HIV TESTING AND COUNSELLING AMONG THE YOUTH OF FANTEAKWA DISTRICT OF GHANA: AN APPLICATION OF THE HEALTH BELIEF MODEL

BY

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DECLARATION

I, Kennedy Nyeseh Ofori, do hereby declare that except for references to other people's work, which have been duly acknowledged, this thesis is the result of my own fieldwork, and that it has never been presented in part or completely for another degree elsewhere.

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DEDICATION

This thesis is dedicated to my late mother, Madam Peace Ama Agyapomaa.

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I thank the Lord Almighty, for granting me wisdom, good health and resources to complete this course.

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LIST OF ABREVIATIONS AND ACRONYMS

AIDS	-	Acquired Immune-Deficiency Syndrome
ART	-	Antiretroviral Therapy
CDC	-	Centre for Disease Control
CVA	-	Cerebrovascular Accident
FDA	-	Fanteakwa District Assembly
FDAHR	-	Fanteakwa District Health Annual Report
GAC	-	Ghana AIDS Commission
GHS	–	Ghana Health Service
GSS	-	Ghana Statistical Service
HAART	-	Highly Active Antiretroviral Therapy
HBM	-	Health Belief Model
HIV	-	Human Immune-Deficiency Virus
HTC	-	HIV Testing and Counselling
MOH	-	Ministry of Health
NGO	-	Non- Governmental Organisation
PLWA	-	People Living with HIV and AIDS
PMTCT	-	Prevention of Mother to Child Transmission
SPSS	-	Statistical Package for Social Scientists
WHO	-	World Health Organisation

ABSTRACT

This study was conducted to examine the factors that contribute to the utilization of HIV Testing and Counselling among the youth of Fanteakwa District of Ghana in light of the health belief model. The study involved 424 youths between the ages of 15 - 24 in the Fanteakwa District in the eastern Region of Ghana. The quantitative approach was used in the study using the Health Belief Model. The multi-stage sampling technique was adopted for the study involving the simple random sampling which was used to select the communities and then the purposive sampling method which was also used to select individual participants. Structured questionnaires made up of 30 items each were administered to the respondents to collect data and processed using STATA 13. The results showed that majority of the respondents (over 80%) had heard about HTC and also knew where to go for HIV test. Again, It was also revealed from the study that as little as 25% had ever taken HIV test at the time of the study with the males being in majority than the females. In addition, more than half of the respondents (57.6%) have been given pre-counselling service before the test and majority of them (67.3%) went back for their test results. It was also found that sex (p = - 0.52854), place of residence (p = - 0.67824) of respondents and perceived susceptibility (p = - 0.07187) were significantly associated with HTC participation. It was recommended that social media is used as a tool for disseminating information on HTC and also, the development and mass distribution of Self-test kits for HIV for the youth.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Human Immune-Deficiency Virus (HIV) and Acquired Immune-Deficiency Syndrome (AIDS) was first reported in 1981 among five young men in United States of America, and since then, the human race continues to suffer huge human, economic and social losses especially in Sub-Sahara Africa as a consequence of not finding a cure or a vaccine for the disease (Tanye, 2013; ward, 1990 cited from Asravor, 2010). According to Chris-Koka (2012), the first HIV and AIDS case in Ghana was detected in 1986 and although, the current prevalence is low at 1.8 percent in 2015 (GAC/MOH, 2016), it is however firmly established within the whole society, and sub populations with high prevalence and risk of transmission that constitute a reservoir for sustaining the epidemic.

HIV, the virus that causes AIDS, attacks and weakens the immune system of its host, causing the individual to become susceptible to innumerable opportunistic infections, which ultimately prove fatal. HIV is transmitted via very specific avenues of contact with contaminated body fluids (e.g. blood, semen, vaginal secretions, or human breast milk). While there is no cure or vaccine for HIV infection or AIDS at this time, there have been effective treatments available since the mid-90's to bolster and maintain the immune system of individuals infected with HIV (CDC, 1998). Commonly referred to as Highly Active Antiretroviral Therapy (HAART) or a "drug cocktail", the treatments are combinations of protease inhibitors and transcriptase inhibitors (Henkel, 1999), which interfere with the virus' ability to enter, reproduce or exit the host cell.

The number of persons living with HIV and AIDS in Ghana as estimated by the 2014 National HIV and AIDS Status Report was 250,232, made up of 59 percent females and 41

percent males. The report further indicates that, there were 21,223 children living with HIV and AIDS, and an estimated 1,295 children died annually from AIDS related illness (GAC/MOH, 2014).

Citing Family Health International-FHI (2006) and World Health Organisation-WHO (2007), Tanye (2013) indicates that, more than 50% of all HIV infections worldwide are among young people aged 15-24 years and again, more than 6,000 youth are newly infected with HIV each day throughout the world. This rate of infection is due to the fact that the youth are more likely to engage in highly risky behaviours such as unprotected sexual intercourse that will lead them to contract HIV infection. Over half of the youth would have had sex by age 17 (Tanye, 2012 citing Summerfield, 2008). Interestingly, adolescents and the youth have more sexual desires and are also more likely to engage in unprotected sexual intercourse, (GHS/UNFPA/MOH, 2005). Therefore, young people remain at the centre of the epidemic in terms of transmission, vulnerability, impact and also potential for behaviour change. This implies that young people will determine the course of the epidemic and therefore they are a critical focus for HIV prevention and behaviour change programmes (Mwandira, 2008 cited in Tanye, 2013).

In countries with high prevalence of HIV, the disease has had a significant economic impact on the country and its population at both societal and individual levels. The HIV epidemic's potential impact on Ghana's economy is considerable. There are three primary ways by which the disease hinders economic well-being: a reduction in life expectancy resulting in both early death and economic disability, a reduction in parental investment in children and, lastly, the overall negative effects on returns on investments in business and infrastructure.

According to the National HIV and AIDS/STI Policy (2013), good quality testing and counselling (TC) for HIV should be made available and accessible to each person seeking these services and adequate information also provided prior to testing and post-test

counselling provided when test results are received. In the policy framework, HIV and AIDS Testing primarily involves individuals actively seeking HIV testing at facilities offering the service which should be offered especially in non-health settings, such as the community, mobile, stand-alone services, during pre-marital counselling and in walk-in health settings where people go to know their HIV status.

Yahaya, Jimoh and Balongun (2010) explain that HIV test involves a scientific analysis of a client's blood in order to determine his/her HIV status which aims at assisting clients/ patients to understand themselves, and adjust effectively to life's challenges and contribute meaningfully to the development of the society. Voluntary Counseling and Testing (VCT) for HIV which is now known as HIV testing and counselling (HTC) therefore becomes much more than drawing and testing blood and offering counselling sessions as it is a vital point of entry to other HIV and AIDS services, including prevention and clinical management of HIV and AIDS-related illnesses, tuberculosis (TB) identification for treatment and control, psychosocial and legal support, and prevention of mother-to-child transmission (MTCT) of HIV.

Good health is an essential condition to meaningful national development. HIV and AIDS is a threat to life, thus individuals need to know their HIV status through testing. This is necessary because such tests help to reduce transmission and involvement in risky sexual behaviours. It also promotes early treatment and adjustment (Jimoh, 2003; Oshi et al., 2007 cited in Yahaya et al., 2010). According to Tanye (2013) citing Jereni and Muula (2008), HIV Testing and Counselling has been described as an important intervention for HIV prevention as it may serve as an early entry point for prevention and cure and support for those found infected. Pikrad (2009) also corroborates that testing and counselling is a crucial intervention strategy for HIV, promoting safe behaviour, providing personalized support, and serving as an entry point for care and treatment.

HIV testing therefore remains the most widely accepted approach for promoting knowledge of serostatus especially for young people who constitute the future work force for any nation because it forms the gateway to HIV and AIDS prevention, care, treatment, and support interventions (Baiden, Akanlu, Hodgson, Alweongo, Debpuur & Binka, 2007 cited by Tanye, 2013). High quality HIV testing enables and encourages people to patronise HTC services and these services are undoubtedly some of the most effective HIV prevention strategies. Again, HIV testing and Counselling provides an environment for teaching and learning about the virus and its transmission and the youth stand to benefit by their participation (Tanye, 2013) asserted.

The Family Guidance Association of Ethiopia (FGAE), North Western Branch (2001) asserts that, HIV testing has been shown to contribute to an increase in safe behaviour at the individual level, and is likely also to reduce the ignorance, fear and stigma associated with HIV infection in the population at large (Binka, 2008 citing UNAIDS, October 1999). Leta, Sandoy and Fylkesnes (2012) also note that HIV testing and Counselling has both individual and societal benefits. For the individual, it enhances the ability to reduce one's risk of acquiring or transmitting HIV, to access HIV-specific treatment, care and support, to manage one's health, and to plan for the future. Testing for HIV is also vital for providing access to emotional support, improving skills to cope with HIV-related anxiety, and increasing motivation to avoid risky behaviours. Furthermore, testing provides awareness of safer options in preventing vertical HIV transmission if pregnant women and their families use such services and learn about their serostatus. For society, widespread knowledge of one's HIV status can lead to better community mobilization against the epidemic, and may reduce HIV related stigma and discrimination and support human rights (Yahaya et al, 2010 cited from Baggaley, 2001; Denison, O'Reilly, Schmid, Kennedy & Sweat, 2008; UNAIDS, 2000).

Different views have been expressed on the need for HIV testing and counselling. On one hand, some argue that knowledge of HIV status influences people to practice safe sex behaviours, (Fiaveh, 2011b; MacPhail et al., 2009). On the other hand, some think that a positive HIV test result is a death sentence and that many people would rather not know their HIV status (Fiaveh, 2011a;Fiaveh, 2011b; MacPhail et al., 2009; Lakas et al., 2005 cited in Chris-Koka, 2012). Irrespective of the results or outcome of a test, the client obtains information that could translate into behaviour change if the test result is negative so as to endeavour to always remain negative. On the other hand if test results turn out to be positive, it offers the opportunity for early treatment and avenues to also live healthily for a longer time (Tanye, 2013).

1.2 Statement of the Problem

The need for HIV Testing and Counselling (HTC) as an effective tool of prevention of HIV and AIDS among the youth cannot be underestimated. Although HIV testing has often been used as a diagnostic tool to confirm symptomatic AIDS, it is increasingly becoming difficult for most of the population, particularly the youth to go for HIV Testing and Counselling (Fiaveh & Lakas, 2011).Hence, the intended commitment by world leaders to end the HIV and AIDS menace by the year 2030seems to be back firing even though more persons living with HIV and AIDS appear to be on ART (UNAIDS, 2016; Lewis, Colbert, Erlen, & Meyers, 2006). The potential of reducing HIV and AIDS in Ghana for example is undermined by the low patronage of testing and counselling among students, (21% of females and 14% of males). Even among those who utilize HTC, only 17% of females and 12% of males return for their results (Chris-Koka, 2012 citing GSS, 2010). According to Yahaya et al (2010), a study in Ghana showed that 78% of the respondents had never undergone any HIV testing and majority of the respondent were not accessing the available HTC services.

Similar, studies (Lamptey, Johnson and Mayra, 2006; UNAIDS Technical Update, 2000; Dejere, 2001) have shown that HIV testing might have far reaching implications and consequences for the person being tested though there are important benefits for knowing one's HIV status. According to The Family Guidance Association of Ethiopia (FGAE), North Western Branch (2001) there are several possible contributing factors that must be addressed if HIV Testing and Counselling is to have an important role in HIV and AIDS prevention and care. One issue of particular relevance is stigma surrounding both the HIV testing process and the disclosure of an HIV-positive status. The stigmatizing nature of HIV and AIDS is a factor that affects delayed HIV testing by at-risk persons and influences the acceptability of testing (Genberg, Kawichai, Chingono, Sendah, Chariyalertsak, Konda, & Celentano, 2007; Kipp, Kabagambe & Konde-lelu, 2002 cited in Pikard, 2009). For instance, stigma and discrimination account for a considerable portion of the barriers to HIV Testing and Counsellinguptake in countries like Zimbabwe (8%), Uganda (51.7%) and Nigeria (48%) of respondents (Pikard, 2009 citing Sherr et al., 2007; Bwambale et al., 2008;Iliyaso et al., 2006).

Citing numerous writers, Leta et al (2012) have stated socio-demographic characteristics, proximity to a clinic, awareness/knowledge related to HIV and AIDS, perception of being at risk of HIV infection, perceived benefits of HTC, the belief that knowledge of infection may accelerate disease progression, psychosocial factors such as HIV and AIDS related stigma and discrimination and concerns about confidentiality are several possible contributing factors that could play an essential role in the low uptake of HTC. Other researchers such as Yahaya et al (2010), FGAE (2001) and Chris-Koka (2012) have also reported of stigmatization, fear of discrimination, ignorance, fear of being positive, cost of HTC, inadequacy of HTC centres, religious belief, cultural belief, parental pressure, and inadequate motivation as factors serving as barriers for individuals to accept HTC services.

Though, there has been a persistent decline in the prevalence rate generally in Ghana, same cannot be said of Fanteakwa District since the prevalence rate keeps increasing over the last few years. For instance the years; 2012, 2013 and 2014 recorded 1.4%, 2.4% and 4.2% respectively (GAC/MOH, 2014), becoming the rural site with the highest prevalence rate in HIV Sentinel survey conducted in Ghana for the year 2014. The pattern of the disease in the District is disturbingly unpredictable and has therefore become imperative to conduct research on HIV testing and counselling among the youth in Fanteakwa district. The district is noted to have a very youthful population with about 39.0 percent of the population under age 15 years and the proportion of youth (aged 15-24 years) constituting 18.6 percent of the population (GSS, 2010). Similarly, the global trends of the HIV and AIDS prevalence as indicated by the WHO report accounts that, over 90 cent of persons living with HIV fall within the age of 15 to 49 years (Chris-Kola, 2012). This study is therefore appropriate since majority of the youth in Fanteakwa District fall within this age group.

The critical question, the study seeks to answer is: "what factors contribute to knowledge, utilization of HTC services, perception of susceptibility, benefits, barriers and severity of HIV and AIDS among the youth in the Fanteakwa District of Ghana?"

