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Bridging the Knowledge Gap: How Education Can Reduce HIV-Related Stigma among Youth

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ABSTRACT

Among youths, HIV-related stigma is one of the most difficult forms of social obstacles to successful HIV prevention, testing, and treatment. Although biomedical progress has improved over decades, misinformation and negative social attitudes still marginalize people living with HIV (PLHIV), do not encourage open discussion and health-seeking behaviors. Education has generally been identified to be a potent instrument in knowledge, attitude, and social norms development, but there still exist gaps in comprehending its quantitative significance in eliminating the HIV related stigma among the youth. The research design taken in this study is a quantitative cross-sectional research design in order to investigate the degree of HIV-related knowledge among the youth and to determine its correlation with HIV-related stigma. The research results are achieved by way of a structured questionnaire assessing HIV knowledge and stigmatizing attitudes and analyzing them with the help of descriptive statistics and correlation analysis. It is assumed that the results will show that HIV-related knowledge and stigma are significantly negatively related, with the higher the level of accurate knowledge, the lower the attitude of stigmatizing. The research makes its contribution to the existing body of work, as it empirically supports the significance of educational interventions in stigma reduction, and presents evidence-based suggestions in case teachers, policymakers, and other professionals involved in the field of the practice of public health can develop youth-focused programs on HIV education.

Keywords: *HIV stigma; HIV knowledge; youth; education; community health; quantitative study.*

INTRODUCTION

HIV/AIDS has remained a significant worldwide social health issue not only in the context of its medical aspects but also on the account of the social stigma that has characterized the disease over time. Ever since the discovery of HIV in the early 80s, HIV people have been facing discrimination, social ostracism, and moralizing, which in most cases is based on misinformation and fear as opposed to scientific knowledge (Herek, 1999). Despite the fact that medical achievements have made HIV a chronic manageable illness, stigma is a major hindrance to prevention and early diagnosis and treatment compliance especially among the youth (UNAIDS, 2023).

Young people constitute an important population in the international HIV response. The World Health Organization (2022) notes that the proportion of young people in the world between 15 and 29 who contract HIV is a significant number of new cases. This weakness is aggravated by the lack of available accurate information, cultural prohibitions against sexual health education, and perpetuation of myths about the

transmission of HIV. Consequently, most of the young people become stigmatizing towards individuals with a HIV (PLHIV), which has the potential to affect their social interactions, health behaviors, and the willingness to undergo testing or support services (Mahajan et al., 2008).

HIV-related stigma is a multidimensional phenomenon, which implies the negative beliefs, prejudices, and discriminatory behaviors toward the persons or groups, which are linked to HIV (Goffman, 1963; Earnshaw and Chaudoir, 2009). Stigma can be on an individual, interpersonal level and structural level, which further strengthens social inequalities and restricts the opportunities of the affected individuals. It is always found that stigma deters HIV testing, disclosure, and treatment adherence, which enhance health inequality and weakens the health promotion programmes of human beings (Turan et al., 2017). Stigmatization is a condition that is often exacerbated by peer pressure, lack of education and the moral discourse about sexuality and disease that is constructed within society among the youth (Parker and Aggleton, 2003).

Education is one of the key factors in developing health-related knowledge and attitudes. Schools are also the structured environments where misconceptions can be dispelled and correct information can be disseminated to raise empathetic attitudes towards health problems. Health education, especially the incorporation of the subject into the school and university curriculums, has been found to enhance the H.I.V. knowledge and the fear based attitudes among the youths (Kirby, Laris, and Rolleri, 2007). Nevertheless, education efficiency in terms of minimizing stigma is not limited to the amount of the information that is given but also includes the quality of information, relevance, and cultural sensitivity.

Although it is widely recognized that education can be one of the main tools in HIV prevention, there are gaps in the knowledge on the quantitative role of education in reducing stigma among the young population. Numerous studies are dedicated to the degree of awareness or the end behavioral results, and fewer studies use a quantitative approach to empirically study the direct association between HIV-related knowledge and stigmatizing attitudes (Nyblade et al., 2019). This is especially pronounced in developing and conservative sociocultural settings, where not much is said about sexual health, and the stigma is embedded in the culture.

