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Voluntary HIV Counselling and Testing Amongst Trainee Nurses and Midwives in Ghana and their Perception of Disclosure of HIV Positive Status to Partners

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Abstract: Voluntary Counseling and Testing (VCT) is the best strategy for a successful HIV prevention, care, and support service implementation among HIV-negative and positive individuals. VCT is also recognized as a critical component in the reduction of risk among sexually active young people. This study aims to assess the voluntary HIV counseling, testing, and utilization amongst student nurses and midwives in Ghana and their perception of the disclosure of HIV-positive status to partners. This study used a cross-sectional quantitative descriptive survey amongst 98 nursing and midwifery students at the Nursing and Midwifery Training College, Koforidua. A simple random sampling was used in selecting the participants. Data collection was done using a structured questionnaire. Females dominated the study with the majority of respondents being single. VCT uptake among the respondents was low. Only 26.5% had ever undertaken VCT. It was observed that their willingness to accept VCT does not translate into actual testing. The majority (83%) of respondents perceived that HIV-infected persons should disclose their status to a sexual partner. Fear of stigma (96.0%), fear of loss of friends (98.0%), and fear of being abused (88.8%) were identified as the barriers to HIV status disclosure. To promote VCT services among trainees, these services need to be periodically included in school activities. A comprehensive VCT training module needs to be included in the school curriculum. More emphasis should be placed on the benefits of VCT so that students will understand the importance of implementing VCT services.

Keywords: VCT, HIV, Trainee Nurses, Midwives, Perception, Disclosure, Partners, Ghana

Introduction

According to the World Health Organization (WHO), the human immunodeficiency virus is a retrovirus that infects cells of the immune system. Since 1981 when the first recognition of Acquired Immunodeficiency Syndrome (AIDS) was reported in the United States, HIV/AIDS infection has spread rapidly to many countries over the years and has become a global health burden. The disease continues to affect millions of people irrespective

of age, sex, or race. According to the World Health Organization report 37.7 million people globally were living with HIV in 2020; 1.5 million people were newly infected with HIV in 2020 and 680 000 people died from HIV/AIDS-related illnesses in 2020. A total of 79.3 million people were infected with HIV since the epidemic started and 36.3 million people died from AIDS-related illnesses since the start of the epidemic. Sub-Saharan Africa which consists of just 10% of the world's population, remains the most seriously affected region with a total of 63% of all new infections recorded in 2020 alone (Agamlor *et al*., 2019)

According to the Ghana AIDS Commission, Ghana recorded an HIV prevalence of 1.69% in 2020 with a regional HIV prevalence of 2.66% (highest) in the Ahafo region and a prevalence of 0.39% (lowest) in the North-East region. The Lower Manya Krobo recorded an HIV prevalence of 5.56% (highest) at the district level and 0.07% (lowest) in the Karaga and Tolon districts (GAIDSC, 2020). HIV prevalence among the young population (15-24 years) is estimated at 1.5% and some 346,120 people are living with HIV across all 16 regions of the country (GAIDSC, 2020).

More countries have tried to take many different approaches to slow the spread of HIV infection and minimize its impact on families, individuals, and society. These strategies include HIV diagnosis in young children and infants, the Voluntary Counseling and Testing (VCT), management and detection of sexually transmitted diseases, the Provider-Initiated Counseling and Testing (PICT), the promotion and provision of condoms, reduction of risk, and safer sex counseling, interventions targeted at sex workers and homosexuals and male circumcision (Addis *et al*., 2013). VCT is internationally recognized amongst the others as an important and effective strategy for the prevention and care of HIV (Agamlor *et al*., 2019).