1.3 Conceptual Framework

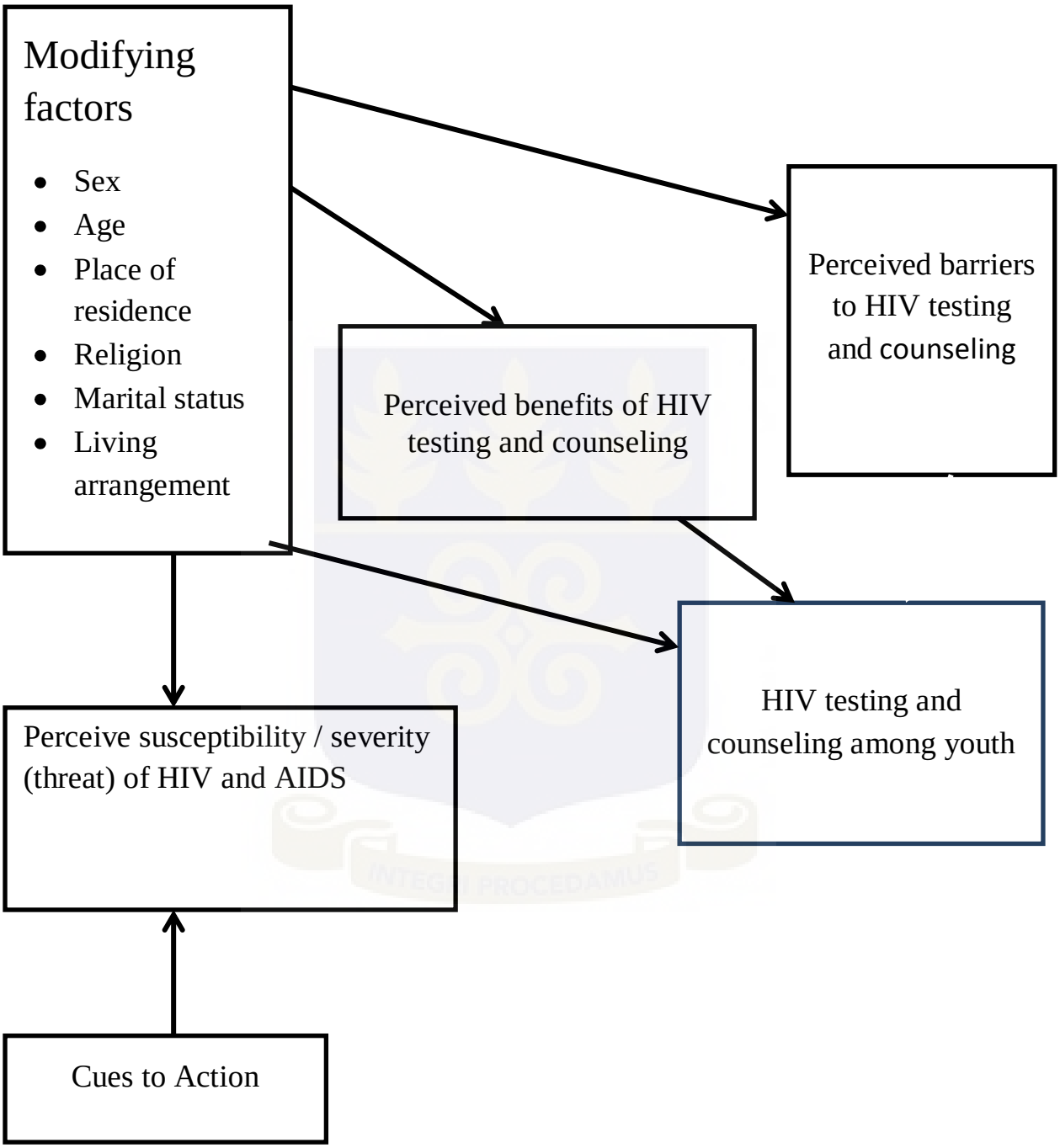
The conceptual framework was guided by the health belief model (HBM). The HBM was originally proponed by social psychologists Hochbaum, Rosenstock and Kegels in the 1950s and had only four constructs, namely perceived, severity/seriousness, perceived benefits, perceived barriers and cues to action. Hence, self-efficacy, which has now become one of the constructs of the model was added later (Berker, 1974). This type of psychological model is used in predicting whether a person will perform an activity necessary for preventing a disease or not, depending on the belief or perception of the person about the seriousness of

the disease, the merits and demerits of the prevention activity and their own ability to perform the activity. The person's perceived susceptibility to the disease, perceived severity of the disease, perceived benefits of the preventive action, perceived barriers against the preventive action, self-efficacy and certain cues to perform the preventive action all interact within the person to determine the person's readiness to perform the preventive action (Downing-Matibag & Geisinger, 2009., Baum, 1997., Rosenstock, 1966).

In applying the HBM to HIV and AIDS prevention, Downing-Matibag & Geisinger (2009) studied casual sexual activity among college students and verify the validity of the HBM. They concluded that, there is high likelihood that people will perform an HIV and AIDS prevention activity such as wearing condom correctly and consistently for sexual intercourse, if they believe that HIV and AIDS is a severe disease condition and they are highly susceptible to it. In addition they must have the belief that the activity they need to perform to prevent HIV and AIDS, in this instance, going for HIV Testing and Counselling is highly beneficial and there are no barriers such as accessibility, availability, affordability and confidentiality issues. Furthermore, they need high degree of self-efficacy, that is, they must have high level of confidence in their own ability to perform that activity for preventing HIV and AIDS. This should also be supported with frequent encouragement to go for HIV Testing and Counselling, that is, cues to action. The cumulative effects of all these favorable factors make people take preventive action (Rosenstock, 1966). On the other hand, perception of being non-susceptible to HIV and AIDS, no severity of HIV and AIDS, little or benefits of the preventive action such as HIV testing, with many barriers against its use as well as no self-efficacy and absence of cues to action will lead to failure of people to perform the actions needed to prevent HIV and AIDs (Downing-Matibag & Geisinger, 2009). In addition certain modifying factors such as the level of education, gender, membership of certain groups just to

mention a few can have effect on people's behavior and decision to perform the needed prevention activities.

Figure 1: Conceptual framework of the Health Belief Model



Adapted from Strecher and Rosenstock (1997) and Tanner-Smith and Brown (2010)

1.4 Objectives of the Study

The general objective of the study is to examine the factors that contribute to HIV Testing and Counselling (HTC) utilization, among youth in Fanteakwa District of Ghana in the light of the health belief model. The specific objectives of this study are:

1. To examine the knowledge level of the youth about HTC services.
2. To assess the extent to which youth in Fanteakwa District utilize HIV Testing and Counselling services.
3. To compare how the youth rate the severity of HIV Test against that of other diseases.
4. To determine how some of the constructs of HBM (perceived susceptibly, perceived barriers, perceived benefits and cues to action) relate to HTC participation.

1.5 Research Questions

In line with the stated objectives, the following research questions are raised:

1. To what extent do youth in Fanteakwa District use HIV Testing and counselling and services?
2. How do the youth rate the severity of HIV Test against that of other diseases?
3. What socio-demographic characteristics of the youth (gender, religion, educational level, marital status) are associated with HTC participation?
4. What psychosocial constructs of the HBM (perceives susceptibility, perceived barriers perceived benefits and cues to action) relate to HTC participation?

1.6 Significance of the Study

This study will offer all stakeholders in health, useful suggestions with regards to improvements in HTC services as a means of reducing the prevalence rate and impact of the HIV and AIDS pandemic among youth irrespective of their sex, religion and educational level. The study is important because it could guide the introduction of HTC programmes and

provide baseline information for evaluating the effectiveness of strategies for the prevention of HIV infection among rural dwellers in Fanteakwa District.

It will also offer the Ghana AIDS Commission and the Ministry of Health strategies to help young people to accept their HIV serostatus if found to be positive and to receive care, and support. Again, it affords the youth the opportunities to learn, adopt and sustain healthy sexual behaviour that could help improve their quality of life and prevent others from being infected by the disease.

Health Services in Fanteakwa District

Table 1.1: Health Facilities in Fanteakwa District

Facility	Number (N)	Percentage (%)
Government/Public hospital	1	4.35
Clinics (Public)	5	21.74
Health Centres (HC)	2	8.70
Community Health Systems (CHPS) Compounds	13	56.52
Mission Clinic	1	4.35
Private Maternity Home	1	4.35
Total	23	100

Source: Fanteakwa District Annual Health Report (FDAHR), 2015

There are both public and private health facilities in the district. These are organized around the five sub-district health teams. These include the Begoro District Hospital which serves as the only hospital in the district. The remaining health facilities in the district are clinics, health centres, chip compounds, and a maternity home.

Table 1.2: Top ten causes of death in Fanteakwa District (2013-2015)

2013				2014			2015		
No	**DIAGNOSIS**	**FREQ**	**%**	**DIAGNOSIS**	**FREQ.**	**%**	**DIAGNOSIS**	**FREQ.**	**%**
1	Malaria	25	25	Cerebrovascular Accident (CVA)	34	22	Congestive Cardiac Failure	22	27
2	Stroke	10	10	Malaria	11	9	Severe Sepsis	19	15
3	Hypertension	9	9	HIV and AIDS	10	8	Severe Anemia	10	8
4	Pneumonia	4	4	Anemia	9	7	Aspiration Pneumonitis	10	8
5	HIV and AIDS	4	4	Gastroenteritis	8	5	Cerebral Toxoplasmosis (HIV related)	5	4
6	Respiratory Disorders	3	2	Pneumonia	8	5	Hypertensive Complications	3	2.3
7	Diabetes Mellitus	2	2	Hypertension	6	5	Advanced Heptatoma	3	2.3
8	Left Ventricular Fever	2	2	Stroke	5	4	Advanced CA Stomach	2	2
9	Typhoid/ Enteric Fever	2	2	Infected Spinal Bifida	2	3	Pulmonary TB	2	2
10	Sickle Cell disorders	2	2	Meningitis	2	2	Acute Respiratory disorder	2	2
	Others	37	37	Others	45	30	Others	50	39
	Total	100	100	Total	138	100	Total	129	100

Source: Fanteakwa District Annual Health Report (FDAHR), 2015.

Table 1.2 shows that Malaria, Cerebrovascular Accident (CVA) and Congestive Cardiac Failure were the leading causes of death in 2013, 2014 and 2015 respectively in the District. Malaria forms 25% of death cases in 2013 and 11.0% in 2014 of all death cases in the district. HIV and AIDS-related deaths were the fifth in 2013, third in 2014 and fifth again in 2015, making it one of the most important causes of mortality in the District. HIV and AIDS is an underlying factor of most other illnesses which thus present themselves as opportunistic infections.

HIV and AIDS continue to be a major challenge to health professionals in the district (FDAHR, 2015). Out of a total of 1,394 people tested in the District in 2015, 453 (32.5%) tested positive for HIV. Antiretroviral treatment is offered at only Begoro District hospital apart from the PMTCT centres (mainly for pregnant mothers). The District Health Directorate works with the District HIV and AIDS Committee at the District Assembly and other Non- Governmental Organisations (NGO's) to implement HIV and AIDS activities such as training of committee members, sensitization and education of the public on HIV and AIDS through the media, and by the use of audio-visuals, posters and flyers at important public gatherings.

Table 1.3: HIV Situation in Fanteakwa District (2013-2015)

Indicator	2013		2014		2015	
	Number Tested	Number Positive	Number Tested	Number Positive	Number Tested	Number Positive
PMTC	1,334	18	2,316	40	3,120	42
HTC	273	58	573	117	573	75
Blood Donors	266	10	456	22	119	1
Total	1,873	86	3,345	179	3,812	118
% POSITIVE		4.5%		5.3%		3.0%
CLINICAL CARE	46		74		78	
NEW CASES ON ARV	32		66		77	
2014 HIV sentinel survey- prevalence rate — 4.2 %						

Source: Fanteakwa District Health Annual Report, 2015

Table 1.3 indicates that in the years 2013, 2014 and 2015 the number of persons who got tested for HIV generally increased from 1,873 to 3,345 and 3,812 respectively. The percentage of persons found to be HIV positive went up from 4.5 percent in 2013 to 5.3 percent in 2014 and then declined to 3.0 percent in 2015. Also, the number of new cases on Antiretroviral viral (ARV) increased over the over the three-year period from 32 to 66 to 77.

Table 1.4: HIV Testing and Counselling (HTC) in Fanteakwa District (2013-2015)

Indicators	Sex	2013	Total	2014	Total	2015	Total
Number Given Pre-test Counselling	Male	75	180	122	338	62	137
	Female	105		216		75	
Number Tested	Male	75	180	122	338	62	137
	Female	105		216		75	
Number Receiving Positive Test Results	Male	20	70	37	101	15	46
	Female	50		64		31	
Number Receiving Post-test Counselling	Male	75	180	122	338	62	137
	Female	105		216		75	

Source: Fanteakwa District Health Annual Report, 2015

Table 1.4 shows a decline in the number of persons who utilized HTC service in 2015. The jump from 180 in 2013 to 338 in 2014 decreased drastically to 137 in 2015, the lowest recorded within the three years. Significantly, all persons who availed themselves for HTC service received pre-test counselling before blood was drawn and post-test counselling after the test results was given to them.

Table 1.5: HAART trend analysis in Fanteakwa District (2013-2015)

Indicator	2013			2014			2015		
	M	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**
Number under Clinical Care	11	35	**46**	17	57	**74**	14	58	**72**
Number Screened for TB	10	33	**43**	16	54	**70**	16	51	**67**
Number on ART	7	25	**32**	21	45	**66**	20	57	**77**
Number of Death	0	3	**3**	4	3	**7**	4	4	**8**
Number of new clients on co-trimoxazole prophylaxis	11	35	**46**	17	57	**74**	16	42	**58**

Source: Fanteakwa District Health Annual Report, 2015

M = Male F = Female T = Total

Table 1.5 shows a continues rise from 30 to 59 moving to 68 for the years 2013, 2014 and 2015 respectively for persons requiring Antiretroviral Therapy. It also indicates the number of patients who were under clinical care for reasons related to HIV and AIDS, which moved from 42 in 2013 to 68 persons in 2014 and went down slightly to 63 in 2015.

1.8 Delimitations

This study is confined to only youths in Fanteakwa District. The study does not cover all the youth but those within the ages of 15 to 24 years. Again the study does not also cover other forms of prevention of HIV and AIDS such as Prevention of Mother to Child Transmission (PMTCT) or condom use but only HIV Testing and Counselling (HTC).

1.9 Limitations and Challenges

A major constraint was the data collection. The data collection period coincided with the harvest season for tomatoes in the district. Most of the people were bused from the various places in the district and recruited to the various farms by the farmers. This made it impossible to get the youth to participate during the day. As a result, the data collection team had to travel to the various places in the evening to administer the questionnaires.

Inadequate research funding was also a challenge. Some organizations were contacted for funding but their response was that the proposal arrived late because they had already budgeted for the year.

Despite these limitations, the study findings present interesting insights into how the youth utilize HTC in the district. This could help in improved design and promotion of HTC among the youth of Fanteakwa District of Ghana.

1.10 Organisation of the study

This study is organised under six chapters. Chapter one deal with the introduction and background of study, statement of the problem, purpose of the study, the research questions, organisation of the study and operational definitions. Chapter two presents the theoretical framework and also the related literature. Chapter three discusses the methods and the procedure employed in the process of carrying out the research. Chapter four presents the results and the findings of the study. The discussions on the result are done in chapter five. Finally, chapter six focuses on the summary, conclusions, recommendations and also policy implications of the study.

1.11 Operational definitions

For the purpose of the study the following items are defined as operative whenever used:

Youth: Any person within the ages of 18 – 25 years old, regardless of his or her marital or economic status, gender, religion and whether the person has a child or not.

HIV Testing and Counselling (HTC): is a process whereby people willingly undergo an HIV counselling process and have an HIV test.

Confidentiality: An agreement between the counsellor or health officer and the client, that all issues that prevail at the HIV Testing and Counselling centre will not be disclosed to any other person.

Model: A simplified version of the framework used in predicting the health behaviour.

Utilization: to make use of the health facility for the purpose of obtaining HIV test results.

Persons Living with HIV and AIDS (PLWHA): Individuals who are at the early, middle or last stage of HIV infection.

CHAPTER TWO

LITERATURE REVIEW

This part of the chapter presents the theoretical framework of the study, description of the health belief model (HBM) and relevant literature are reviewed under this session. The Literature was obtained from academic sources such as annual reports of various organizations as well as books and articles on HIV and AIDS in revered journal publications. The purpose was to explore what has been done on HIV and AIDS in-relation to HIV Testing and Counsellig both globally and locally, in order to situate the study in a proper perspective.

2.1 Theoretical Framework of the Study

HIV transmission has basically been identified as an issue relating to a person's behaviour. For this reason, most behavioural theories propounded to modify the attitude of persons gives real basis for most health prevention programmes worldwide, with HIV and AIDS being no exception. King (1990) asserts that though the Western countries have been in the frontline of pioneering these psychological theories, its application and usage is spread in almost every part of the world, inspite of the difference in results often generated. Many behavioral theories and models provide useful frameworks for addressing HIV and AIDS. Five of the most commonly applied theories are the Health Belief Model, Theory of Reasoned Action, Transtheoretical Model of Behavior Change, AIDS Risk Reduction Model and Social learning Theory. The individual is at the centre of this study since attention is on the individuals' engagement or participation in HTC services. The other two levels are therefore not in consonance with the philosophy of this current study. Social theories align themselves to issues such as social norms, relationships and gender imbalances, and do not take into account the significance of the beliefs and attitude of individuals. Moreover, structural models broadly focus on a range of other issues that borders especially on civil organisations,

polity and economic issues, which are quite different from the expectations of this research. For instance, social cognitive theory's reliance is paced on learning and observation from others for behaviour change. Theory of reasoned action puts emphasis on societal expectations from individual persons. Though, AIDS Risk Reduction Model is on the individual, it focuses on the stages of life which is not the focus of this study, thus making it unsuitable.

For these reasons the Health Belief Model (HBM) is applied to this study due to its ability to link attitudes, beliefs, perception and knowledge directly to a person's attitude over time. Again the HBM has the tendency to recognize the significance of past experiences of persons and makes it more appropriate for what the study aims to achieve. Thus, the study is grounded on Health Belief Model (Rosenthal, Strtchem & Bercker, 1994) as the theoretical framework because of its relevance to the study.