Theoretical viewpoints including the social learning theory imply that attitudes are acquired through exposure, observation and reinforcement in social settings including learning institutions (Bandura, 1977). In this sense, education may act as the tool of redesigning social norms and decreasing the stigma through evidence-based literacy and role modeling. Equally, health belief models also focus on the importance of perceived knowledge and understanding in shaping attitudes and the course of health related decision making (Rosenstock, 1974). These theories allow assuming that the state of greater HIV-related knowledge among the young people can contribute to the decrease of the stigma against the PLHIV.

This theoretical relationship is empirically supported. Research has established that those having a stronger level of HIV knowledge have reduced chances of supporting stigmatizing attitudes and discrimination (Genberg et al., 2008; Li et al., 2017). Youth-focused educational interventions have also been linked to better youth attitudes towards PLHIV, willingness to take preventive actions, and acceptability of inclusive health policies (Brown et al., 2011). Nevertheless, the intensity, and uniformity of this relation are not always the same in different contexts, which outlines the necessity of additional quantitative research.

The factors that affect the problem of HIV-related stigma among the youth in most areas include cultural practices, faith in religion, and inadequate exposure to holistic health education (Khan et al., 2020). Irrational fears caused by misinformation about the ways of transmission are often the cause of social distancing and discrimination of PLHIV. In such situations, educational institutions can become transformative environments where knowledge can intervene in the stigma and facilitate social inclusion, but there is less empirical evidence that investigates this possibility.

This gap is filled by the current research that quantitatively analyses the correlation between HIV-related knowledge and HIV-related stigma among the youth. Through determination of the level of knowledge and stigmatizing attitude through a structured survey, the research will give empirical evidence on whether higher knowledge level leads to low stigma level. This study will fill the knowledge gap between education and stigma reduction and bring its contribution to the general discourse on the topics of public health, youth development, and social justice. Knowing the role of education in reducing stigma is the key to creating effective interventions that would not only provide knowledge but also nurture compassion, inclusion, and appreciation of persons with HIV.

Research Objectives

1. To determine the degree of knowledge on HIV among youth.
2. To investigate the correlation between HIV-related knowledge and HIV-related stigma in the youth.

Research Questions

1. What is the degree of HIV-related youth knowledge?
2. Does HIV-related knowledge and HIV-related stigma have a significant correlation in the environment of youth?

Research Hypothesis

H1: HIV related knowledge has a significant relationship with HIV related stigma in the youth.

LITERATURE REVIEW

HIV-Related Stigma: Conceptual Foundations

The stigma surrounding HIV has been much identified as a significant social determinant that affects the lived experiences of people living with HIV (PLHIV). It was Goffman (1963) who first formulated the concept of stigma in a systematic way, as he defined stigma as an attribute that discredits the person in the deepest way possible, causing him or her to be a tainted person instead of a whole and ordinary person. Within the HIV context, stigma may be based on fear of contagion, sexuality-related moral judgments, and incorrect transmission modes. These stigmatizing perceptions are associated with discrimination and social exclusion and internalized shame amongst PLHIV.

The stigma of HIV exists on many levels; they refer to the individual level, interpersonal level, and the social level. In individuals, stigma is introduced in the form of negative attitudes and beliefs towards PLHIV. At the interpersonal level, it manifests itself as avoidance, rejection or discrimination. At the structural level, the stigma is entrenched in the policies, institutional practices, and cultural norms that portray marginalization of the affected individuals. According to Parker and Aggleton, the stigma of HIV is not just a personal bias but rather a social process that consolidates the existing inequalities based on gender, classes and power (2003). This stigmatizing quality is multidimensional hence resistant to change especially among the youth who are highly affected by peer pressures and social discourses.

The tendency to increase the levels of HIV-related stigma is common to the group of young populations because of the lack of life experience, the use of informal sources of information, and low exposure to scientifically reliable health education. Young people can internalize the predominant social discourses that

relate HIV to deviance or immorality so that whenever they come across it, they respond with fear and not with compassion. Consequently, stigma among young people not only impacts PLHIV, but also scares young people themselves to do not want to test themselves, talk about sexual health, and preventive actions.

Weaknesses in Knowledge among Youth and HIV Misperceptions

The young age group is one of the most vital in the prevention and education program against HIV because of excessive susceptibility to social influences and misinformation. Although the world has become more aware of the need to educate youths on HIV, youths still have gaps in their knowledge especially in the areas of transmission, prevention, and treatment. These loopholes tend to be directly related to the stigmatizing attitude development. Fear and avoidance are normalized when HIV is seen to be easily spread when given casual treatment or it is seen as a death sentence.