VCT is defined as the process by which an individual is taken through counseling to enable him or her to make an informed choice about being tested for HIV. The decision must be entirely the choice of the individual who was counseled, and he or she must have the assurance of confidentiality (Addis *et al*., 2013). VCT is usually employed as an effective strategy for ensuring behavioral change for preventing HIV as well as ensuring early access to support and care. VCT is also instrumental in promoting behavioral change, unprotected sex reduction, and helping reduce the incidence of HIV and other STIs. VCT has been proven to be the most effective way, which plays a link between prevention and mitigating activities, thereby limiting the spread of the infection (Madiba and Mokgatle, 2016). For those who are still negative, VCT can be an incentive for behavior change for high-risk sexual behaviors, especially those with multiple sexual partners; whiles those who are already positive can seek medical treatment and support (Gizaw *et al*., 2014). A recent study conducted among 4 countries in Africa; Congo Brazzaville, Central Africa Republic, Mozambique, and Nigeria showed that only 36.5% of youth had ever tested for HIV. Furthermore, studies aimed at increasing awareness to get tested among participants reported a high willingness of the participants to get tested. However, the high willingness to get tested for HIV does not automatically translate into actual testing (Agamlor *et al*., 2019; Zewudie *et al*., 2020).

The tertiary student population in Ghana, of which trainee nurses and midwives are no exception, falls in the 15-25 age group who are at risk of contracting the virus. The students' lifestyle exposes them to high vulnerability to HIV. The environment on campus combined with peer pressure on the students to get involved in transactional sex relations in exchange for money promotes sexual activity among the student population (Gizaw *et al*., 2014). There are increasing efforts to increase adolescent utilization of VCT services; however, its utilization is low among Ghanaians. In 2008, the percentage of people who had ever tested for HIV was 21% for females and 14% for males. Reasons for the non-utilization of VCT services among the youth include fear of positive results, stigmatization, lack of confidentiality, and the cost of testing (Agamlor *et al*., 2019).

Disclosure of HIV status to others, especially to one's sexual partner, leads to better compliance with HIV therapy thereby reducing transmission (Kenu *et al*., 2014). The disclosure rate is lower in developing countries (17%) as compared to the developed world (86%) (Alema *et al*., 2015). The disclosure rate in sub-Saharan Africa varies among partners vary (between 33 and 93%). Malawi reported the lowest rate. Reasons for disclosure include HIV transmission prevention, the need for care, and upholding the integrity of the relationship (Kyaddondo *et al*., 2013). The disclosure rate has been notably low among Ghanaians. A study conducted by Boampong-Konam (2015) reported a 41.2% disclosure rate among sexual partners. The study discovered that age, knowing a partner's status, and knowing the relevance of disclosure are determinants of HIV status disclosure. Fear of negative consequences of disclosure such as divorce or blame were major barriers to disclosure.

HIV counseling and testing constitute a central part of HIV prevention efforts and it is performed in several health facilities in Ghana. Despite VCT being recognized in National AIDS control programs, its importance is not well understood by many, especially the youth. It has been observed that trainee nurses and midwives have prolonged contact with people infected with HIV, during their clinical practice. These trainee nurses and midwives were expected to periodically undertake voluntary counseling and testing at least once a year since they do come into contact with HIV-positive patients, coupled with the other risky sexual behaviors they engage themselves in. Despite various studies conducted in Ghana around VCT, not much had been conducted on training

nurses and midwives in Koforidua. Considering this gap, this study is being conducted to assess the attitude of trainee nurses and midwives of Nursing and Midwifery Training College, Koforidua towards VCT uptake.

Materials and Methods

This study used a cross-sectional quantitative descriptive survey amongst 98 nursing and midwifery students at the Nursing and Midwifery Training College, Koforidua. A simple random sampling was used in selecting the participants. Data collection was done using a structured questionnaire. The sample size was estimated using an online epi info software open calculator. All trainee Nurses who were not present at school during the survey were excluded from the study. Data were analyzed using STATA statistical software Version 14.2. Pre-screening procedures were conducted to ensure data appropriateness and accuracy. All statistical assumptions were subsequently tested. Ethical approval for the study was obtained from the Research Committee of the Nursing and Midwifery Training college, Koforidua. Participation was voluntary, and respondents were able to withdraw at any stage without any penalty. Females (83.7%) dominated the study with the majority (59.2%) of respondents between the ages of 21-25years. The majority (92.9%) were single, and the majority (99.0%) were Christians.