***2.1.1** Health belief model*

A wide range of theories can be applied to health issues that seek to involve behaviour change as it has been established earlier in this chapter. The applications of these theories are in the individual, social structural and the environmental levels of operation. An application of the three levels of operation reveals the individual is at the centre of the study, since the attention is on the individual's engagement or participation in HIV Testing and Counselling (HTC) services. The other levels are however not in consonance with the philosophy of this current study. This is because the social theories align themselves to issues such as social norms, relationships and gender imbalances, and do not take into account the significance of the beliefs and attitude of individuals. Also, structural models broadly focus on a range of other issues that borders especially on civil organisations, polity and economic issues, which are quite different from the expectations of this research.

As each coin has two sides, that is to suggest that each individual theory has its merits and demits the Health Belief Model (HBM) is accordingly adopted and applied to the current research. This is view of its ability to link attitudes, beliefs, perception and knowledge directly to a person's attitude over time. Again the HBM has the tendency to recognize the significance of past experiences of persons and makes it a pre-existing component. For instance, social cognitive theory's reliance is placed on learning and observation from others for behaviour change. Theory of reasoned action does not focus on the disease itself but put emphasis on societal expectations from individual persons. And, AIDS Risk Reduction Model concerns itself with life stages encountered by individuals as they forge to modify their attitude.

The study therefore adopts the HBM for its application in the research. This widely used theory (HBM) was first developed in the 1950's by United States (US) social psychologists known as Hochbaum, Rosenthal and Kegels in their effort to find solution to the non-participation in public health screening and prevention programmes to detect tuberculosis (Rosenthal, Strtchem & Bercker, 1994). Since then its application has been wide as it seeks to explain health problems perceived to relate to behavioural change. Consequently, the model has proved to be applicable in many areas of health concern in developing counties, without the exception of the deadly HIV and AIDS menace.

The Health Belief Model is a model designed for predicting and explaining whether a person will take action to prevent themselves from getting an adverse health condition or not. It posits that, whether a person will take action to prevent getting an unwanted health condition or not depends on several factors which interact together within the person to determine the person's "readiness to act". These factors make up the concepts of the HBM and include perceived susceptibility to the disease, perceived severity of the disease, perceived benefits of the preventive action against the disease, perceived barriers against taking preventive action

against the disease, cues to action and self-efficacy (Downing-Matibag & Geisinger, 2009., Baum, 1997., Rosenstock, 1966).

The study was interested in finding out how the construct of HBM (Perceived severity, perceived barriers and perceived benefits) related to HTC utilization. In this sense, HBM is applied to the study in order to understand factors responsible for knowledge of HTC services, vis-à-vis perception of HIV severity compared to other diseases among the youth. According to Downing-Matibag and Geisinger (2009), "for a person to take preventive measures (or action), he or she must believe that the consequences of contracting that illness would be severe". The underlying assumption of the study presented is that, other things being equal, a high perception of severity of HIV and AIDS, more benefits coupled with less barriers among youth will translate into high HTC utilization. Consequently, the tenets of the model that influence behaviour as outlined by Poureslami, Roberts and Tavakoli (2001) are;

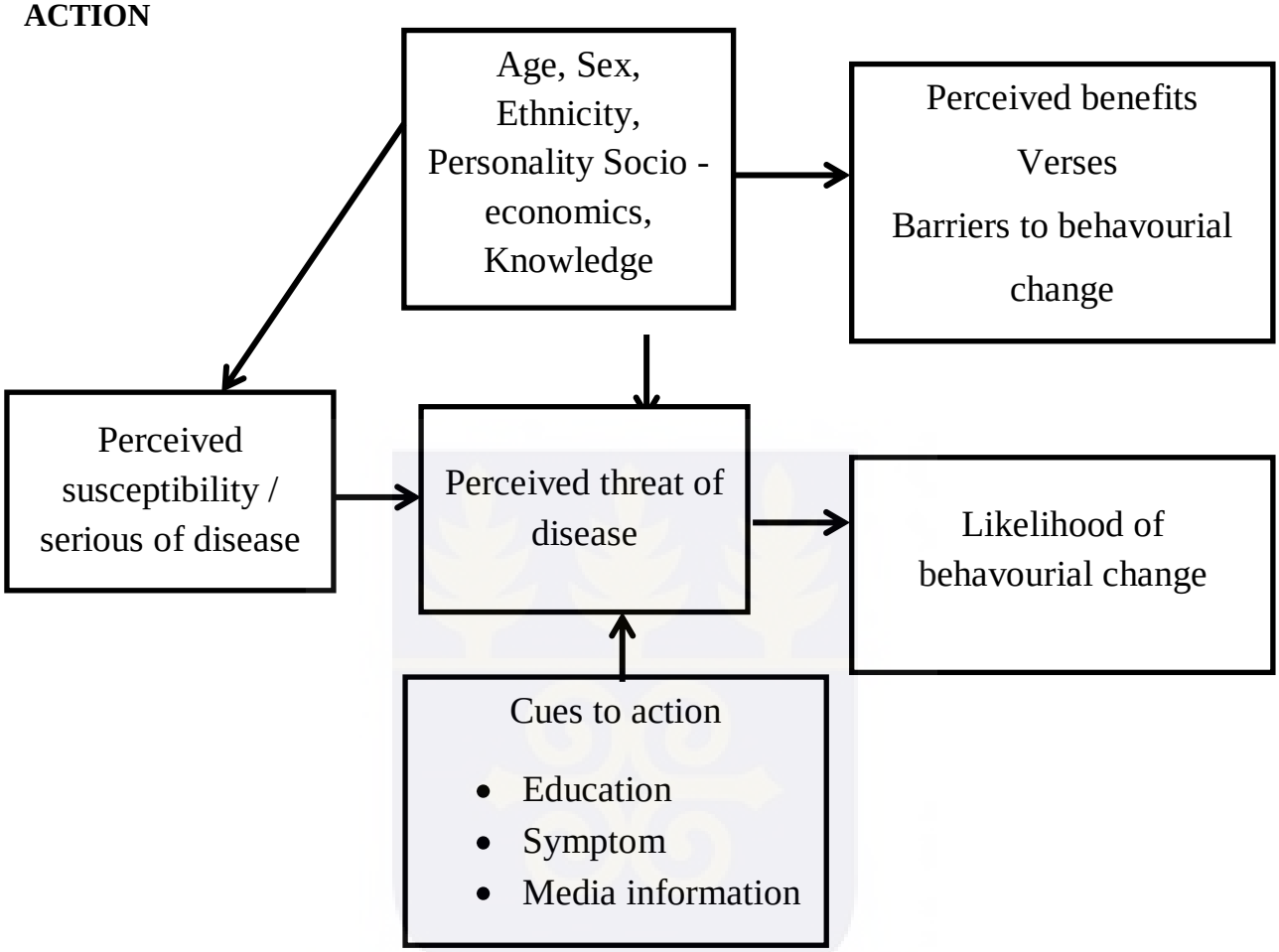
- **Perceived Susceptibility**- This refers to how the individual believes he/she has been exposed to HIV. The vulnerability of the individual as he/she perceives it is very necessary especially if one views his/her behaviour as risky, for instance by engaging in an unprotected sex with multiple partners.
- **Perceived Severity** – Perceived severity connotes how the individual believes contracting the disease will have consequences on his/her life if left untreated. At this point the individual engages in a self-evaluation of the medical effects as against the social effects. For instance, matching the effects of one dying, becoming disable or the pains as against the effects of the conditions on his/her work, friends and family relations and so forth. The model here recognizes that individuals may not take action to change behaviour by merely seeing themselves as susceptible to a disease condition but would have to further view it as serious or life threatening (Becker, 1974). This suggest that

the youth in the Fanteakwa District would not just take action to change their sexual behaviour just because they see themselves as susceptible to HIV and AIDS but would rather view it as serious or life threatening.

- **Perceived Benefits** – One feels that getting tested for HIV is an effective preventive way and allows early treatment. The individual's belief in the effectiveness of the required action could serve as a motivation for the person to undertake the desired behaviour. Hence, the perceived benefits should out-weigh the barriers for one to exhibit the required attitude.
- **Perceived Barriers**- The individual identifies potential obstacles that may serve as impairments and institute desirable behaviours. Here the individual weights the inconveniences involves, the unpleasant issues relating to the processes involved, time constrains, pain, cost in accessing the facility and many others.
- **Cues to Action** – Refers to activities or events that motivates an individual's preventive behaviour, for example; witnessing another person who may have been threatened or dying from HIV and AIDS related illness.
- **Self-Efficacy**- Relates to the belief by the individual to master courage to successfully execute the desired behaviour outcome (that is, getting guidance on the place to have the HTC)

Figure 2: The Health Belief Model (HBM).

INDIVIDUAL PERCEPTIIONS MODIFYING FACTORS LIKELIHOOD OF ACTION



Source: Glanz et al, (2002)

2.2 Related Literature

2.2.1 The nature and impact of HIV and AIDS

2.2.1.1 *The nature of HIV and AIDS*

The Human Immunodeficiency Virus (HIV) causes the disease known as Acquired Immune Deficiency Syndrome (AIDS) if appropriate treatment is not given (Hare, 2008). AIDS is the end stage manifestation of HIV infection. HIV is a lentivirus from the viral family of Retroviraedae that attacks the immune system, destroying helper T-Lymphocytes, making the affected person susceptible to common infections and malignant tumours (Crowly, 1996). It thus invades the immune system and induces immune deficiency that places persons at risk for opportunistic infections that define AIDS. These opportunistic infections include pneumonia, tuberculosis, herpes, chronic diarrhoea, kaposis sarcoma, europhageal candidiasis, toxoplasmosis and many others which take advantage of the weakened immune system to cause disease.

According to Sousa, Carneiro, Meier-Schellersheim, Grossman, and Victorino (2002), there are two variants of HIV that have been identified, namely HIV-1 and HIV-2. Though both have similar transmission modes, HIV-1 is more virulent and responsible for worldwide pandemic. On the other hand, HIV-2 is more localized to West Africa, parts of Europe and Asia. Crowley (1996), accounts that the first case of the disease (AIDS) was identified in 1981 and subsequently a blood test to detect HIV virus infection became available in 1985. Although after over 30 years more people know a lot about the virus and how it damages the immune system, unfortunately the disease continues to spread because neither an effective vaccine nor a cure to eradicate the disease has still been found. According to USAID, (2016) more than 35 million persons are infected with HIV and the numbers continue to increase worldwide.

2.2.1.2 Impact of HIV and AIDS

2.2.1.2.1 Demographic Impact

Since the discovery of the deadly HIV and AIDS epidemic in 1981, many people have died of the AIDS related diseases. In 2014, it was reported that 1.2 million people were buried worldwide as a result of AIDS (UNAIDS Gap report, 2015). The United Nations AIDS report of 2001 indicates by the year 2000, Africa had buried more than 17 million people who died from AIDS, representing 75% of AIDS deaths worldwide. Findings from the Ghana AIDS Commission (GAC) indicate that, 12% of all deaths in Ghana in 2000 were attributed to HIV and AIDS related illness (GAC, 2005).So Africa is losing millions of its young people to HIV and AIDS. This is a huge effect on the demography of the African continent as a whole.

A major demographic effect of HIV and AIDS is on mortality and fertility. AIDS claims the lives of persons in their most fertile years and for that matter, the demographic picture in many countries in the Sub-Sahara Africa is being affected by reduction in fertility. Duh (2008) stated that; "young adult females are three times and teenage girls are five times more likely than their male counterparts to be infected with HIV". Obviously having fewer females will subsequently translate to fewer babies to be born. As more females contract and die from HIV and AIDS, there is going to be an excess of males, and eventually some of these men might have to either leave their native countries or bring in women from other countries in order to get married (Brown, 2001).

In addition, AIDS has the tendency of affecting dependency ratio. Dependency ratio is the number of dependents, usually children under the age of 15 years and adults over the age of 64 years, per 100 adults 15-64 years of productive age (Whiteside, 2001). Africa, with only 10 percent of the total world's population, is home to over 70 percent of young people living with HIV and AIDS worldwide. Again, among all the children living with HIV and AIDS, Africa alone accounts for 80 percent of children living with HIV and AIDS (American Public

Health Association, 2001). This development has a potential effect on uninfected older adults. In the African setting, many people especially above the age of 60 years depend greatly on their older children for economic survival. When these older children or young adults are no longer available to give this assistance to their aged parents due to illness or death from HIV and AIDS, the older adults might be driven to destitution and earlier death (UNAIDS, 2001).

2.2.1.2.2 *Social Impact*

One other problem AIDS creates is the large number of orphans. South Africa being the hardest hit African country to be affected by the deadly HIV and AIDS disease was said to have about 800, 000 orphans by the end of 2000 (Stephenson, 2000). In Ghana, an estimated 124,779 orphans have resulted from HIV and AIDS (GAC, 2014). Since most countries in Africa are developing countries, there is little assistance available to persons affected by HIV and AIDS. Therefore these orphans have little choice than to rely on their immediate families. But the already incurred cost by these families on the care of the AIDS patients makes these families incapable of proving adequately for these orphans. These orphans then have to drop out of school to fend for themselves. Eventually, these children may end up becoming street children and being more susceptible to HIV infection through sexual abuse or engaging in prostitution for necessity. In addition, these children might also have to deal with stigmatization of having parents who died from HIV and AIDS (Stephenson, 2000; UNAIDS, 2001).

Another problem is the burden of care most families go though. It is particularly women and girls who suffer most as they tend to provide most of the care for HIV infected individuals. Though, some men do play an important role especially in the care of other men, it is not like that of the women. A survey of households affected by HIV and AIDS in several provinces of South Africa found that in more than two thirds of households, women or girls were the

primary caregivers. Almost a quarter of caregivers (23 per cent) were over the age of 60 and just less than three quarters of these were women. Similar findings were seen in Zimbabwe. There, most people caring for children orphaned by HIV and AIDS were over 50 years of age. Of those, over 70 per cent were 60 years or older. The stress of caregiving was clear. Caregivers are often faced with challenges such as inadequate food and clothing, high cost of medical bills, and inability to pay school fees for orphans. Indeed, the health status of the older caregivers deteriorates as a result of the physical and emotional stress they go through (Brown, 2001; Duh, 2008).

2.2.1.2.3 *Economic Impact*

Every country depends on its human resources people for economic development, thus the number people in the workforce and the skills they possess are the engine that drives the economy for prosperity. A country could head to economic jeopardy if the technical know-how, resourcefulness, and vibrant hard working youth are lacking (Duh, 2008; Asravor, 2010). In some countries for example South Africa, young people who would have otherwise been trained to join the workforce are battling with HIV and AIDS. According to the International Labour Organisation, the size of the workforce of some countries could be slashed by 35% by 2020 (Ardayfio, 2000). Another study by the World Bank found that income growth per capita in Africa was being reduced by 0.7% per year because of HIV and AIDS. The report further indicates that, the income per capita would have grown at a rate of 1.1% per year in 1997-1999 had the prevalence rate of HIV and AIDS not reached 8.6% in 1999 (UNAIDS, 2001). The decline in per capita income growth is due to the shrinkage of the workforce due to the deadly HIV and AIDS epidemic.

Furthermore, HIV and AIDS related illnesses and deaths have been implicated as the leading causes of absenteeism and reduction in the number of workers leading to low productivity.

As employees become ill with HIV and AIDS, they leave their employment. This is particularly true with unskilled workers whose jobs often involve physical exertion. The death of these workers imposes additional financial obligations on the companies or firms to recruit and train new workforce to replace lost ones (UNFPA, 2002 cited from Duh, 2008). A research by Fredrickson and Kanabus (2005) revealed a profit reduction margin between 6% to 8 % among some Southern African countries as a consequence of HIV and AIDS related absenteeism, reduced productivity, cost of health care, and new staff recruitment and training. The agriculture sector is another area of the economy which suffers from morbidity and mortality of HIV and AIDS epidemic, leading to low production in that sector. In most parts of Africa, both cash and food crop production is mostly undertaken by small scale famers (peasant farmers) in the rural communities. Families usually cultivate family owned lands and the young adult members of the family especially the women do most of the physical work. Also, families often employ day labourers to help them work on the farms both in planting and harvesting the crops. As families lose their young adults to the deadly AIDS disease, the burden of maintaining the farms falls on the very young and older members of the family (Duh, 2008; Asravor, 2010). Meanwhile, the financial burden of caring for the sick and also burial ceremonies for deceased loved ones makes it difficult if not impossible to hire the services of labourers. It must be noted that even the labourers may not be readily available since they are not exempted from the segment of the population hit by the HIV and AIDS epidemic. The result of this tragedy is abandoned farms leading to low production.