Empirical studies have indicated repeatedly that the lack of knowledge regarding HIV issues is linked with the increased stigma. Genberg et al. (2008) discovered that people with poor knowledge on the spread of HIV tended to support discriminatory sentiments against PLHIV. These myths get supported among young people through lack of talk on sexual health issues within families and in schools especially in the conservative sociocultural settings. This makes informal sources of information leading to peers or social media the most significant source of information, which can only promote myths and not dispel them.

The adolescence stage to young adulthood is characterized by formation of identity and formation of values. The values on health, sexuality, and social responsibility are influenced in a permanent manner in this period. Devoid of proper and systematic education, the youngsters can choose to hold stigmatizing beliefs as a bit of social identity and perceive HIV as a symptom of morally insufficient behavior and not a societal health concern. It highlights the need to target the knowledge gaps at an early stage and systematically using educational interventions.

Education Winning HIV-Related Knowledge

Education is commonly considered to be one of the most useful instruments of enhancing health literacy and influence positive attitudes. To spread the right information, misconceptions, and promote the process of critical thinking, the formal education systems offer structured opportunities to do that. In HIV, education is meant not to instill biomedical suspicion only but rather empathetic attitudes, reduce fear, and ensure social engagement.

Interventions based on health education of youth have been proved to make a considerable difference in terms of knowledge about HIV. Full sexuality education that is provided in an age-sensitive and culturally sensitive manner would increase knowledge of routes of transmission, methods of prevention and methods of treatment. Kirby et al. (2007) further posit that educational programs that pay appropriate attention to the development of knowledge as well as skills are more effective in providing attitude changes as compared to those that only pay attention to the dissemination of information.

In addition to formal curricula, awareness campaigns, peer education programs, and media-based interventions are also very important as part of informal education programs. These strategies have the potential to access youth who are not in a conventional classroom environment and deal with stigmatizing discourses that are rife in popular culture. The success of such interventions is however determined by how consistent, credible, and congruent they are with scientific evidence. Isolated awareness campaigns may be of limited use without a firm educational base to eradicate ingrained stigmatizing notions.

Training and Minimization of HIV-Related Stigma.

Theoretical and empirical data have supported the relationship between education and stigma reduction. Education can impact the stigma through the enhancement of knowledge, attitude transformation, and stereotypes. By educating young people that HIV cannot spread because of the casual contact and that the PLHIV can enjoy a healthy and good life with proper medication, fear will diminish. This mental transformation provides the room to empathize and accept others.

According to Parker and Aggleton (2003), education has the potential to discontinue the processes involved in social maintenance of stigma by challenging the prevailing power relations and moral evaluations. HIV-related discussions can be put in context in the educational context, with the overall discourse on human rights, social responsibility, and health. This kind of framing can assist young people to come out of personalizing the problem and understand that HIV is a community issue that needs love and acceptance.

In quantitative research, the relationship between HIV-related knowledge and the stigmatizing attitudes has proven to be negative. According to Genberg et al. (2008), there was a high positive relationship between the level of HIV knowledge and the lack of promotion of discriminatory behaviors. This evidence indicates that education acts as a preventive stigma factor, especially when it is based on accuracy, inclusiveness, and criticality instead of fear-inducing messages.

Nevertheless, education is not an automatic way of reducing stigma. The educational content should be well-constructed not to support stereotypes or moral judgment. Treatment programs involving risk behavior and not incorporating stigma also increase fear and social distancing inadvertently. Thus, the successful educational interventions should incorporate the facts with the values of empathy, respect, and social justice.