Results

Voluntary HIV Counseling and Testing Amongst Trainee Nurses at Koforidua Nursing and Midwifery Training College

The study showed that only 27.0% of the respondents have ever gone through voluntary HIV counseling and testing while the majority of (73.0%) of respondents have never gone through voluntary HIV counseling and testing (Fig. 1).

Reasons for Non-Utilization of Voluntary HIV Counseling and Testing Services

The study found (Fig. 1) that of the total of 72 respondents who had never gone through voluntary HIV counseling testing, the reason for the non-utilization of VCT services by the majority (61.1%) was the "fear of being tested positive". While a proportion (15.3%) of respondents did not utilize VCT services because they had "one sexual partner" a proportion (11.1%) did not because they were not aware of VCT services.

Assessing the attitude of trainee nurses on VCT uptake (Table 3), all the participants agreed that VCT is very useful to enable one to know his/her serostatus. However, very few of the respondents (14, 14.3%) had the misconception that VCT pre-disposes them of early sexual matters. Regarding the overall attitude of the respondents, the majority of them (71, 72.4%) were willing to undergo VCT if requested, whiles a greater proportion (92, 93.9%) recommended students in health institutions to undertake VCT. A greater number of the respondents (96, 98.0%) agreed that VCT services should be provided free of charge to students. Less than half (44.9%) perceive that their lives would be in danger if a colleague discovers they have tested positive for HIV. The majority (81, 82.7%) preferred VCT services combined with youth activities such as sports, festivals, and drama. In addition, a greater number of the respondents (76, 77.6%) recommended that VCT services should be integrated into youth programs such as STIs and family planning. Most of the respondents (84.7%) trusted health care providers with their counseling and testing information. Almost all the respondents (99.0%) believe that HIV testing and counseling are necessary for one to plan for a healthy sexual life (Table 3).

Table 1: Sociodemographic characteristics of respondents (n = 98)

Variables	Frequency (N = 98)	Percentage (%)
Age		
•18-20	24	24.4
•21-25	58	59.2
•26-30	9	9.2
•31+	7	7.1
Gender		
•Female	82	83.7
•Male	16	16.3
Marital status		
•Single	91	92.9
•Married	7	7.1
Religion		
Christian	97	99.0
Muslim	1	1.0

Females (83.7%) dominated the study with the majority (59.2%) of respondents between the ages of 21-25 years. The majority (92.9%) were single, and the majority (99.0%) were Christians

Table 2: Reasons for non-utilization of VCT services

Reason	Frequency	Percentage (%)
I am afraid to test positive	44	61.1
I have only one sexual partner	11	15.3
I don't want to know my status	8	11.1
I am not aware of VCT services	6	8.3
I am not in a relationship	3	4.2
Total	72	100.0

Table 3: Attitude of trainee nurses and midwives towards the uptake of voluntary counseling and testing

Statement	Agree	Disagree
Students in health training colleges need to attend voluntary counseling and testing services.	92 (93.90)	6 (6.10)
It is extremely useful to test for HIV.	98 (100.00)	0 (0.00)
I am willing to test for HIV if requested	71 (72.40)	27 (27.60)
HIV testing and counseling services should be provided free of charge to students.	96 (98.00)	2 (2.00)
My life will be in danger if a college finds that I have tested positive for HIV.	44 (44.90)	54 (55.10)
Health providers can be trusted with their counseling and testing information.	83 (84.70)	15 (15.30)
Voluntary counseling and testing should be integrated into youth programs such as STIs and family planning.	76 (77.60)	22 (22.40)
One must undertake voluntary counseling and testing services to plan for a healthy sexual life.	97 (99.00)	1 (1.00)
Voluntary counseling and testing services should better be given during youth activities like sports, drama, and festivals.	81 (82.70)	17 (17.30)
HIV testing and counseling predispose one to early sexual matters	14 (14.30)	84 (85.70)

Table 4: Perception of respondents on reasons for disclosure of HIV status to a sexual partner.