2.2.1.2.4 Impact on Health

Also, HIV and AIDS exerts heavy burden on the health system. This is evident in the increase in the health budget of some countries and also diverting funds for other health-care needs to support HIV and AIDS patients. New services such as HIV Testing and Counselling (HTC), Prevention of Mother to Child Transmission (PMTCT), monitoring of patients and provision of Antiretroviral Therapy (ART) have to be introduced, stretching a countries health resources. For instance in Swaziland, it was reported in 2001 that about 50 percent of beds in some health care centres were occupied by PLWH. Moreover, a study in La Cote D'ivoire showed a high jump in the cost of health care of about 400 percent for families living with members who are HIV and AIDS patients (Fredrickson & Kanabus, 2005).

Kwawukume (2004) argues that the Government of Ghana supports treatment of Persons Living with HIV and AIDS (PLWH) with about GH₵ 4 million annually, where each patient gets GH₵ 4,500 annually. The amount is used for the provision of test kits, medication and care. Therefore, dealing with HIV and AIDS menace invariably means other basic health care are being compromised due to pooling of scarce resources towards HIV and AIDS care.

Also, HIV and AIDS create a shortage of manpower due to death of some health staff who may be infected (WHO, 2012). Health workers are one of the most susceptible groups of professionals to HIV infection since they take care of HIV and AIDS patients. Young adults who acquire the disease and die include doctors, nurses and bio-medical technicians who run the health facilities (Duh, 20008). Since it takes quite a long time to train hospital workers, the health care industry is likely to starve for a long time. For example in Ghana it takes up to seven years to train a doctor and taking into account the brain drain phenomena the health sector is already suffering from, as doctors and nurses often find more lucrative employment overseas, replacing a lost staff is not easy.

Additionally, there is high level of absenteeism due to HIV and AIDS illnesses. Ill health of health staff infected by HIV is a major reason for lost time of work. Also health workers in the family are usually relied upon for their professional skills in taking care of their own relatives who might be suffering from AIDS. Again, as custom demands, they would have to take time off work to perform the funeral rites of deceased relatives. This high level of absenteeism may increase the burden of work on the few who may be left to keep the health system running with the huge number of patients which may lead to burn out (Stephenson, 2000). It will therefore not be surprising as staff may resist transfers or postings to areas with high-prevalence of HIV and AIDS because of over burden.

2.2.1.2.5 Impact on Education

According to Duh (2008), the education system is among the hardest hit sectors in terms of supply of both students and teachers and also the quality of education. There is a decrease in the supply of students as HIV- infected women tend to have fewer babies and even some of the young women may die from HIV and AIDS related diseases before they ever have the chance of bearing children. Hence, there is a decrease in the number of children to attend school. In addition, in situations where both parents die from AIDS, the orphans tend to drop out of school due to the inability of financing the school fees and other related costs. A study in Uganda revealed that, the chance of an orphan going to school was halved when both parents die from AIDS (Brown, 2001, UNAIDS, 2001).

The education system is further threatened by the death of teachers, eroding the supply of teachers, who are the critical human resource for running the education system. The experienced and qualified teachers may be killed by HIV and AIDS related illnesses, affecting the quality of education. In some instances, it creates shortages of teachers in schools and the learning outcomes of students deteriorate. In some the hardest-hit countries, namely; Central African Republic, Zambia and South Africa, the class size is said to increase

because of the shortage of teachers. In some of these countries it was reported that there were more teachers dying from AIDS than those being trained (Duh, 2008). The adverse effect of the AIDS menace is that of reduction of supervision due to death of school managers and administrators, thereby, affecting the quality of education provided.

So far the devastating impact of HIV and AIDS has been extensively reviewed. In a nutshell, the impact of HIV and AIDS transcends the demographic, social, economic, health and educational sectorsof the society as revealed in the literature reviewed thereby threatening not just the progress but the survival of communities, nations and regions of the world with high prevalence of the HIV and AIDS.

2.3 Knowledge of the youth about HIV Testing and Counselling (HTC)

A quantitative study conducted on Voluntary Counselling and Testing (VCT) by Uzochukwu, Ugun, Onwijekwe & Sbeudu (2011) of Nigeria on the topic: "VCT for HIV/AIDS: A study of the knowledge, awareness and willingness to pay for HTC among students in tertiary institutions", found that the youth had adequate knowledge about HTC through publicities. It was reported from the study that, most of the respondents had heard about HTC services. The students obtained their source of information from mass media while a few heard about it from family members. Furthermore, the study identified certain factors the students attributed to their non-attendance to HTC as; being indifferent to HTC, perceived high cost of HTC and fear for discovering their HIV status. These they claimed hindered them from participating in HTC. Uzochukwuet, at. (2011) concluded that high knowledge of HTC does not reflect on the participation of HTC services and went on to suggest that HTC centres should be created and widely publicized in various communities to attract more participation.

The current study set out to explore the knowledge and utilization of HTC among the youth in Fanteakwa District in the Eastern Region of Ghana is relevant. There is only on radio station (Fanteakwa FM) in the district and print media (newspapers) are available only at the

urban towns of Osino and Begoro, which supplies are irregular most often. Other channels of communication such as television constitute a luxurious choice for the few elite groups stationed in the urban towns. Hence, the most vibrant and widely accessed medium of communication that can be used to transmit information about HIV Testing and Counselling among the youth is social media platforms such as facebook, instagram, twitter, whatzapp, and so on. This is because the social media is very popular and widely used among the youth. Therefore, researching into HTC among the youth in Fanteakwa district is relevant. Theoretically, the reviewed study is also deemed relevant to the current study as it focuses on the knowledge of the youth about HTC. It discusses the need to increase the youth's utilizationof HTC. The study employee quantitative methodology to get in-depth knowledge of the participants similar to the current study and findings contribute to knowledge on youth and HTC.

Similarly, another study conducted by Zelalem, Aregaw, Yitayal, Alemu, Birhen, Mathewase &Tachebela (2013) on knowledge of HTC among university students in North West Ethiopia, using a cross-sectional study and questionnaire, it was found that male respondents were more knowledgeable about HTC than female respondents. However, in a related study, Lema (2005) reported that females were more knowledgeable than males. Conversely, a study by Mengesha (2006) at North and South Gondar in Ethiopia revealed that both males and females did not differ in their knowledge and awareness about HTC.

In essence, the studies reviewed so far differ in their conclusions on gender based differences in knowledge levels about HTC. However, this may be due to the differences in the settings of the studies reviewed. However, the current study employed a quantitative methodology which aimed at getting different and empirical information from youth participants through structured questionnaire and also considered whether gender based differences exist in knowledge about HTC.

2.4 Barriers to HTC and Youth

Though HTC is a well-known health promotion strategy that seeks to monitor individual's health status, most people, especially the youth may see it as doing the health provider some form of favour by their involvement (Baiden, Remes, Baiden, Williams, Hodgson, Boelaert, and Buve, 2005). However, the benefits the person derives from the services are many. For example it gives the individual more insight about HIV and AIDS and ensures early treatment so that the infected person could stay healthy for a long time. Hence the importance of the youth utilizing VCT services cannot be over emphasized.

In West Africa, specifically, Nigeria, Yahaya, Jimah & Balogun (2010) conducted a quantitative study on factors hindering acceptance of HIV Testing and Counselling (HTC) in Kwara State. Their aim was to examine the factors hindering the patronage of HTC among youth aged 15 to 24 years. The study was conducted from the three senatorial districts in the Kwarastate of Nigeria. The researchers designed their own questionnaire using a four point Likert Type Scale and employed a descriptive research survey design. A total of 600 participants comprising 390 males and 210 females of the state took part in the study. In terms of educational attainment, the respondents varied in different grades with primary school certificates (120), secondary school certificates (396) and post-secondary school certificates (144).

Most of the participants, 77% (462), lived in urban areas while the remaining 23% (138) lived in rural areas. Analysis from the study ranked the respondents views on factors that hindered the acceptance of HTC among the youth. Ignorance was ranked first followed by fear of being positive, cost of HTC, inadequate number of HTC centres, stigmatization, discrimination, religious belief, cultural belief, parental pressure and inadequate motivation respectively in this order. On this basis the researchers concluded that more awareness needed to be created on knowledge of VCT services to reduce the level of ignorance.

In a related study, Odimegwu, Adedi and Ononopono (2013) revealed that attitude towards people living with HIV and AIDS (PLWHA) was negative, and as this negative feeling rises, the more unlikely people would want to engage in HTC service. Over two-fifth of the respondents showed negative attitude (felt angry) towards individuals having the AIDS disease and more than 50% were scared of them. A section of the respondents reported that PLWHA should be quarantined and again more than 80% supported a mandatory HIV testing regardless of the individual's fundamental human rights. This according to the respondents was to ensure that uninfected ones were protected. Most respondents admitted of being guilty of stigmatizing and discriminating against individuals believed to be infected with HIV and AIDS. For instance, they (84.8%) claimed they would avoid an infected shopkeeper, a workmate who was known to be HIV positive and also 53% claimed they will withdraw their wards from schools where a teacher was known to be HIV positive. Results from the study also indicated fear of their sexual partners getting to know their status, if found to be infected with HIV as major problem. This was particularly among the females who were afraid of consequences such as being detested and deserted by both the family and community members. The study which used both quantitative and qualitative approaches showed that participants lacking access to media were less likely to engage in VCT services due to their ignorance of such health services. Many participants believed that an HIV-positive person could look very healthy but still held the view that all their future plans would end if diagnosed HIV positive. Few participants held the view that public labeling of persons infected was required to make others aware and avoid contacts that could spread the virus.

Sanga, Kapanda, Msuya and Mwangi (2015) in a study to evaluate the factors influencing the uptake of voluntary counselling and testing among secondary school students in Arusha City, Tanzania adopted a cross-sectional survey involving quantitative research methods. The study involved a total sample size of 400 secondary school students. The age of the

respondents ranged from 13 to 24 years. It was found that, while a large portion (93.5%) had heard about HTC centres, only 35% of them had ever visited the HTC centre in the last 12 months. Of those who visited the HTC centre, 64.3% were just interested in knowing their HIV status while 13.4% of students used HTC services for counseling purposes, 20.5% were being required for school admission and 1.8% of them for other purposes (e.g. suspected sexually transmitted infections). However, on factors hindering HTC uptake, the study found that participants above the age of 18 years had a higher rate of HTC use than those below the age of 18 years. Furthermore, the higher the educational attainment, the more the individual was likely to undergo HTC. Moreover, the media and health facilities served as greater sources of information on HTC to the students than their respective schools. This implied that HIV and AIDS awareness creation did not serve as part of the priority of most of the Senior High Schools studied.

Consequently, the study concluded that fear from anxiety and stress from discovering one's sero-positive status were serving as barriers to most respondents and these accounted for low VCT uptake among the respondents. In other words, fear of being stigmatized by close relatives and community members were the main obstacles for their poor response to undergo HTC. But it is imperative that the socio-cultural beliefs associated with fear of stigmatization and discrimination, and fear of progression of disease condition once HIV status is known are demystified though education using social media and other platforms.

2.5 Utilization of HTC among the Youth

Several researches on HTC utilization revealed that many individuals used HTC services based on a wide range of factors. In one of these studies in Kapsabet Division, Nandi County in Kenya by Ndwiga and Omwono (2014) on factors influencing HTC service utilization among youths, majority of the respondents were aware of HTC services. The cross-sectional descriptive study found 52% of the respondents who visited HTC centres reported that post-

test counseling services were poor, highlighting challenges such as open location of HTC centres within the health facilities and assigning financial charges (fees) to HTC services, as major barriers hindering HTC utilization in the area. The respondents also mentioned that the posters in the HTC rooms were stigmatizing and it had remarkable influence on them, resulting in most of their non-involvement in HTC service.

In a similar study on prevalence of HTC utilization and its associated factors among Bahirdar University Students, Fikadie, Badimo and Alamrew (2014) employed a quantitative methodology with 801 study participants using self-administered questions, among students between the ages of 20 to 24 years. The study revealed that most of the participants were willing to get tested for HIV, though 292 (37.8%) had ever been screened for HIV. Among the total of 292 students who had ever tested for HIV, 77% of them were male students. The results from the study also indicated some reasons why respondents had engaged in VCT earlier. Majority of them wanted to check their HIV sero-status. Other reasons included for marriage purposes, medical reasons, family advice and also to obtain visa from certain embassies.

In Ethiopia, Tsesay, Edris and Meseret (2011) conducted a study to assess HTC service utilization and associated factors among University Students in North West Ethiopia. A quantitative data collection method was employed. Out of the 753 respondents, majority (81.4%) of the respondents had heard about confidential HTC services and their major source of information were through mass media and health workers. Again, 585% of the study participants had undergone HTC before. It can be inferred from the work of Tsegey et al. (2011) that HTC service utilization was significantly associated with availability of Antiretroviral Therapy (ART drugs) and presence of confidentiality at HTC sites.

Furthermore, Olusola, Nkiruka, Obasohan, Olanrewaju and Titilayo (2015), who conducted a quantitative study with 287 participants in Shagamus Metropolis of Ogun state, Nigeria,

assessed and compared the sexual behaviour, HIV prevention knowledge and HTC utilization. With a self-developed instrument, the researchers used stratified random sampling technique to select the sample for the study. From the results of the study, participants' sexual behaviour had significant relationship with HTC utilization. In other words, participants' sexual behaviour cannot be separated from HTC utilization did not differ significantly. It was also revealed that participants did not differ significantly in HIV prevention knowledge and HTC utilization. This shows significant positive relationship that co-exit among the variables tested. Utilization of HTC was associated with age, marital status, occupation, gender and religion. The study did not take into account certain variables such as place of residence (either rural or urban), level of education, accessibility of HTC services, confidentiality of HIV testing and the respondents willingness to be informed of positive HIV test results. The study also did not take into consideration several factors hindering HTC such as the stigma and discrimination aligned to being HIV positive. These factors contributed to the generally low rate of HTC utilization by individuals.

In another study to examine the attitude of the youth towards HTC in Accra, Ghana, a total of 200 youths were selected for the study. It was found from the study that only a few (37%) of the respondents were aware of HTC services. As low as 6% out of the 37% had ever visited the HTC centre and out of 6% of the visitors 4% went there to check their HIV status whiles the remaining 2% were there just to pay a visit to their friends working at the centre. The study further indicates that 52% of the participants preferred the hospital as a more suitable place for HTC. Moreover, as much as 92% of the participants were hesitant to go for HIV testing. The study recommended the introduction of home test kits in Ghana in order to deal with the issue of lack of trust or confidentiality that serves as hindrance to individuals desiring to know their HIV status (Gadegbeka, Saka and Mensah, 2013).

In a related cross-sectional study conducted by Asante (2013) to find out the knowledge of HIV/AIDS and uptake of HIV Testing and counselling (HTC) among undergraduate private university students in Accra, Ghana, found out that, over half of the respondents (45.4%) had never had an HIV test even though as high as 95% of them said they knew the place to access HTC services. It was also revealed from the study that demographic characteristics of the respondents had significant association with taking HIV test. In addition, knowing the place to go for HIV test and religious affiliation of respondents had significant relation with taking an HIV test.

Also, Baiden et al (2005) in a study found that, involving the spouse or sexual partner in HTC services was useful in influencing the utilization of HTC among respondents. Conversely, Van Dyke and Van Dyke (2003) also consented that low patronage of HTC was due to fear of rejection if found to be HIV positive. Hence the fear of people discovering their status if found to be positive after testing and lack of trust for health workers (unable to keep results confidential), coupled with discriminated against persons with HIV at HTC centres were all reported by the respondents as the reason for low HTC patronage.

In furtherance, Regassa and Kedir (2011) conducted a study examining the attitude and practice of students on ways of preventing HIV and AIDS. The study employed a multistage sampling technique to obtain six hundred and six (606) respondents from Addis Ababa University. Collection of data was done both quantitatively and qualitatively and analysed through descriptive statistics method. It was found out that50% of the participants had experienced HTC before and nearly all respondents (over 90%) expressed their desire of partaking in HIV antibody test in future.