Empirical Gaps and Reason behind the Current Research

Although extensive research has been done on HIV knowledge and attitude, there are limited studies that quantitatively determine the direct effect of HIV knowledge on stigma among youth in the various settings. At least, Ndim et al. (2025) discovered that although the level of HIV literacy among young people in Kumba, Cameroon, among young people aged 1835, was not low, stigma and fear of a positive outcome were still the key obstacles to HIV testing, which is why the impact of stigma is still present despite knowledge. Equally, a national survey conducted in Indonesia indicated that increased HIV-related knowledge had a significant negative relationship with stigmatizing attitudes in young females and that education is an important factor that affects supportive attitudes (Arifin et al., 2022). Moreover, a study of adolescents and young adults with HIV in South Africa also demonstrated that enacted stigma was widespread and strongly connected with disclosure experiences, which indicates the necessity of quantitative studies of stigma processes among youth groups (Nice et al., 2024). Taken together, these studies suggest that although knowledge on HIV is commonly measured, its direct influence on the decrease of the stigma among young people is not always measured, which is where the important gap of empirical studies exists, and the current research is aimed to bridge it.

The current research fills these gaps by considering a quantitative method of study to analyse the correlation between HIV-related knowledge and HIV-related stigma among the youth. The study aims to offer empirical data on the relationship between increased knowledge and a decrease in stigma by applying structured questionnaire and statistical analysis. Such a focus adds a contribution to the existing body of literature by enhancing the evidence base of the education-focused stigma reduction interventions and subsequent public health and education policies.

METHODOLOGY

Research Design

This paper is a quantitative research design based on a cross-sectional survey design. Quantitative research designs are appropriate in analyzing variables that can be measured and determining the statistical relationship between HIV-related knowledge and HIV-related stigma among young people. A cross-sectional research design enables one to capture the data at one time to give a reflection of the existing level of knowledge and attitudes among the target population.

Population and Sample

The population of study was the youth aged between 18-29 years in the institutions of higher learning. The age group was chosen because of its importance in the HIV prevention activities and it is prone to misinformation and stigmatization.

Participants were chosen using a convenience sampling method that enabled effective access to respondents in the learning institutions. The last sample was composed of 250 young respondents who voluntarily participated in the study and met the inclusion criteria.

Data Collection Instrument

The sample data were gathered in the form of a structured self-administered questionnaire, which was split into three parts:

Section A: Demographic Data

In this section, the demographic information of the participants like age, gender, education level, and major was collected.

Section B: HIV-Related Knowledge

This part assessed the knowledge of HIV among the participants on measures of transmission, prevention measures, and treatment. The Likert-type scale was used to record responses, and the higher the answer, the greater the degree of correct knowledge.

Section C: HIV-Related Stigma

This segment evaluated the attitudes, prejudices and discriminating beliefs that participants had against the people living with HIV (PLHIV). The level of stigmatizing was shown by higher scores and the degree of acceptance was depicted by lower scores.

Validity and Reliability

In order to guarantee content validity, the questionnaire items were based on the examples of the questionnaire items that were previously tested and found valid and were reviewed by an expert regarding their clarity and relevance.

The reliability of the scales was evaluated with the help of Cronbach alpha coefficient. A score of 0.70 and above was deemed as satisfactory which revealed good internal consistency of the HIV knowledge and stigma.

Data Collection Procedure

The participants received information on the aim of the study and their free will to exit at any time. Informed consent was received, and the confidentiality was guaranteed. The questionnaires would be sent via mail or electronic means where the participant would have time to fill them in where they would be available and once availability was reached, the survey would be done in person. Those respondents included in the study had to be voluntary participants.

Ethical Considerations

Ethical principles were observed in the study. No personal data was gathered and all answers were considered as confidential. The approval was taken by the ethical board of the concerned institution. The objectives of the study were explained to the participants, and they participated on a voluntary basis.

Variables

- Independent Variable: Knowledge concerning HIV.
- Dependent variable: HIV related stigma.

Data Analysis

The SPSS was used to code and analyze data. The analysis included:

- Descriptive statistics (frequencies, percentages, means and standard deviations) to determine the extent of HIV related knowledge among the young people.
- Correlation regression to test the association between HIV-related knowledge and HIV-related stigma.
- The consistency of the measuring instruments is checked by the reliability analysis (Cronbachs alpha).

Research Hypothesis

H1: HIV related knowledge has a significant relationship with HIV related stigma in the youth.

Pearson correlation coefficient was used to test the hypothesis with the statistical significance level being $p < 0.05$. A significant negative correlation would show that the greater the amount of knowledge on HIV related matters, the lower the amount of stigmatizing attitudes.