Reasons for disclosure	Frequency(f)	Percentage (%)
To prevent transmission to the other partner	42	43.0
To enable the partner to test for his/her status	18	18.4
To obtain early treatment	10	10.2
To maintain faithfulness in the relationship	8	8.2
To help the other partner to be aware of the situation	7	7.1
To enable them to plan for a healthy sexual life	6	6.1
To help the other partner carry out preventive measures	4	4.0
To obtain emotional support from his/her partner	2	2.0
To prevent divorce	1	1.0
Total	98	100.0

Respondents' Perception on Whether HIV-Infected Persons should Disclose their Status to their Sexual Partner

Out of the 98 respondents, the majority (83%) perceived that HIV-infected persons should disclose their status to a sexual partner while only 17% of the respondents perceive otherwise (Fig. 2).

Across the respondents who perceived that HIIV infected persons should disclose their statuses to their sexual partners, several reasons were identified; most events were associated with multiple reasons to disclose. The most common reason was to prevent transmission to the other partner which accounted for 43.0% of all the reported reasons (Table 4). The other reasons reported were; to enable the partner to test for his/her status which accounts for 18.4% of all the reported reasons, to help the other partner carry out preventive measures account for 4.0% of all the reported reasons, to promote faithfulness in the relationship accounts for 8.2% of the reported reasons, to obtain early treatment accounts for 10.6% of all the reported reasons, to help the other partner to be aware of the situation accounts for 7.1% of all the reported reasons, to prevent divorce accounts for 1.0% of all the reported reasons and to obtain emotional support from his/her partner accounts for 2.0% of all the reported reasons. Table 4 summarizes the views of the respondents and their corresponding frequencies on reasons why HIV-infected persons should disclose their status to their sexual partners.

Reasons for Non-Disclosure of HIV Status to others

Figure 3 shows the respondents' views on reasons for non-disclosure of HIV disclosure to others. A larger number (96, 98.0%) believe that fear of loss of friends prevents one from disclosing his/her status to others. Additionally, the majority of the respondents believe that fear of stigmatization (94, 96.0%), fear of being blamed (95, 97.0%), fear of being abused (87, 88.8%) and fear of financial support from work, parents or friends (78, 79.6%) prevent HIV positive persons from disclosing their status to others. A very small number (26, 17.0 %) believe that HIV-positive patients would not disclose their status because it is against traditional practices

whiles the rest (72, 83.0%) perceive otherwise (Fig. 2). The common reasons for non-disclosure of HIV status as perceived by the respondents were fear of loss of friends, fear of stigmatization, and fear of being blamed.

Discussion

The Attitude of Trainee Nurses/Midwives Towards the Uptake of Voluntary Counseling and Testing

Findings from the study (Table 3) show that majority of the students had positive attitudes toward VCT, with few expressing negative attitudes. The student's positive attitude maybe because they were better placed, educated, and possibly more enlightened through their exposure during practicum (clinical) related to health delivery, including People Living with HIV/AIDS (PLWHA) and VCT services. The current finding is consistent with other studies, where a high intention score of the respondents to use VCT is explained by the Theory of Planned Behaviour (TPB) model (Ermeko *et al*., 2019). Despite this finding, the study showed a low uptake of voluntary counseling and testing amongst respondents.

Reasons for Non-Utilization of VCT Services

Only 27.0% of the respondents had ever utilized voluntary counseling and testing services (Fig. 1). This finding is slightly lower compared to findings from other studies in Tanzania (34.6%) (Zou *et al*., 2009) and Kenya (46.1%) (Kalimbo, 2019). This might be due to a lack of knowledge on the need to patronize VCT services. However, this study did not assess the knowledge level of the participants. While the "fear of testing positive'' was found to be the most reason for the Non-utilization of VCT services among the trainee nurses a proportion (13.6%) did not because "they have only one sexual partner'' (Table 1 and 2). The reasons adduced by the respondents for their unwillingness to undertake VCT is based on false assumptions and misconceptions about HIV/AIDS and VCT. This is quite surprising knowing that participants were trained nurses with adequate knowledge of HIV and VCT. There is a need therefore to intensify reproductive health education efforts amongst trainee nurses in Ghana. This will impact tremendously the primary prevention of HIV/AIDS. Even though there was low utilization of VCT services by participants, Findings from the study showed that the majority of the students had a positive attitude towards VCT and were willing to test for HIV if requested. This finding is similar to the findings of (Witzel *et al*., 2017; Agamlor *et al*., 2019).