Addis, Yalew & Shiferaw (2013) also in their study on the knowledge, attitude and practice towards HTC among university students in North West Ethiopia, used a cross sectional survey, employing self-administered questionnaires which were delivered to the students to

respond. The main objective of this research was to assess the level of knowledge, attitude and practice of HTC among students who were mainly youths within the age group of 19 to 22 years. A total of 330 students were sampled through a stratified sampling method with majority of them being males (66.1%). This method ensured that students from different faculties were given equal chances to partake in the study, for that matter ensuring a fair representation of all students.

The results indicated that majority of the respondents had adequate knowledge on HTC service and showed positive attitude towards HTC. Most participants were reported to have experienced HTC in the past and knew the place where HTC service was provided. Participant relied on the mass media as their main sources of information regarding HTC. Accordingly, majority of the students exhibited good attitude towards HTC service. From the findings again, almost all respondents agreed to the necessity of HTC services and assigned the following as their most important reasons why HTC was essential to everyone;

Firstly "to know their HIV self-status and caring for the future, secondly to prevent partners and others from getting HIV infection and finally to change partners for the future".

Again, majority of the respondents stated their willingness and desire to recommend HTC to their partners and were interested in accessing HTC services themselves. Though, almost all the students exhibited positive attitudes towards HTC and appreciated the significance of HTC services, it was however recorded that, students from rural areas were deficient in knowledge regarding HTC services. Hence the researchers recommended building the knowledge level of people in rural settlements, expansion of facilities for the HTC services and stakeholders focusing on training of more counselors for the HTC centres the way forward to improving HTC. Accordingly, the study area in Fanteakwa District of Ghana is a rural district hence suitable for replicative study.

In another study, Maconai, Petitifor, Coates and Pees (2008) compared South African Youth and Parents to HIV voluntary counselling and testing for adolescents. A focus group discussion was employed in two towns in South Africa. The study's objective was to establish the perception and need for HTC service among young individuals. Results from the study revealed that, adolescents had less experience with HTC because they entertained fear of knowing their HIV status and also perceived HIV testing to be for only symptomatic individuals. With regards to disclosure of their HIV status, it emanated that respondents were willing to reveal their status only to their supportive family members, however, most respondents (mainly youths) had little confidence in the community and hardly would they rely or call for their support. This cross-sectional descriptive survey used a pre-tested structured questionnaire on a total of 460 participants through a non-probability purposive sampling technique. The study showed that most participants had confidence in the ability of trained nurse to provide a counselling friendly environment for HIV testing. Analysis of the findings also revealed that HTC utilization generally was very high; however, the association between acceptance of HTC and educational level was found to be insignificant. Again the lack of community support was observed to be associated negatively with HTC acceptance. The respondents indicated their willingness to accept HTC services based on the availability of Anti-retroviral therapy (ART). In this regard, expansion of HTC services and making ART available were found to be essential to HTC utilization. The study concluded by suggesting a more youth-friendly HTC services. This is critical, especially in view of germane issues raised by the respondents concerning the youth-unfriendly nature of the HTC facilities in the community.

2.6 Socio-demographic characteristics and HTC

Asante (2013) carried out a study on HIV and AIDS knowledge and uptake of HIV Counselling and testing. The study was among youth of undergraduate private university students in Accra, Ghana. It was aimed at exploring the factors associated with the use of HIV counselling and testing. This quantitative approach used structured questions among 334 respondents had 57% males and 43% females. The analysis from the study involving youths indicated that; age and sex were significantly related to the willingness to get tested for HIV. It showed that the older the person, the less likelihood of getting tested for HIV and again more males (67%) were likely to have an HIV test than their female counterparts (33%). A large part of the respondents who were single, were reported to be six times likely to engage in HIV test than those in relationship and married. Additionally, religion was found to be associated with the taking of an HIV test, as more of those who were identified with religions expressed their willingness to take HIV test in the future than non-religious persons.

In another study, Modiba and Mokgatle (2015) that about half of the respondents had been tested for HIV before the study. Factors such as having multiple partners, age and gender were significantly related to having had an HIV test. Acceptability of HTC was observed to be high (76.9%) and more respondents (71.8%) were willing to be tested.

In a related research, Mtengo, Exavery, Kakoko and Gienbebels (2015) indicated in a cross-sectional analytical study that nearly half (42%) of the participants had never experienced HTC before. The research conducted in Dar es Salem, Tanzania, indicated that more Christians (73%) had used HTC services as compared to the 51.1% of Muslims. Education was also found to be significantly associated with HTC utilization. Thus, respondents with higher education or secondary school education were more likely to use HTC services than those with primary or no education.

Again, Yahaya et.al (2010) in analyzing HTC among youths in Kwara state, Nigeria, identified a low patronage of HTC service among the 600 respondents who were between the ages of 15 to 24 years. Results from the study indicated that religion and gender had no significant difference in relation to factors hindering HTC. Further to this, respondents from urban areas viewed factors on HTC differently from those from rural areas. That is; there was a significant difference on how people perceived issues on HTC based on their location.

2.7 Constructs of health belief model and HTC

In a qualitative study, Abede and Mike (2009) examined the perception and attitude of students regarding HTC services in the context of the health belief model. The title of the study was: "perception of high school students towards voluntary HIV Counselling and Testing using Health Belief Model". A descriptive cross-sectional survey was carried out using a two stage sampling procedure to select study participants of 658 from a high school in Butajir township, about 130 km away from Addis Ababa in Ethiopia. The study found a high level of awareness of HIV Testing and Counselling (97%), certainly to the point that 82 percent of them, comprising mainly youth were willing to undergo HTC, though less than one fifth of the students had undertaken HTC before the study. The respondent's main source of information on HTC was from radio, followed by television, friends and school. Among the reasons given by participants for their unwillingness to undergo HTC was fear of anxiety, obtaining positive results and lastly society's attitude of discriminating and stigmatizing persons perceived to be HIV positive.

The study also reported that, out of the 638 participants, 129 of them representing 20.2% had previous history of sexual contact. However, only one third of those who had had sexual contact or intercourse used condom to protect themselves. Fifty-two (52%) percent of the participants in the area indicated their high preference for trained HTC counselors followed

by physicians (25.2%), HIV patients had (10.5%), while only 5.8% indicated their preference for Religious leaders. In addition, majority of the respondents, 382 (60%) indicated their preference for confidential testing, followed by anonymous ways of testing 156 (24.4%). Further to this, in as much as participants wanted to secure the results of their HIV test conducted, more than half preferred face to face with the counselor and a little over one-third wanted it in a sealed envelope. Results from the study went on to indicate that less than 50 percent of the participants perceived themselves as susceptible to HIV infection. The reasons given by them were that they had not involved themselves in sexual intercourse and even those who engaged in sexual activities claimed to have one partner and consistently used latex condom as a way of protection against the virus. Perhaps, the application of health belief model in HIV and AIDS research is essential in order to understand sexual health psychology of the youth.

With regards to perceived severity and perceived benefits, half of the participants had high perception towards the seriousness of HIV and AIDS, while one forth (25%) of them attested to the relevance of HTC as an effective preventive measure against HIV and AIDS. Most of the participants had problems with the uptake of HTC, though the self-efficacy or confidence level of the students in utilizing HTC service was high. It was shown that perceived barriers and perceived benefits had significant relation with the willingness to utilize HTC services. The indication is that, more of those who confirmed to the assertion that HIV causes death did use HTC service as compared to those who held the view that HIV did not cause death. The study is significant to the present study as it employed a similar quantitative method among youths using the same health belief model.

Hirut (2014) conducted a study entitled “Factors Influencing HIV Voluntary Counselling and Testing (VCT) Service Utilization among Youth of Hawassa town; a Health Belief Model Approach, Southern Ethiopia”, sought to determine the factors influencing utilization of

voluntary HIV Counselling and testing service among 18 to 24 years old adolescents in Hawassa town. A cross sectional qualitative study conducted from January to May, 2011, through the application of Health Belief Model among the youth used a focused group discussion (FGD) and in-depth interview guides. A combination of convenient and maximum variation sampling technique were used to select participants for the study. In all six focal groups were conducted with each group comprising of three religious leaders, two community leaders, two persons living with HIV and AIDS, two street boys, twelve (12)Community Sanitation Workers (CSW's) and two counselors. Moreover, a total of 13 key informants were used to confirm the information provided by the participants during the focal group discussions.

From the study, almost all the focal group members agreed that HTC was necessary for everyone irrespective of their sex, age, occupation or health status. Only a few suggested that HTC was only important for persons who were getting ready to be wedded, street boys, night club workers and non-missionaries. Group members mentioned factors such as fear of stigma and discrimination, inability to cope with positive results as main barriers to HTC usage. Participants indicated lack of confidentially on the part of service providers and validity of the test as issues affecting the up-take of HTC. Group members were not reluctant to mention lack of professional competence (for example improper pre-test counselling before taking blood sample) and unwillingness of family members to be transparent on sexual issues as factors hampering HTC service. The study found that persons who were preparing for marriage and the availability of ART's, influence of the clergy, persuasion by health providers, changing friends or sexual partners were more likely to influence the up-take of HTC service positively. The study is relevant to the present study as the author evaluated HIV Testing and Counselling in the light of the Health Belief Model. Respondents of the questionnaire were individuals who were within youthful ages of 15-24 years similar to the

participants that were sampled for the present study. The only difference was that the researcher employed a qualitative method as against a quantitative method that was employed in the present research. This qualitative method was employed in order to elicit detailed sensitive information that the respondents would naturally be unwilling to provide.

In sum, the impact of HIV and AIDS on the infected (the individual), society, health care system and the country as a whole is too frightening for any person to contemplate. In the advent of antiretroviral therapy, the sure way to bring the AIDS menace under control to ensure that all infected persons are identified and given the necessary care and support through HIV testing and counselling. The mass media, health workers and educational institutions have been identified as major sources of information to the youth as reviewed. The reasons assigned by the youth as having influence on their desire to utilize HTC were varied. The reasons included; wanting to know their HIV status, for marriage purposes, recommendations from friends or family members, requirements to obtain a visa from an embassy and for medical reasons. Again, many of the factors that affected the utilization of HIV testing and counselling co-existed and are multifaceted for the youth.

Psychological and other personal factors have been identified in the literature as having hindrance on the uptake of HTC services among the youth. These are fear for being HIV positive, stigmatization or public labeling, discrimination, financial cost of HTC services, quality of counselling service, ignorance, lack of trust for workers at HTC centre, age of the individual, marital status, religious affiliation, place of residence, occupation and level of education of the person and inadequate motivation.

Environmental factors influencing HTC negatively include; parental pressure, religious belief, cultural belief, inadequacy of HTC centres, and location of HTC centre may either result in utilization or non-utilization of HTC services.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter discusses the research design, the population and the sampling procedures that were used in the study. The methods of data collection and analysis are also presented in this chapter. The study is descriptive and the design was a cross-sectional survey, whereby data was collected on a section of the population at a point in time and then analyzed.

3.1 Research Design

Ghuari and Gronhaug (1989), defines research design as " the total plan for relating the conceptual research problem to the relevant empirical research to enable the researcher choose strategy that allows effective answering of the research problem within constrains such as time, money and skills affecting the research" . In the view of Kinnear and Gray (2004), a design is the basic plan that serves as a guide for the process of data collection and analysis. These definitions provide ontological understanding regarding the choice of cross-sectional survey as the suitable research design for the study. Hence, a cross sectional study design was employed among youth drawn from selected area councils in the Fanteakwa District for the study. Cross sectional research designs are snapshot descriptive studies of a situation at one particular time. This study design was employed due to time and financial constraint.

3.2 Location of the Study

The Fanteakwa district is located within the central part of the Eastern Region of Ghana. It is the third largest district in the region in terms of land size (total land area of 1,150 square kilometres), lying within longitudes 0032.5' West and latitudes 6015' North and 6010' South. Fanteakwa District is bounded by six (6) Districts: Kwahu Afram Plains South District to the

north, to the northwest by Kwahu South District, East Akim and Atiwa Districts to the south; on the east are Yilo and Upper Manya Krobo Districts and finally, the Volta Lake to the North West (GSS, 2010).

Politically, the District is divided into ten (10) area councils, namely: Ahomahomaso, Abourso, Brim Agya, Feyiase, Ehiamenkyene, Bosuso, Osino, Begoro, Obooho and Dedesawirako area councils. Fanteakwa District per the results of the 2010 Population and Housing Census has an estimated population of 106,155 with an average household size of 4.4 persons per household. It has over 72.5 percent of the population being rural. During the 2010 population and housing census the district recorded a youthful population of 63.9 percent and the total age dependency ratio of 83.0. The age dependency ratio for males was higher (86.1) than that of females (80.0).

Fanteakwa has members of most ethnic groups from several parts of the country. These include the Akans, Ga-Adangmes, Ewes, Guans, Northern tribes (Mole Dagbani, Frafra, Kotokoli, Gurma, Grusi, and Mande) and many others. However, the indigenous Akyem (part of the Akan group) people are predominant followed by the Ga-dangmes. Even though the migrant communities maintain their language and cultural identity, the Twi language is universally spoken and understood among the habitants in the district.

The major religious groups in the district according to the 2010 census report include Christianity (88.2 percent), Islam (5 percent) and Traditional religion (0.7 percent). Also found in the district are persons with no religious affiliation which constitutes 5.5 percent of the entire population.

The people of Fanteakwa celebrate two major festivals; the Ohum and Odwira (also known as Ahwie). Ahwie is observed yearly in the months of September and October. The Ohum festival on the other hand, is observed twice in a year, that is, Ohumkan (first Ohum) and Ohumukyire (last Ohum), the first is observed in June and the last is climaxed in January.

The main occupation of the people is farming, followed by trading, whilst the remaining occupations are petty traders/merchants, artisans and public service workers. The main market centers are located at Begoro (the district capital), Ahomahomaso, Miaso, and Ehiamenkyene. There are other satellite trading centres located in the various sub-districts. Farming activities are done mainly by communities at the outskirts of the towns and villages.

Fanteakwa is noted to be a place which is able to attract many people from several parts of the country during the farming seasons due to its fertile lands. Most of the youth both in-school and out-of-school engage in these farming activities as a means of raising income for themselves and sometimes their families. At the end of the farming season, some of the young girls get pregnant and it will therefore not be surprising if some of these youths get infected with HIV. This therefore raises concerns for this study. Figure 1 below represents the map of Fanteakwa District.

Figure 3; Map of Fanteakwa District

Source: Ghana Statistical Service (GSS, 2010)

3.3 Population

According to Neuman (2007), population refers to the large general group of many cases from which a sample is drawn for the study. Hence, the population for the study included all youths within the ages of 15-24 years resident in the Fanteakwa District in the Eastern Region of Ghana.

3.4 Sample and Sampling Technique

The multi-stage sampling technique was used in the study. According to Badu-Nyarko (2011), this type of technique is adopted when the researcher has to first select the population units in groups, before determining some of the units or all of the units in each group. Firstly, simple random sampling was used to select five area councils out of the total 10 area councils in the Fanteakwa District (GSS, 2010). The selected five area councils were Ahomahomaso, Begoro, Dedesawirako, Obooho and Osino. Then, the communities were randomly selected from the five area councils to ensure a fair coverage and enhance representativeness of the findings. Later, individual respondents within the ages of 15-24 years in houses were purposely selected.

The total population of the study area was 108,614 while the number of youths within the ages of 15-24 years in the district was 20,186 (GSS, 2010). The target population (in the five area councils) from which the sample was drawn from was estimated to be 10,093, representing 50 percent of the entire youth from 15 to 24 years in Fanteakwa District.

3.4.1 Sample Size Determination

The sample size of the study was calculated using Yamane's formula, (Sarmah, Bora-Hazaika & Cloudbury, 2013) for calculating sample size for cross- sectional study.

$$n = \frac{N}{1 + N(\propto)^2}$$

Where = n is the sample size

N is the total number of target population

α is the margin of error (5%)

Thus, the sample used for the study was computed using:

N = 10,093

α = 0.05

Therefore, $n = \frac{10,093}{1+10,093(0.05)^2}$

$$n = \frac{10,093}{26.233}$$

n = 385

Thus, the minimum number of questionnaires administered was estimated to be 385. Kunsu (2010), in his study to assess the knowledge of Adolescents on HIV and VCT in Nadowli District of Ghana was emphatic that, issue on HIV and AIDS was likely to have a high drop rate due to its sensitivity, hence suggested an addition of a non-response rate.