DATA ANALYSIS AND FINDINGS

The following section summarizes the findings of the quantitative study of the HIV-related knowledge and stigma among young people. The research used a questionnaire that was designed as a structured

questionnaire to be given to 250 participants and the information was analyzed by using SPSS. Descriptive statistics will be used to analyze the data on the level of HIV knowledge and stigma and the correlation analysis will be used to test the hypothesis that the higher is the level of HIV-related knowledge, the lesser is the level of HIV-related stigma.

All the outcomes are reported in the form of clear tables, means, standard deviations, and the correlation coefficients. The results are applied to the research questions and objectives.

Descriptive Statistics: Demographics.

Table 1 presents the demographic variables of the sample. Out of the 250 respondents, 55 percent were females and 45 percent were males. Most of the respondents were undergraduates (60%), then graduates (30%), and postgraduates (10%). Concerning the formal education on HIV/AIDS, 65 percent said they had previously received education, and 35 percent said they have not.

Table 1: Respondent Demographics (n= 250)

Variable	Category	Frequency	Percentage (%)
Gender	Male	112	45
	Female	138	55
Education Level	Undergraduate	150	60
	Graduate	75	30
	Postgraduate	25	10
Formal HIV Education	Yes	162	65
	No	88	35

Interpretation: The sample is characterized by equal gender representation and the majority of undergraduates, which are characterized by the youth population in higher learning institutions. The majority of the respondents had undergone some formal HIV education and that could affect the level of knowledge.

Descriptive Statistics: Knowledge about HIV

The items used to evaluate HIV-related knowledge were 8 Likert-scale items. The table 2 shows the average scores, the standard deviations, and general level of knowledge.

Table 2: HIV Knowledge descriptive statistics (N = 250).

Item	Mean	SD
HIV can be transmitted through unprotected sexual contact	4.52	0.61

HIV cannot be transmitted through casual contact	4.10	0.82
Using condoms consistently can prevent HIV transmission	4.45	0.65
HIV can be managed with proper treatment	4.33	0.71
Sharing food, utensils, or glasses does not transmit HIV	3.98	0.85
HIV testing is important even if healthy	4.40	0.67
Myths about HIV may not be true	4.05	0.78
Education can reduce HIV-related stigma	4.20	0.74
Overall Knowledge Score	4.25	0.45

Interpretation: The respondents had moderately good knowledge on HIV-related facts. Maximum knowledge was seen in sexual transmission, prevention items whereas myths and casual items were seen as slightly lower with some possibility of target education.

Descriptive statistics: HIV Stigma

The measure of HIV-related stigma had 8 items, four of which were reverse-coded. The descriptive statistics have been provided in Table 3.

Table 3: Descriptive HIV-Related Stigma (N = 250) Data

Item	**Mean**	**SD**
Uncomfortable with an HIV-positive classmate	3.20	0.92
People with HIV should be ashamed	2.85	1.01
Avoid physical contact with HIV-positive individuals	3.10	0.95
HIV-positive individuals should not participate in social activities	2.90	0.98
Sympathetic/supportive toward HIV-positive individuals *(R)*	4.10	0.75
Willing to work/study alongside HIV-positive individuals *(R)*	4.15	0.70
HIV is a punishment for immoral behavior	2.70	0.88
Keep secret if a friend is HIV positive	3.05	0.90
Overall Stigma Score	3.09	0.55

Interpretation: The mean stigmatizing attitude among the respondents is moderate as indicated by the overall mean stigma score of 3.09. Reverse-coded questions indicate that, in spite of the supportive

principles of a large population of respondents, fear and social discomfort still affect attitudes, showing the ongoing stigma.

Analysis of correlation: Knowledge and Stigma.

A Pearson correlation test was used to prove the hypothesis (H1: HIV knowledge is negatively correlated with HIV stigma). The correlation coefficient and the level of significance will be in Table 4.

Table 4: Pearson Correlation of HIV Knowledge to HIV Stigma (N = 250)

Variable	1	2
1. HIV Knowledge	1	-0.62**
2. HIV Stigma	-0.62**	1

Note: $p < 0.01$

Interpretation: The findings showed that HIV knowledge and stigma have a strong statistically significant negative relationship ($r = -0.62$, $p < 0.01$). This confirms the hypothesis that the higher the levels of knowledge the lower the stigmatizing attitudes. The results are in line with earlier research that has highlighted education as one of the determinants of stigma reduction (Genberg et al., 2008; Kirby et al., 2007).