Perception of Trainee Nurses/Midwives on Factors Affecting HIV/Aids Status Disclosure

Disclosure of HIV-positive results enables an individual to practice safer sex to make informed options for prevention that may ultimately lower the number of newly infected and even reduce the risk of HIV transmission to partners. The study showed that the majority of the respondents (83%) perceive that HIV-infected persons should disclose their status to their sexual partners (Fig. 2). The perception of disclosure rate among the respondents is comparable with the study conducted in Ethiopia (Alema *et al*., 2015) which reported an 81.2% disclosure rate among the study participants. However, a study conducted in Nigeria by (Mbamara *et al*., 2013) observed a very high disclosure rate (97.1%) as compared to the findings of this study (83.0%). The reason for the lower disclosure rate from this study might be attributed to the difference in sample size. The views of the respondents on reasons for non-disclosure of HIV status to others were fear of stigma, fear of discrimination, fear of divorce, fear of loss of financial support from work, parents, and friends, and fear of being abused (Fig. 3). The most common reasons for non-disclosure of HIV serostatus among the respondents were fear of loss of friends, fear of being abused, and fear of stigmatization. This finding was similar to the study conducted in Ethiopia, which showed that fear of stigma and discrimination (94.4%) and fear of lack of confidentiality (61.1%) were major barriers to disclosure of HIV status to others (Alema *et al*., 2015).

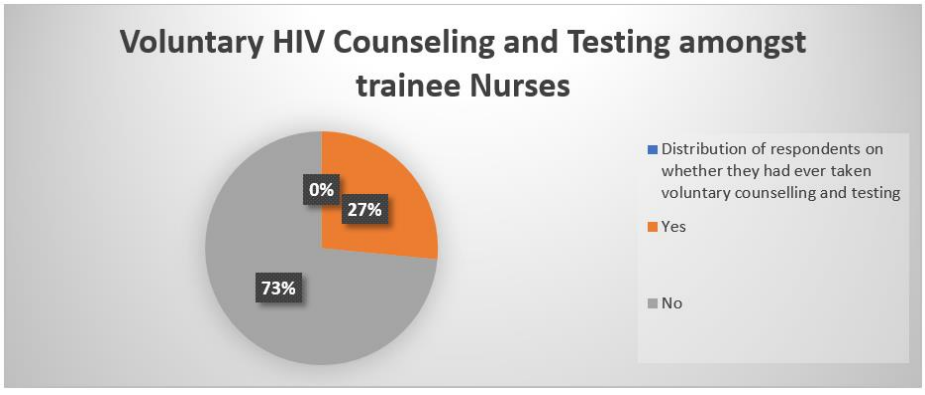

Fig. 1: Distribution of respondents on whether they had ever taken voluntary counseling and testing

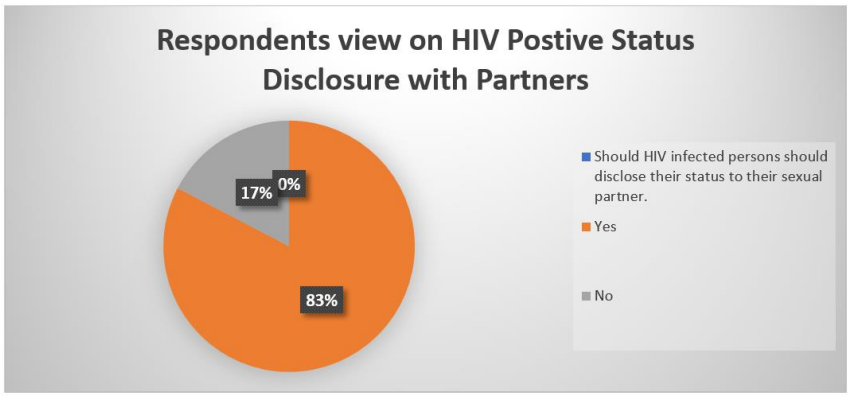

Fig. 2: Respondents' view on whether HIV-infected persons should disclose their status to a sexual partner