That is 10% x 385 = 38.5 = ~ 39.

Therefore, with the addition of a 10% non-response rate, the final sample size became 424.

Hence, a sample size of 424 young people between the ages of 15 and 24 years from the five (5) area councils was used for the study. The respondents were selected randomly in each housing unit. A person of age 15 to 24 years was identified and given a questionnaire to

response. Where an identified person declined to participate, he or she was replaced by another from the same or the next sampled house.

Out of the total sampled population, 227 were chosen from the rural area while 197 were chosen from the urban area. More of the participants were taken from the rural area in order to reflect the 2010 census report for Fanteakwa District which indicates that the district has a more than 70 percent population being rural. Osino and Begoro area councils are classified as urban while Ahomahomasu, Obooho and Dedesawrako area councils are said to be rural (GSS, 2010). The distribution of the participants to the various councils also took into consideration the numerical strength or size of each council.

Table 3.1: Distribution of the sample population to the communities.

Name of Area Council	Population	Selected communities	Sub-sample
Ahomahomasu	11,840	Ahomahomasu	25
		Nteso	25
		Ntanuam	25
Begoro	27,196	Bontrase	32
		Oboase	32
		Odumase	32
		Bethlehem	32
Dedesawirako	9,609	Dedeso	25
		Odortum	25
		Mpiam	25
Obooho	13,155	Obooho	27
		Onuku	25
		Dua Police	25
Osino	13,800	Saamang	23
		Bethlehem	23
		Osino Zongo	23
TOTAL			424

3.5 Inclusion and Exclusion Criteria

a. Inclusion Criteria

Youth between 15-24 years living in Fanteakwa District who freely give consent to participate in the study

b. Exclusion Criteria

• Persons who are above the age of 24 or less than 15 years.

• Youth residing in Fanteakwa district for less than twelve (12) months

• Youth who do not give their consent to participate in the study.

3.6 Research Instrument

The instrument for the data collection was self-administered questionnaire. Babbie (1998) defines a questionnaire as a series of questions or instruments specifically designed to elicit information that will be used for analysis. Amedahe (2002) has identified two main ways of administering questionnaires as;

i. Through the mail; this implies respondents receiving the questionnaire by post or electronic.

ii. Delivering the questionnaire to the respondents personally.

For this study, the questionnaires were made up of 29 items which were personally delivered to the participants.

3.6.1 The Structure of the Questionnaire

As stated earlier, the questionnaire was personally administered to the youth involved in the study. The questionnaire had five main sections of twenty-nine items. The first section was on bio-data of the respondents. The questions in this section were meant to determine whether bio-demographic characteristics of the respondents could have affected the participants' decision to utilize HIV Testing and Counselling (HTC). The second section

focuses on Knowledge of HIV and AIDS and HTC. As noted earlier, individuals have different motivational drives that push them to undertake HTC services. The questions were therefore designed to explore the knowledge level of the youth on HTC.

The third section dealt with the lived experiences of the youth regarding the utilization of HTC services. Section four looked at the constructs of the Health Belief Model in relation to HTC while the fifth and the last section measured the Severity of HIV and AIDS as against other diseases. The close-ended questions were used for the questionnaire. The close-ended types of question had possible responses provided for respondents' to make choices

3.6.2 Pre-test

To ensure the research instrument was reliable, a pre-test was done in two other communities (Miaso and Kplandey) not included in the actual study. Jakajinka (2007) citing Koul and Rose (2001) states that the reliability of a test instrument aids the establishment of the stability, dependability and predictability of the instrument applied in a study. The pre-test used 10% (n=43) of the projected number of respondents of the main study to test the questionnaire for validity and reliability of the questions, as well as the appropriateness of the method employed for the study.

3.6.3 Validity and Reliability of Instruments

Validity refers to the extent to which the research instrument serves the use for which it is intended (Seidu, 2006). The validity of the instrument was conducted using content validity procedure. The procedure measures the degree to which the items contained in a questionnaire measure the variables being studied. Thus, the two supervisors who are experienced researchers and demographers assessed the instrument and certified that the items were relevant and suitable for data collection.

Relatedly, Joppe (2000) defined reliability as "the extent to which results are consistent over time and if the results of a study can be reproduced under a similar methodology and environment, then the research instrument is considered to be reliable". The test-retest technique was adopted to establish the reliability of the research instrument. Two weeks after the first pre-test at Kplandey and Miaso, participants who took part in the first pilot trial were asked to respond to the same instrument. The results were subjected to Cronbach's Alpha reliability analysis using STATA SE 13. The first test yielded a reliability co-efficient (r) of 0.923 while the second test also resulted in a reliability co-efficient value of 0.955. These results imply that the reliability of the research instrument was very high; hence it was adopted for the main research work.

3.7 Sources of Data

The study relied on both primary and secondary data sources. The primary data consisted of responses to the questionnaires administered to the youth (from the ages of 15 to 24 years) in the study area. The secondary data consisted of published information dealing with the study. Pieces of information were also obtained from published and unpublished works related to HIV Testing and Counselling. Other sources of secondary data or information were extracts from thesis, magazines, journals, newsletters and books. Documented data were obtained from the Fanteakwa District Assembly and Fanteakwa District Health Directorate.

3.8 Data Collection

Quantitative data was obtained through the responses offered by the participants using structured questionnaire. Closed-ended questions were included in the questionnaire. Close ended questions are those that require the respondent to select or thick one or more responses, thus the questions have fixed or set alternatives (Badu-Nyarko, 2011). Five (5) data collection assistants who reside in the district and therefore knew the terrain well were recruited and

trained to assist in the data collection. A two-day workshop was organised for the data collection assistants. This was to build their capacity in the field of HIV and AIDS, HTC, ethical principles and community entry techniques. The questionnaire was read to the non-literate youths in their local dialects (that is, Twi, Ewe and Ga-Dangbe) to solicit their response. Each questionnaire administered lasted between 24 to 30 minutes. The period data collection exercise lasted for a month, spanning from the middle of May to the middle of June, 2017. The researcher personally supervised the data collection assistants to ensure that the administered questionnaire were complete and accurate.

3.9 Data Analysis

Data collected from the survey was analysed quantitatively. The collected data was cleaned, coded, and processed using STATA computer soft-ware package version 13. Frequencies, means, standard deviation (SD) and percentage distributions were used to summarise the data and to discover the magnitude and direction of the responses.

Logistic regression analysis was also used to analyze the factors which influence the HTC level in the Fanteakwa district, the statistical software tool employed was also the STATA 13.

3.10 Ethical Consideration

In respect to this study, ethical clearance was obtained from the Ethics Committee for Humanities, ISSER, University of Ghana. According to the American Psychological Association (2002), ethical principles are geared towards promoting the dignity and human welfare of respondents. These ethical considerations are also necessary as they preserve scientific integrity required by international standard.

Furthermore, Nevid, Rathus and Greene (2011), opine that individuals should have the liberty to choose whether to participate in a study or not, hence researchers need to seek their informed consent. For this reason, participants were fully informed to volunteer freely

without inducement, free to opt out without prejudice, and were fully protected with regard to the anonymity and confidentiality of information they provide on the questionnaire.

Permission was obtained from household heads and all individual respondents (youth) were made to sign a consent form. For respondents who were below the age of 18 years, the consent of their parents or guardians was obtained.

CHAPTER FOUR

ANALYSIS OF DATA AND PRESENTATION OF RESULTS

This part of the chapter presents the results of the study. A total of 424 questionnaires were administered to the youth within the ages of 15-24 years of Fanteakwa District. All the four hundred and forty-two respondents (424) of the originally planned sample completed and returned the questionnaires. Analysis of the results are organized into five sections namely; socio- demographic characteristics of respondents, knowledge of HIV Testing and Counselling, utilization of HIV Counseling and Testing services, severity of HIV and AIDS against other diseases and finally, logistic regression was run for the variables of the Health Belief Model to establish the effect of these variables on HIV Counseling and Testing.

4.1 Demographic characteristics of Respondents

The demographic characteristics of the respondents in terms of sex, age, place of residence, level of formal education, marital status and living arrangement are depicted in Table 4.1

Table 4.1: Distribution of the demographic characteristics of respondents

Variables	Frequency	Percentage (%)
Sex		
Male	207	48.8
Female	217	51.2
Age		
15-19	272	64.2
20-24	152	35.8
Place of Residence		
Rural	227	53.5
Urban	197	46.5
Religion		
Christian	335	79
Moslem	72	17
Traditional	12	2.8
No religion	5	1.2
Formal Education Level		
None	39	9.2
Primary	29	6.8
JHS	191	45
SHS and Above	165	38.9
Marital Status		
Single	205	48.3
Married	43	10.1
Divorced	9	2.1
Separated	4	0.9
Widowed	6	1.4
In a Relationship	157	37
Living Arrangement		
Alone	63	14.9
With parents	231	54.5
With friends	10	2.4
With other relatives	88	20.8
With spouse	32	7.5

Source; Field Work, 2017

Sex of respondents

Sex plays a major role in determining the trend of HIV and AIDS prevention and care. In most parts of the world, particularly in Africa, society does not treat both males and females as equal in family life and social standing. Being male or female plays a vital role especially in women's economic security. This role often takes the form of vulnerable as some women depend on men for financial support. (Suarez-Al-Adam, Raffaelli & O'Leary, 2000; Baylies & Bujra, 2000). These disparities in terms of one's sex often contribute to a persons' susceptibility to HIV infection and hence matters regarding gender and sexuality cannot be ignored in the discussions of HIV and AIDS issues. From table 4.1, most of the respondents in the study (51.2%) were made up of females while the males were made up of 48.8%.

Age

Age is an important variable in a study on HIV and AIDS. This is because ages 15-24 have been identified as the period within which the youth is vulnerable to HIV and AIDS disease (NACP/MOH, 1999). According to Anarfi (1995) most HIV/AIDS infected people are within the 15-34 age groups. The vulnerability of people in this age group is explained by the fact that this is the age where men, boys, girls and women alike are most sexually active. It is, therefore, important for any research on HIV and AIDS to take cognizance of this fact. By the research design, the 424 respondents of the survey were mostly within this age range. From table 4.1, In terms of age, 64.2% were between the ages of 15-19 years while 35.8% were between the ages of 20-24 years.

Place of Residence

The place of residence of the respondents is very key in HIV and AIDS management, that whether the dwelling place of the person is rural or urban. In a developing country such as Ghana, resources in terms of infrastructure, telecommunication and health workers are more available to persons in the urban areas than the rural areas. Access to health information at the rural area is not the same as those in the urban areas. From table 4.1 more than half of the respondents (53%) included in the survey lived in the rural area whereas 46.5% lived in the urban area.

Religion

Another important demographic variable considered in the study is religious affiliation of the respondents. One cannot run away from the fact that, the African is highly inclined to religion. This has been underscored by a number of scholars such as Mbiti (1976) and Assimeng (1981) who in their words describe the African as "notoriously religious". The religious activities of the African relate to every aspect of his/her life. In the Ghanaian society, a person lives in a social collectivity in which religion plays a defining role in terms of interpretation of the person's place in the universe. It is undeniable that religious values constitute the modes of thoughts, behaviour, and attitude towards events and activities. Hence, the desire to or not to indulge in unprotected sexual activity in Ghana may be influenced by one's religious beliefs and practices. Christians and Muslims for example, prohibit sexual intercourse before marriage, and reject it on strict religious grounds and so do Traditional religion worshippers. It is against this background that the study investigates the religious affiliation of respondents. From table 4.1a high majority of the respondents 335 (79%) were Christians while Muslims constituted 17%, a few of the respondents (2.8%) were Traditionalists and 1.2% were not affiliated to any religion.

Level of Formal Education

In AIDS studies, as in many other health studies, one's level of formal education is critical in determining how knowledgeable and understanding a person might be on a particular subject area. Formal Education is seen as a major tool to social change especially with regards to attitudinal or behavioural change processes. A person's level of formal education has a significant impact on his/her attitude towards pregnancy and other sex related activities (Nabila and Fayorsey, 1996). It was for this reason that the study looked at the respondent's formal educational level. From table 4.1 in terms of formal education, the majority of the respondents (45%) were Junior High School (JHS) leavers. Almost two-fifth (38.9%) had received Senior High School Education and above, 6.8% had Primary education and 9.2% had no formal education.

Marital Status

Marriage is the recognised institution for the establishment and maintenance of family life all over the world. Nukunya (1969) describes marriage as a union in which a man and a woman have been initiated through all the procedures recognised in society for the purposes of sexual intercourse and procreation. It was in this light that marital status of the participants in the study was taken into consideration. From table 4.1 In relation to marital status, majority of the respondents (48.9%) were single while 10.1% were married. As much as 37.0% were in a sexual relationship.

Living Arrangement

The status of people a young person lives with at home is very significant in determining the degree of freedom the person enjoys at home. While young people who live with their parents and other elderly family members are restricted to places they could go and the kinds of friends they move with. Young persons who live alone or with their friends are normally not under control or restrictions. They go out and come home at will with friends of their own

choice. Such living arrangement exposes them to early sexual relationship and for that matter sexual activity at an early stage, exposing them to sexually transmitted diseases such as HIV and AIDS. It is therefore essential to consider the living arrangement of the youth when researching into issues relating to HIV testing and counselling. From table 4.1 those who lived with their parents constituted the majority (54.5%) of the sampled population, followed by those who lived with other relatives (20.8%) and nearly 15% lived alone.

4.2 level of Respondent's Knowledge on HIV Testing and Counselling

The first objective of the study was to examine the knowledge level of respondents about HIV Testing and Counselling. Knowledge of HIV Testing and Counselling services is one of the most critical determinants of health seeking attitude and behavior of people. This is more likely in respect of HIV testing and counselling services which is often compromised by factors such as perception and socio-cultural beliefs of the people. The responses regarding respondent's level of knowledge about HIV testing and counselling are presented in Table 4.2

Table 4.2: Respondent's knowledge level about HTC Services

Variables	Freq.	Percentage	$\bar{x}$	S.D
Ever heard about HTC				
Strongly Agree	131	30.9	4.11	1.30
Agree	217	51.2		
Don't Know	52	12.3		
Disagree	16	3.8		
Strongly Disagree	8	1.9		
Knows a place to be tested for HIV				
Strongly Agree	175	41.4	4.04	1.23
Agree	169	39.9		
Don't Know	51	12		
Disagree	21	5		
strongly Disagree	7	1.7		
Taking a test one week after unprotected sex will tell HIV status				
Strongly Agree	96	22.6	3.35	1.24
Agree	131	30.9		
Don't Know	61	14.4		
Disagree	60	14.2		
Strongly Disagree	76	17.9		

Source; Field Work, 2017

Table 4.2 represents the analysis of the responses regarding the knowledge level of the youth on HIV Testing and Counselling (HTC). Majority of the respondents ($\bar{x}$ = 4.11; SD=1.3) indicated majority of the respondents had heard about HTC while the responses from the respondents less dispersed from the mean. It was also evident that a few of the respondents 24 (5.7%) had never heard about HTC while 12.3% were indifferent about their response.

In terms of knowing a place to go for HTC, the calculated mean shows that most of the respondents ($\bar{x}$ =4.11; SD=1.3) knew where to go for HIV testing and counselling whiles there was less dispersion from the mean. It was interesting as it came to light that, some of the respondents 28 (6.7%) displayed their ignorance of the place to go for HTC.

Finally, on the question about taking HIV test one week after having unprotected sex to tell one's HIV status, over half of the respondents had the answer correct ($\bar{x}$ =3.35; SD=1.24). Hence, although most of the respondents had ever heard about HTC and knew the place to go for HTC, however about two-fifth of the respondents 136 (32.1%) were ignorant about the fact that it is highly impossible for one to his/her HIV status within one week of having unprotected sexual intercourse.

Again, from the table, the general mean of the respondents' knowledge level on HTC services was determined to be high (general mean=3.81). This is an indication that majority of the respondents were knowledgeable about HTC services.

