rho | -.285 | .000 | Reject the null hypothesis | There is a significant relationship between the variables |

However, in the relationship between knowledge and practice (p -value = 0.180; test value = 0.75), the data in Table 6 indicate no significant relationship between the variables. The study of Correlation between Knowledge, Attitude, and Practices on HIV and AIDS: Cases from the Kathmandu Valley of Karki TB of 2014 shows that a total of 71 (25.6%) respondents had used a condom during their first sexual intercourse. Based on marital status, it is found that

17 (33.3%) of the unmarried and 179 (79.2%) of the married had not used condoms. The study shows that there was no significant relationship ($r = .018$, $p = .766$ (2-tailed)) and no significant association (Pearson Chi-Square, $p = .289$, $df = 2$) found between the level of knowledge of the way of HIV transmission and the use of condoms in first sexual intercourse, as the level of practices (Karki, 2014).

Subsequently, Table 6 shows a significant relationship between Attitude and Practices ($p = .000$), which is below the significance level of 0.05 (test value = -0.285). The study of HIV/AIDS Knowledge, Attitude and Practice among Dilla University Students in Ethiopia, conducted by Gemed, Gandile, and Bikamo in 2017, revealed a p-value (0.004) between attitudes and practices, showing a significant relationship between respondents' attitudes and practices. The study revealed that a significant portion of the respondents, 58%, had a positive attitude towards the helpful facts and preventive strategies of HIV/AIDS. In addition, a strong focus on understanding and addressing HIV/AIDS was integrated into the preventive strategies, prioritizing prevention over transmission. The respondents in the current study displayed a positive attitude towards crucial scientific knowledge and preventive measures (abstinence and faithfulness) against HIV/AIDS. However, there have been significant disparities between the current findings and most prior studies. The inconsistency in this situation may be attributed to the fact that most respondents in the current study prioritized abstinence and faithfulness over condom use. However, when it comes to practice, a significant majority of the respondents, 92% to be exact, demonstrated commendable behavior in preventing the transmission of HIV/AIDS. It is worth mentioning that a significant majority of the respondents in the current study reported refraining from any sexual activity before enrolling in the University. This advanced level of self-restraint may explain why a substantial number of participants achieved higher levels of proficiency. Perhaps the students' decision to abstain from sexual contact was influenced by socio-cultural and religious factors, such as restrictions on premarital sex. It highlights the significance of these influences (Gemed, Gandile, Bikamo, 2017).

CONCLUSIONS

Despite the ongoing efforts of the Department of Health (DOH) to educate senior high school students about HIV/AIDS through various programs, the level of knowledge among students regarding the disease's route, transmission, and control remains only moderately satisfactory. Interestingly, the research reveals that there is no direct correlation between students' knowledge levels and their attitudes or practices concerning HIV/AIDS. However, a significant positive relationship exists between students' attitudes and their actual practices. This suggests that while knowledge is essential, attitudes play a more significant role in influencing behavior regarding HIV/

AIDS prevention and control among senior high school students. Therefore, future interventions should not only focus on increasing knowledge but also on fostering positive attitudes towards HIV/AIDS, which are more likely to lead to desirable health practices among this demographic.

In the context of the Health Promotion Model by Pender and the Social Cognitive Theory by Bandura, this research finding suggests that while knowledge about HIV/AIDS is important, it alone does not necessarily lead to positive attitudes or practices. The Health Promotion Model emphasizes the role of individual characteristics and experiences in influencing health behaviors. In this case, senior high students' attitudes towards HIV/AIDS are positively related to their practices, indicating that their beliefs, perceptions, and social influences play a significant role.

Similarly, the Social Cognitive Theory underscores the importance of observational learning, self-efficacy, and the social environment in shaping behavior. The positive correlation between attitude and practice among the students aligns with Bandura's idea that individuals learn through observation and modeling, and their beliefs about their ability to perform a behavior (self-efficacy) influence their actions.

Fostering positive attitudes is crucial for effective HIV/AIDS management, as it encourages responsible behavior and practices. Simultaneously, combating stigma and discrimination is essential, as these negative social factors can negate the benefits of knowledge and positive attitudes, thereby increasing the risk of HIV infection. This dual approach—promoting good attitudes while addressing stigma and discrimination—is key to reducing HIV/AIDS risk and improving public health outcomes. Overall, this research finding highlights the importance of considering attitudes and social influences in promoting positive health behaviors among senior high school students beyond just providing them with knowledge about HIV/AIDS.

RECOMMENDATIONS

Based on the assessment and interpretation of the collected data and findings, the researchers provide the following recommendations:

1. The University of Bohol College of Nursing, in collaboration with the Department of Health - Bohol, will initiate a program aimed at continually upholding exemplary standards towards HIV/AIDS aligned with broader public health goals of reducing transmission and enhancing access to care. Incremental improvements in knowledge, attitude, and behavior can have a significant impact on community-level outcomes, supporting the overall well-being and resilience of populations impacted by HIV/AIDS.
2. The University of Bohol College of Nursing, in collaboration with the City DepEd Division, will conduct regular seminars and

workshops emphasizing the route of transmission, prevention, and control while highlighting the stigma and discrimination associated with HIV/AIDS. Emphasis should be placed on the importance of practicing safe sex.

3. The LGU and the Provincial Government of Bohol continually support the programs of the DOH related to HIV/AIDS control and prevention, formulating complete and numerous strategies to significantly improve the awareness of people on HIV/AIDS prevention, along with its existing services provided.
4. The University of Bohol - College of Nursing will recommend to the City Health Office of Tagbilaran and the Provincial Health Office those condoms and lubricants be given out free of charge. By providing these resources free of charge, people are encouraged to participate in safer sexual practices, which helps improve their sexual well-being and contributes to the overall goal of reducing the transmission of HIV/AIDS in communities.
5. To the Senior High School Student of DCPNHS, the University of Bohol – College of Nursing will suggest and advocate that abstinence remains an essential component of comprehensive sexual health education.

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