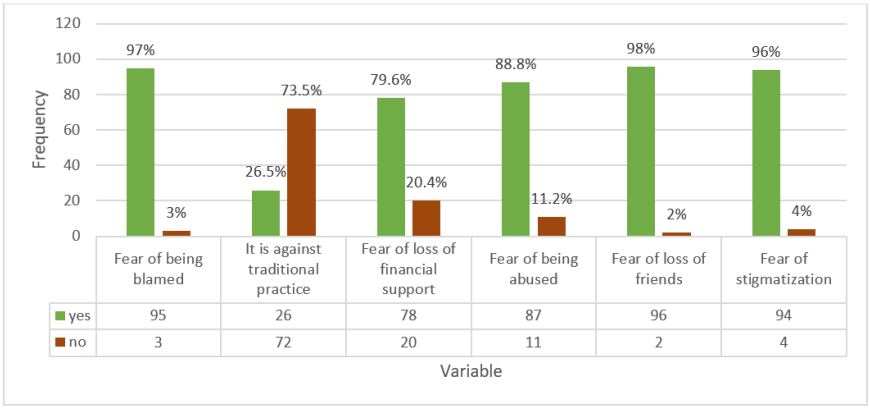

Fig. 3: Distribution of respondents' views on reasons for non-disclosure of HIV status to others

In this study, participants also expressed interest in reasons why HIV-positive persons should disclose their information to a sexual partner (Table 4). The most common reason identified was to prevent transmission to the other partner. The other reasons reported were to enable the partner to test for his/her status, to help the other partner carry out preventive measures, to maintain faithfulness in the relationship, to enable them to plan for healthy sexual life, to obtain early treatment, to help the other partner to be aware of the situation, to prevent divorce and to obtain emotional support from their partner (Table 4). Similar findings were reported in Tanzania and Uganda, in which people infected with AIDS disclose their status to a sexual partner to receive emotional and financial support from their spouses (Yonah *et al*., 2014).

Conclusion

The uptake of Voluntary counseling and testing is low among students of Nursing and Midwifery Training College, Koforidua. Our study has revealed that low perceived risk among the study population might be a contributing factor to low attendance of VCT services. Even though the students have a positive attitude, the fear of being tested positive for HIV was preventing them from patronizing VCT services.

Limitations

The study used a cross-sectional design, which means that the potential causal inference of the results cannot be ascertained. The close-ended response structure of the developed questionnaire did not allow respondents to express their opinions, hence, may have limited study participants on the expression of their opinions on relevant issues. Sensitive issues like HIV/AIDS may trigger social desirability concerns such as underreporting or overreporting, self-presentation, recall biases, and confidentiality worries due to potential stigmatization connected with a reported behavior.

Recommendation

VCT services need to be integrated into some of the school's activities to increase the awareness of this vulnerable group of people since they are at risk and the most affected group. Youth-friendly VCT services need to be established so that they will attract most of the youth who are scared to know their status. Further research needs to be done to assess the knowledge level of the students. There should always be a professional staff who

would take students through adequate counseling. Lastly, service providers should always ensure privacy and anonymity so far as VCT services are concerned'. We recommend further studies into this area using a more robust study design and methodology.

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Author's Contributions

Augustine Kumah: Final review of the manuscript.

Gideon Dzando: Designed the research plan and organized the study.

Christine Ahiale: Contributed to the data collection and writing of the manuscript.

Linda Hayford: Contributed to the data analysis and writing of the manuscript.

Tarsicius Kumih Yaw: Contributed to the data analysis and writing of the discussion of the manuscript.

Eunice Adorkor: Contributed to the writing and review of the manuscript.

Ernest Agada: Contributed to the design of the research plan.

Hillary Selassi Nutakor: Coordinated the data collection process.

Joseph Nortu: Contributed to the data collection and data entry process.

Gideon Komla Azi: Contributed to the data collection and writing of the manuscript.

Augustina Akua Lartey: Contributed to the data collection and data entry process.

Ethics

Ethical approval for the study was obtained from the Research Committee of the Nursing and Midwifery Training college, Koforidua. Participation was voluntary, and respondents were able to withdraw at any stage without any penalty.

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