4.3 Extent of Utilization of HTC Services by Youth

The second objective of the study was to assess the extent of use of HIV Testing and Counselling by the youth. The first part of this objective, the demographic background of the respondents influencing their decision to undertake HIV test was determined. The results are presented in Table 4.3

Table 4.3: Demographic Characteristics of Respondents in Relation to ever taking HIV test

Variables	Have ever been tested for HIV				
	Responses				
	Agree (N,%)	Disagree (N, %)	X^2 - value	df	Syn
Sex			3.84	1	0.05
Male	60 (56.6)	147 (46.2)			
Female	46 (43.4)	171 (53.8)			
Age			17.64	2	0.00
15-19	51 (48.1)	221 (69.5)			
20-24	55 (51.90	97 (30.5)			
Place of Residence			8.63	2	0.01
Rural	69 (30.1)	158 (81.0)			
Urban	160 (69.9)	37 (19.0)			
Religion			6.45	3	0.09
Christian	81 (73.0)	254 (81.2)			
Moslem	19 (17.1)	53 (16.9)			
Traditional	6 (5.4)	6 (1.9)			
No Religion	5 (4.5)	0 (0.0)			
Formal Education Level			1.99	3	0.85
None	12 (11.3)	27 (8.8)			
Primary	9 (8.5)	20 (6.3)			
JHS	46 (43.4)	145 (45.6)			
SHS and Above	39 (36.8)	126 (39.6)			
Marital Status			11.97	5	0.04
Single	166 (52.2)	38 (35.9)			
Married	6 (1.9)	3 (2.8)			
Divorced	2 (0.1)	2 (1.9)			
Separated	3 (0.1)	3 (2.8)			
Widowed	26 (8.2)	17 (16.0)			
In a Relationship	115 (36.2)	32 (30.2)			
Living Arrangement			8.08	5	0.15
Alone	18 (17.0)	45 (14.2)			
With parents	52 (49.1)	179 (56.2)			
With friends	3 (2.8)	7 (2.2)			
With other relatives	20 (18.9)	68 (21.4)			
With spouse	13 (12.3)	19 (6.0)			

Source: Field Work, 2017

Table 4.3 shows that only 106 (25%) of the respondents reported to have ever taken an HIV test before the study. Over two-third of the respondents 318 (70.4%) had never been tested for HIV. The Chi-Square value was 3.84 with an asymptotic significance value of 0.05 and 1 degree of freedom. This implies a significant relationship between sex and having been tested for HIV. The distribution by age indicated that those who had ever taken HIV test were high among the youth aged 20–24 (51.9%) and low at 48.1% among 15–19 years old. HIV testing among the sampled youth therefore appreciated with age: the older the person, the more the likelihood of getting tested for the virus. This assertion is confirmed by the Chi-Square value which was 17.64 with an asymptotic significance value of 0.00 and 2 degree of freedom. This implies a significant relationship between age and having been tested for HIV.

In terms of place of residence, majority of respondents who had been tested lived in urban places (69.9) while a few (30%) lived in the rural. Youth who have Junior High School (J.H.S.) education (43.4%) were more likely to have taken HIV test as compared to those who have not have Senior High School (S.H.S.) education (36.8%) and above. Moreover a few respondents who have had no formal education (11.3%) had taken the HIV test. The Chi-Square value run was 0.01 with an asymptotic significance value of 0.85 and 3 degree of freedom. This implies that there is no significant relationship between level of education and having been tested for HIV.

Moreover, in relation to religion, most of the Christian respondents 81(73%) had taken the test as compared to the other religions. The Chi-Square value run was 6.45 with an asymptotic significance value of 0.09 and 3 degree of freedom. This implies that there is no significant relationship between one's religious affiliation and having been tested for HIV.

The table also indicated that of the respondents who had taken an HIV test, there were more single people (52.2%) than those who were in a relationship (36.2%), widowed (8.2%),

married (1.9%), separated (0.1%) and divorced (0.1%). The Chi-Square value was 11.97 with an asymptotic significance value of 0.04 and 5 degree of freedom. This implies a significant relationship between one's marital status and having been tested for HIV.

Lastly, with regards to living arrangement, almost half of the respondents who had tested for HIV lived with their parents 52(49.1%) while those who lived with their friends 3 (2.8%) were the least to get tested. The Chi-Square value run was 8.08 with an asymptotic significance value of 0.15 and 5 degree of freedom. This implies that there is no significant relationship between one's living arrangement and having been tested for HIV.

To further explore the extent of utilization of HTC by the youth, three questions were asked. The questions were to find out whether respondents had been tested within the last twelve months, offered counselling before the test was taken and also whether they went back for their results. The results is shown in Table 4.4

Table 4.4: Utilization of HTC Services

Variables	Frequency	Percentage	$\bar{x}$	S.D.
Tested for HIV within the last 12 months				
Strongly agree	16	15.8	3.20	1.30
Agree	40	39.6		
Don't know	4	4.0		
Disagree	32	31.7		
Strongly disagree	9	8.9		
Offered pre-counselling before the test				
Strongly agree	15	15.2	3.30	1.23
Agree	42	42..4		
Don't know	7	7.1		
Disagree	28	28.3		
Strongly disagree	7	7.1		
Obtained results after test				
Strongly agree	17	16.8	3.35	1.24
Agree	51	50.5		
Don't know	3	3.0		
Disagree	24	23.8		
Strongly disagree	6	5.9		

Source; Field work, 2017

Table 4.4 shows the results of respondents' utilization of HTC services. The mean and the standard deviation obtained ($\bar{x}$=3.2; SD 1.30) indicate that most of the respondents agree with the statement with less dispersion of the responses around the mean. Also, among those who had been tested most of them ($\bar{x}$=3.3; SD=1.23) indicated they were taken through pre-test counselling before the test was carried out. Finally, out of those who had ever taken HIV test, a significant number of them ($\bar{x}$=3.35; SD 1.24) showed agreement with the statement with less dispersion around the mean.

Similarly, Chi-square analysis of taking HIV test within the last twelve months by personal characteristics of respondents are summarized in Table 4.5

Table 4.5: Chi-square analysis of respondents taking HIV test within the last twelve months by personal characteristics of respondents

Personal Characteristics	x^2 –value	df	N	Sign
Sex	0.48	5	424	0.469
Age	10.993	10	424	0.358
Place of Residence	23.786	10	424	0.008
Religion	21.882	15	424	0.111
Formal Educational Level	25.883	25	424	0.414
Marital Status	43.952	25	424	0.011
Living Arrangement	49.863	25	424	0.002

df= degree of freedom

Source: Field Work, 2017

From Table4.5, the chi-square analysis shows that there were no significant relationship between sex, age, religion, level of formal education and taking HIV test within the last twelve months. This is an indication that the socio-demographic variable; sex, age and level of formal education do not significantly affect one's tendency to take an HIV test within the last twelve months. On the other hand, the variables; place of residence, marital status, living arrangement had significant relationship. This shows that the desire of the respondents to undertake HIV test within the last twelve months was significantly influenced by the place of residence, marital status and living arrangement.

Again, Chi-square analysis of respondents offered pre-counselling by personal characteristics of respondents are depicted on Table 4.6

Table 4.6: Chi-square analysis of Respondents offered pre-counselling before test by characteristics of respondents

Personal Characteristics	x^2 –value	df	N	Sign.
Sex	2.620	5	424	0.758
Age	8.739	10	424	0.557
Place of Residence	26.297	10	424	0.003
Religion	14.605	15	424	0.480
Formal Educational Level	23.671	25	424	0.538
Marital Status	25.487	25	424	0.435
Living Arrangement	17.528	25	424	0.862

Source: Field Work, 2017

Table 4.6 shows the relationship between personal characteristics of respondents and being offered pre-counselling services at the HTC centre. From the calculated chi-square values in the table, it is clear that, sex, age, religion, level of formal education, marital status had no significant relationship with pre-counselling service. This means that respondents who were given pre-test counselling were not influenced by their sex, age, religion, level of formal education and marital status.

It is however clear from the results displayed in the table that, place of residence was the only demographic variable that had significant relationship with been offered pre-test counselling. This implies that where the individual lives (that is whether rural or urban) has significant impact on pre-counselling services at the HTC centre.

Finally, in line with the second objective, a chi-square analysis of the respondents obtaining their HIV test results against personal characteristics was calculated. The results are shown in Table 4.7

Table 4.7: Chi-square analysis of respondents obtaining test results by personal characteristics

Personal Characteristics	x^2 –value	df	N	Sign
Sex	1.211	5	424	0.944
Age	5.399	10	424	0.863
Place of Residence	22.490	10	424	0.013
Religion	18.180	15	424	0.255
Formal Educational Level	25.566	25	424	0.431
Marital Status	30.874	25	424	0.193
Living Arrangement	43.291	25	424	0.013

Source: Field Work, 2017

Table4.7presents the chi-square test results of respondents who took the HIV test and had subsequently obtained the results of their tests. From the table, it can be seen that almost all the variables with the exception of living arrangement (0.013) and place of residence (0.013), the remaining were not significantly related to the respondents obtaining their results after test. This therefore shows that, the socio-demographic background of respondents such as sex, age, place of residence, religious, formal educational level and marital status had no significant influence on the decision of the respondents to go back for their result after taking the HIV test.

On the other hand, living arrangement which significantly influenced obtaining test results shows that living alone has direct relationship with one obtaining his or her test results.

4.4 Severity of HIV and AIDS test against other Diseases tests.

The third objective of the study was to determine how the youth rate the severity of HIV Test against that of other diseases. Perceived severity of HIV and AIDS against the other diseases is a peculiar determinant of the respondents' health seeking behavior and attitude toward HTC services. The first part of this objective determined the level of severity of HIV/AIDS test is shown in Table 4.8

Table 4.8: Description on level of severity of HIV Test

Variables	Frequency	Percentage	$\bar{x}$	SD
Thoughts of HTC scares me				
Strongly agree	87	20.7	3.2	1.33
Agree	148	35.2		
Don't know	49	11.7		
Disagree	88	21		
Strongly disagree	48	11.4		
Rather die from any other disease than AIDS				
Strongly agree	127	30.2	3.41	1.47
Agree	122	29		
Don't know	52	12.4		
Disagree	41	9.8		
Strongly disagree	78	18.6		

Source; Field work, 2017

Table 4.8 indicates the results on the severity of HIV and AIDS. The results indicates that most of the respondents ($\bar{x}$ =3.2; S.D 1.33) were scared of HTC at the time of the study.

Again, it was evident that most of the respondents agreed to be scare of AIDS ($\bar{x}$ =3.3; SD 1.47), with the standard deviation confirmed that there was less dispersion of the responses from the respondents.

In relation to the third objective a Chi-square analysis of respondents who had thoughts that HTC scares was cross-tabulated with personal characteristics as depicted in Table 4.9

Table 4.9 Chi-square analysis of respondents who had thoughts that HTC scares by personal characteristics

Personal Characteristics	x^2 -value	df	N	Sign
Sex	15.756	5	424	0.008
Age	5.274	10	424	0.872
Place of Residence	5.880	10	424	0.825
Religion	16.419	15	424	0.355
Formal Educational Level	22.428	25	424	0.611
Marital Status	10.256	25	424	0.996
Living Arrangement	29.571	25	424	0.241

Source: Field Work, 2017

Table 4.9 presents the chi-square test results of respondents view on whether HIV testing and counselling was fearful based on their personal characteristics. From the table, it evident that all the socio-demographic characteristics with the exception of sex were found not to have any significant relationship with HTC scares. The indication is that the personal background of the respondents such as age, place of residence, religious, formal educational level, marital status and living arrangement had no significant relationship with HTC scares.

However, the sex of the respondents which had relationship with HTC scares shows that one's sex (that is, being a male or a female) had influence on the perception of HIV testing

and counselling being scary or not to an individual.

Again, a Chi-square analysis of respondents who prefer dying from other diseases than AIDS by personal characteristics is shown in Table 4.10

Table 4.10: Chi-square analysis of respondents who prefer dying from other diseases than from AIDS by personal characteristics

Personal Characteristics	x^2 –value	df	N	Sign
Sex	7.175	5	424	0.0208
Age	8.674	10	424	0.563
Place of Residence	9.192	10	424	0.514
Religion	14.626	15	424	0.479
Formal Educational Level	59.918	25	424	0.000
Marital Status	31.652	25	424	0.168
Living Arrangement	20.790	25	424	0.704

Source: Field Work, 2017

Table 4.10 shows the relationship between the demographic characteristics and rather dying from other diseases than AIDS. The calculated chi-square test values gives the evidence that; age, place of residence, religion, marital status and living arrangement had no significant relationship with one preferring to die from other diseases rather than AIDS This indicates that respondents who preferred dying from other diseases rather than AIDS were not influenced by age, place of residence, religion, marital status and living arrangement. It is also evident from the results in the table that sex and ones' level of formal education had significantly relationship with preferring to rather die from other diseases than AIDS. Formal education was highly significant.

Furthermore, in line with this objective, the respondents were asked to rank their readiness to undertake some selected medical tests (Malaria, Hepatitis B, Cancer, Ebola and HIV Test) based on how they perceive their severity or threat.

Malaria Test: malaria is a disease caused by plasmodium parasite, transmitted by the bite of infected Anopheles mosquitoes. When the mosquito bites a person, the parasite is released into the blood stream of the individual. Hence, malaria rapid diagnostic test (RDTs) assist in the diagnosis of malaria by detecting evidence of malaria parasites (antigens) in human blood.

Hepatitis B Test: Hepatitis B is an infection of the liver. It can cause scaring of the organ, liver failure and cancer. It spreads when people come in contact with blood, open sores, or body fluids of someone who has hepatitis B virus. It can be fatal when not treated. A test for hepatitis B surface antigen (HBsAg) may be used for screening when someone falls into one of the high categories for chronic hepatitis B virus.

Cancer test: In most parts of Ghana, males usually suffer from prostate cancer whiles the females are noted for breast cancer disease. If a person is suspected of having cancer, the physician may order for cancer blood tests, such as an analysis of urine or a biopsy of a suspicious area to help guide diagnosis. Examples of blood tests uses to diagnose cancer include; complete blood count (CBC), blood protein testing and tumor marker tests.

Ebola test: Ebola was causes an acute, serious illness which is often fatal if untreated. In the years 2014 to 2016 outbreak was the largest and most difficult (WHO, 2016). Ebola spreads through human to human transmission via direct contact through broken skin or mucous membranes with the blood, secretions, organs or other body fluids of infected people and with surfaces and materials contaminated with these fluids. The current WHO recommended tests for Ebola include;

a. Automated or semi-automated nucleic acid tests (NAT) for routine diagnostic management.
b. Rapid antigen detection tests for use in remote settings where NAT's are not readily available.

The general results are presented as follows in Table 4. 11

Table 4.11: Ranking of respondents readiness to undertake selected medical tests

Name of Test	Mean	Standard Error	Rank
Malaria Test	3.78	0.059	1st
Hepatitis B Test	3.38	0.063	2nd
Cancer	3.29	0.06	3rd
Ebola	2.63	0.062	4th
HIV Test	1.86	0.055	5th

Source; Field work, 2017

In terms of ranking respondents readiness to submit themselves for some selected medical tests, Table 4.11 indicates that respondents were most ready to undertake malaria test, followed by Hepatitis B, then Cancer, the next was Ebola and lastly HIV test.

Similarly, the result of respondents' readiness to undertake some medical tests with regards to sex was tested with the results presented in Table 4.12

Table 4.12: Ranking of respondents readiness to undertake some selected Medical test with regard to sex

	Male (N=227)		Female (N=227	
Name of Test	$\bar{x}$	Ranking	$\bar{x}$	Ranking
Hepatitis B	3.37	2	3.38	2
Malaria	3.72	1	3.82	1
HIV	1.94	5	2.63	4
Ebola	2.6	4	1.77	5
Cancer	3.2	3	3.33	3

Source; Field Work, 2017

Table 4.12 shows the ranking of respondents' readiness to submit themselves for some selected medical tests by sex. It indicates that the male and female respondents did not differ in their readiness malaria test; Hepatitis B and Cancer were ranked from first to third respectively. On the other hand the rankings from male respondents had Ebola as fourth and HIV test as fifth while for the female respondents the order was; fourth HIV and then Ebola fifth.