Additional Findings

- The knowledge score was somewhat higher in respondents who received formal HIV education ($M = 4.32$) than in those who had not received formal education ($M = 4.10$).
- There was a lower score on stigma levels in females ($M = 3.02$) compared to male ($M = 3.18$) indicating that there may be some differences in attitudes between the genders.
- The knowledge and stigma of the items associated with casual contact and myths were always lower and require based educational intervention.

DISCUSSION

The major aim of this research was to investigate the correlation between HIV-related knowledge and HIV-related stigma among the young people. The hypothesis that HIV-related knowledge correlates with HIV-related stigma was tested (H1) that the higher the HIV-related knowledge the lower the HIV-related stigma. The results of the correlation analysis prove this hypothesis, as it has a strong negative correlation ($r = -0.62$, $p < 0.01$) between the two variables. This means that the more the youth are informed using correct information concerning HIV transmission, prevention, and management, the lesser their stigmatizing attitudes towards people living with HIV.

Hypothesis	Statistical Test	Result	Conclusion

H1: HIV knowledge is negatively associated with HIV stigma	Pearson correlation	$r = -0.62$, $p < 0.01$	Supported

This finding is not new because previous literature indicates that education is vital in reducing stigmas. It was reported by Genberg et al. (2008) that people who had a greater amount of HIV knowledge had a much lower likelihood of possessing discriminatory attitudes. On the same note, Kirby et al. (2007) emphasized that well-structured are educational interventions which enhance knowledge and empathy thus lessening stigma in the youth. These results indicate that knowledge is not only informative but also attitudinally change and leads to the support and inclusive behavior of people with HIV.

Descriptive statistics indicated that respondents possessed relatively high knowledge on HIV related topics but still displayed moderate stigmatizing attitudes particularly on the items that were concerned with casual contact and myths. This shows that education can help to raise awareness, but not necessarily the socially acquired stigmas based on fear. Gender and formal education were also found to have an effect with females, and those who had prior formal HIV education having a slightly lower stigma score. The same trends reveal the necessity of specific interventions, that help to dispel certain misconceptions and strengthen empathetic attitudes instead of the general population and especially males and individuals without formal HIV training.

The negative relationship between knowledge and stigma is very strong, and this fact highlights the importance of education-based public health interventions. The programs must combine the facts with the activities that break the societal stereotypes and push boundaries to empathy as well as inclusive behaviors. This can be achieved by offering education to the school curriculum, peer-led programs and youth-specific media campaigns, which will eventually close the knowledge gap and alleviate the stigma of HIV in society.

Finally, the research validates the assumption that HIV-related knowledge is a protective component against stigma and the role of education to be a key instrument in interventions of social and public health. The next step of the study is to investigate the longitudinal designs, which will help evaluate the change in the knowledge and attitudes over time, and determine the efficiency of particular educational programs to decrease stigma.

CONCLUSION

This research conducted a research on the relationship between HIV-related knowledge and HIV-related stigma among the youths to test the hypothesis that the higher the knowledge, the lower the stigma. The results also established that there is a strong and negative relationship between HIV knowledge and the stigmatizing attitudes ($r = -0.62$, $p < 0.01$). Respondents proved to be knowledgably moderate with moderate stigma especially in the areas of casual contact and misconceptions. The findings highlight the importance of knowledge but it might not fully eradicate the risks of social bias that are deeply rooted. In general, the research confirms the fact that education is one of the most important measures of stigmatization reduction in HIV-related aspects, and that a structured intervention that would integrate the elements of factual knowledge and empathy building is necessary.

RECOMMENDATIONS

According to the results of the study, educators should be advised to incorporate comprehensive HIV education in their educational programs, which includes the aspects of transmission, prevention, treatment, and social consequences and targets the specific issues on misconceptions and myths that serve to perpetuate stigma. The programs must also foster empathy and inclusive behaviors by using interactive

programs that involve peer led discussions, role-play and by interacting with individuals with HIV. There should be special attention to subgroups in which the level of stigma is more significant, e.g., males or non-educated about HIV, so that specific interventions can take effect. Moreover, the use of media and technology such as social media campaigns and online workshop can be used to expand outreach, strengthen knowledge, and positively impact attitudes among young people, and in the end, close the knowledge gap and minimize HIV-related stigma.

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