In furtherance of fulfilling the third objective, the results of respondents' readiness to undertake some medical tests with regards to age is presented in Table 4.13

Table 4.13: Ranking of respondent's readiness to undertake selected medical test with regard to Age

	15-19 Years (N=272)		20-24 Years (N=152	
Name of Test	$\bar{x}$	Ranking	$\bar{x}$	Ranking
Hepatitis B	3.25	2	3.58	2
Malaria	3.75	1	3.8	1
HIV	1.84	5	1.87	5
Ebola	3.3	3	2.43	4
Cancer	2.72	4	3.19	3

Source; Field work, 2017

Table 4.13 shows the ranking of respondents' readiness to submit themselves for some selected medical tests by age. The rankings signify that respondents in terms of their ages did not differ in their readiness to test for malaria, Hepatitis B and HIV, as they were ranked first, second and fifth respectively. However, their views differed in terms of Ebola and cancer as respondents between 15-19 years had Ebola as third while those between 20-24 years had Ebola as fourth.

In addition, the respondents' readiness to undertake some selected medical tests with regards to place of residence was tested and the results are provided in Table 4.14

Table 4.14: Ranking of respondents readiness to undertake some selected medical test by place of residence

	Rural (N=227)		Urban (N=152)	
Name of Test	$\bar{x}$	Ranking	$\bar{x}$	Ranking
Hepatitis B	3.39	2	3.35	2
Malaria	3.27	3	3.72	1
HIV	1.86	5	1.85	5
Ebola	2.54	4	2.7	4
Cancer	3.81.	1	3.27	3

Source; Field work, 2017

Table 4.14 shows the ranking of respondents' readiness to submit themselves for some selected medical tests by place of residence. For respondents who lived in rural areas; both the male and female respondents had Hepatitis B, Ebola and HIV ranked second, fourth and fifth respectively. But the rankings differed in terms of the other tests. For cancer, it was first for rural while it came third for urban. For malaria, it was third for rural while it was ranked first for urban.

Finally, respondents' readiness to undertake some medical tests with regards to level of formal education was tested and results presented in Table 4.15

Table 4.15: Ranking of respondents' readiness to undertake some selected medical test by level of formal education

	None (N=39)		Primary (N=29)		JHS (N=191)		SHS and Above (N=165)	
Name of Test	$\bar{x}$	Ranking	$\bar{x}$	Ranking	$\bar{x}$	Ranking	$\bar{x}$	Ranking
Hepatitis B	3.28	2	3.72	1	3.3	2	3.71	1
Malaria	3.77	1	3.62	2	3.84	1	3.41	2
HIV	1.95	5	2.09	5	1.91	5	1.73	5
Ebola	2.71	4	2.48	4	2.66	4	2.57	4
Cancer	3.26	3	3.04	3	3.22	3	3.37	3

Source: Field work, 2017

Table 4.15 shows ranking respondents readiness to submit themselves for some selected medical tests by level of formal education. It indicates that, for Hepatitis B, respondents with no formal education had it ranked second, those with primary had it first, those with Junior High School had it second while it came first for those with Senior High School education.

Also, for malaria, respondents with no formal education had it ranked first, those with primary had it second, and those with Junior High School had it first, while it came second for those with Senior High School education.

Again, for, cancer, Ebola and HIV test, they were ranked third, fourth and fifth among all respondents irrespective of their level of formal education.

4.5 Constructs of the Health Belief Model (HBM) and HTC participation

The last objective of the study was to determine how the constructs of the HBM (perceived susceptibility, perceived barriers, perceived benefits and cues to action) relate to HTC participation. The first part of this fourth objective is the results obtained the application of the health belief model constructs. Thus, the results from respondents on perceived susceptibility of HIV testing and counselling is presented in Table 4.16

Table 4.16: Perceived Susceptibility

Variables	Freq.	Percentage	$\bar{x}$	SD
Chances of people in locality getting HIV				
Strongly Agree	115	27.1	4.41	1.26
Agree	149	35.1		
Don't Know	71	16.7		
Disagree	78	11.3		
Strongly Disagree	40	9.4		
High chances of person getting HIV infected				
Strongly Agree	68	16	4.04	1.96
Agree	94	22.2		
Don't Know	53	12.5		
Disagree	115	27.1		
Strongly Disagree	93	21.7		
Worried about getting HIV				
Strongly Agree	81	19.1	3.64	1.44
Agree	84	19.8		
Don't Know	43	10.1		
Disagree	127	30		
Strongly Disagree	89	21		

Source: Field Work, 2017

Table 4.16 represents the analysis of the responses regarding respondents' perceived susceptibility to HIV Testing and Counselling. The majority of the respondents (62.2%) with a mean of ($\bar{x}$=4.41; SD=1.26) indicate that the chances of community members being infected with HIV is high. Similar results were received on individuals getting the virus as high ($\bar{x}$=4.04; SD 1.96). The level of acceptance as to whether the respondents were worried about getting HIV was moderately high ($\bar{x}$=3.64; SD= 1.44). The standard deviation showed that the individual responses were clustered around the mean.

Again from the table, generally, the respondents agreed that their perceived susceptibility to HTC was determined to be high (general mean=4.03). This is an indication that majority of the respondents perceived themselves to be susceptible to HIV and AIDS test.

On perceived benefits, the results in Table 4.17 provided what the respondents thought.

Table 4.17: Perceived Benefits

Variables	Freq.	Percentage	$\bar{x}$	SD
Using HTC likely to lower HIV infection				
Strongly Agree	118	27.8	3.39	1.09
Agree	203	47.9		
Don't Know	43	10.1		
Disagree	30	7.1		
Strongly Disagree	28	6.6		
Knowing HIV status to reduce transmission				
Strongly Agree	115	27.1	3.81	1.74
Agree	160	37.7		
Don't Know	50	11.8		
Disagree	74	17.5		
Strongly Disagree	24	5.7		
HTC services prevents future infection				
Strongly Agree	115	35.6	3.09	1.14
Agree	164	38.7		
Don't Know	49	11.6		
Disagree	36	8.5		
Strongly Disagree	24	5.6		

Source: Field Work, 2017

Table 4.17 shows that the respondents believed the use of HTC service was likely to lower their chances of HIV infection ($\bar{x}$ =4.39; SD=1.09). The standard deviation shows that they were unanimous in their responses. In relation to respondents believing that HIV positive persons who know their status were less likely to transmit the virus to someone else ($\bar{x}$ =3.81; SD=1.74). This is an indication that knowing ones status was likely to reduce HIV transmission.

Similarly, most of the respondents ($\bar{x}$=3.09; SD=1.14) believed using the HTC service could help prevent getting HIV in future if found to be negative while there was less dispersion from the mean.

This, from the analysis respondents perceived benefit to HTC was confirmed ($\bar{x}$=3.43). This is an indication that the majority of the respondents perceived there were benefits for using HTC services.

Table 4.18: Perceived Barriers

Variables	Freq.	Percentage	$\bar{x}$	SD
Religious beliefs hindering HTC use				
Strongly Agree	39	9.2	2.41	0.66
Agree	68	16.0		
Don't Know	87	20.5		
Disagree	121	28.5		
Strongly Disagree	109	25.7		
High cost of HTC services				
Strongly Agree	46	10.8	2.44	0.96
Agree	82	19.3		
Don't Know	149	35.1		
Disagree	94	22.2		
Strongly Disagree	52	12.2		
Disclosure of HIV test results by staff				
Strongly Agree	54	12.7	2.12	0.61
Agree	82	19.3		
Don't Know	115	27.1		
Disagree	104	24.5		
Strongly Disagree	69	10.2		
People found at HTC assumed HIV positive				
Strongly Agree	90	21.2	2.58	0.31
Agree	168	39.6		
Don't Know	33	7.8		
Disagree	87	20.7		
Strongly Disagree	46	10.6		

Source: Field Work, 2017

Table 4.18 depicts the analysis of the responses regarding perceived barriers to HIV Testing and Counselling. Four variables were tested in this direction. The respondents were indifferent ($\bar{x}$=2.41; SD=0.66) as they did not perceive religious beliefs hindering their going for HTC. They also did not agree that cost related to HTC services, prevent people from engaging in HIV testing and counseling ($\bar{x}$=2.44; SD=1.96). On the issue of disclosure, the

respondents were indifferent ($\bar{x}$=2.21; SD=0.61). They believed health staff at the HTC Centre might disclose results while most people were ambivalent on the perception that people might assume they are HIV positive if found going to the HTC centre ($\bar{x}$=2.58; SD=0.31).

Generally, the mean of the respondent's perceived barriers to HTC was indifferent ($\bar{x}$ =2.41). This is an indication that majority of the respondents had low perception on barriers to HTC.

Another area in the Health Belief Model considered was cues to access to HTC activities as indicated in Table 4.19

Table 4.19: Cues to Action

Variables	Freq.	Percentage	$\bar{x}$	SD
Often hear about HTC through family and friends				
Strongly Agree	70	16.5	3.11	1.26
Agree	101	23.8		
Don't Know	88	20.8		
Disagree	95	22.4		
Strongly Disagree	68	16.0		
Knows someone who ever experience HTC				
Strongly Agree	40	9.4	3.91	1.14
Agree	94	22.2		
Don't Know	89	21.0		
Disagree	123	29.0		
Strongly Disagree	77	18.2		

Source: Field Work, 2017

The analysis in Table 4:19 shows that most of the respondents agreed ($\bar{x}$=3.11; SD=1.26) hearing about HTC through friends and family with standard deviation showing homogeneity. The responses from the respondents are less dispersed from the mean. In relation to respondents knowing someone who has ever experienced HTC, the results shows that most of the respondents ($\bar{x}$=3.91; SD=1.14) affirmed knowing someone who had used

HTC before. This provides evidence of the knowledge level of respondents and information flow. Thus, the level of awareness is high in the District among the youth.

The general mean of 3.01 confirm the level of awareness of individual youth having gone through HTC services in the District.

The second part of the last objective shows the bivariate relationship between the demographic variables and the construct of the health belief model. The result is depicted in Table 14. 20

Table 4.20: Shows the bivariate relationship between the demographic variables and the construct of the health belief model

Table 4.17: Correlation matrix

correlation	sex	age	place of residence	religion	level of education	marital status	living arrangement	perceived susceptibility	perceived benefits	perceived barriers	personal commitment
perceived susceptibility	0.1798	0.064	-0.03	-0.04	0.1687*	0.01	0.03				
perceived benefits	0.1093*	0.039	-0.09	-0.03		-0.1	-0.1	0			
perceived barriers	0.0058*	0.096	0.097	0.03	-0.043	0.1202*	-0.1	0.1	0.1011*		
Cues to Action	-0.0681	0.026	0.117	0	0.118	0.02	-0	0.1	0.4	0.05	

Source: Field Work, 2017

From 4.17 presents the bivariate relationship between the demographic variables and the constructs of the Health Belief Model. The results from this analysis suggest six correlated relationships although, they are marginal or weak.

Firstly, perceived susceptibility correlated significantly with sex of respondent. Secondly, perceived benefits correlated significantly with sex. Thirdly, perceived susceptibility correlated with level of education. Fourthly, perceived benefits correlated with level of education. Fifthly, perceived barriers correlated with marital status. Lastly, perceived barriers correlated with perceived benefits. As expected, an increase in an individual's perceived benefits it likely to affect one's perceived barriers to the utilization of HIV Testing and Counselling services.

In conclusion, the very weak correlation among the independent variables indicates little or no multicollinearity. Hence the independent variable can perfectly be used to predict the level of HIV Testing and Counselling in the study area.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter presents a discussion of the findings of the study, as outlined in the objectives of the study. The study seeks to examine factors that contribute to HIV Testing and Counselling utilization among the youth of the Fanteakwa District of Ghana. The study explored youths' knowledge and usage of HTC using the health belief model. The discussions of the findings were done under the following major headings:

- Knowledge of HIV Testing and Counselling Service
- Utilization of HIV Testing and Counselling
- Severity of HIV and AIDS against other diseases
- Constructs of the Health Belief Model and HTC

5.2 Knowledge of HIV Testing and Counselling Service

Knowledge of HIV testing and counselling services is likely to influence the respondents' attitude and behavior towards HIV and AIDS in terms of patronage of HIV testing and counselling. It was found from the study that as high as 80% respondents had heard about HIV Testing and Counselling (HTC) and over 80% knew where to seek for HIV Testing and Counselling. This is very significant as it shows that awareness of HTC is almost prevalent among the respondents. This finding generally conforms to results from earlier studies in Nigeria, Ethiopia and Tanzania by Ugun, Onwijekwe & Sbeudu (2011), Zelalem, Aregaww, Yitayal Alemu, Birhen, Mathewase & Tachebela (2013) and studies by Sanga, Kapanda, Msuya & Mwangi (2015) respectively. The high knowledge of awareness of HTC could be attributed to an increase in access to electronic-media.

There has been an increased number of radio and television stations and also internet access across many places in Ghana in recent times. For this reason, individuals could easily get information on HTC from these radio stations and the internet. Since, media and internet platforms have been identified as vibrant sources of information about HIV testing and counselling services, there is therefore the need to intensify education about HIV testing and counselling services via the media and internet. Again, the awareness could be as a result of over 83.9% of the respondents with Junior High School or Senior High School education and above. The information on HIV and AIDS are incorporated into the Integrated Science syllabus and therefore, it is highly possible that respondents might have learnt about HTC at school from their teachers and other public health education officers who patronize the schools to offer health education from time to time.

Despite the high level of awareness on the part of the respondents on HTC, about 60% of the respondents gave inaccurate responses by agreeing on testing for HIV a week after unprotected sex, to determine their HIV status. This implies that most of the respondents were ignorant about the widow period or waiting period of HIV testing. There is a window period from the time when the person is infected to the time standard screening test such as an antibody or antigen test is able to detect the virus. The virus takes some time (usually between one to three months to replicate enough of itself for the standardized test instrument to be able to detect the virus (HIV). It is imperative that the clear ignorance about the window period of HIV testing and counselling demonstrated by the respondents requires further that education is given to demystify cultural beliefs associated with unprotected sexual activities among the youth of Fanteakwa. For instance, some of the respondents believed that the virus could be detected immediately after HIV testing. This phenomenon is not peculiar to only the youth but individuals engaged in high risk sexual behaviours courting and or cohabiting. This raises concern because; such development creates

fertile ground for transmission of HIV (Kucrika, Sarathy, Govindan, Wolf, Ellison, Hart, Montgomery, Rus & Segev, 2011; Cumming, Wallace, Schorr & Dodd, 1989). This is particularly important because people who are engaged in high risk behaviours need to be tested again after the window period to confirm their negative status in order to prevent false negative test results.

5.3 Utilization of HIV Testing and Counselling

The second objective of the study concerns the extent to which youth in Fanteakwa District utilize HIV Testing and Counselling services. Though results from the study indicates that more than 80% of respondents did not deny that they knew about HTC and where to obtain the services, it was regrettable that only one out of four of the respondents (25%) had utilized HTC service to find out their HIV status at the time of the study . This findings is similar to that of Fikadie, Badimo and Alamrew (2014) where 37.8% of the respondents had utilized HTC but contrary to the finding of Olusola, Nkiruka, Obasohan, Olanwaju and Titilya (2015) and that of Tsesay, Edris and Meseret (2011) which recorded over 50 percent of respondents who had utilized HTC. Again, it is interesting to note that majority of the respondents agreed that knowledge about HTC services and places to obtain such services is important but attributed their inability to utilize such services to the four main factors. These factors are one, HIV testing and counselling facilities are not client friendly; two lack of trust among the respondents for the workers at the HTC facilities; three the societal perception of sexual promiscuity associated with these who regularly utilize HTC services and four the socio-cultural belief among the respondents that once, their status is known, their well-being "would start deteriorating. It will therefore not be wrong to state that knowledge of HTC alone is insufficient to promote optimum utilization of HTC. Also, there is the need for further education among the respondents that would extend their knowledge about HTC services to actual utilization of HTC services. Hence, such educational intervention would require the use of

motivation and other behavioural change techniques necessary in order to encouraging more participation.

From the study more than 50 percent of males had tested for HIV as compared to the 43.4% females. This is similar to other studies by Fikadie et. al. (2008) which also had more males testing for HIV than the females. Similarly, it is also interesting to note that even when the respondents mastered courage to utilize HTC services, more males than females tested for HIV. This development accentuates the belief that women are more concerned about the sanctity and society perception associated with sexual life. This phenomenon gives credence to apparently inability to utilize the HTC services in view of the reasons mentioned above, especially among the female respondents.

Further findings from the study show that out of the total number that had been tested for HIV, 57.6% said they were given counselling before their blood was drawn for the test. It further showed that about 67.3% did obtain their results after the test. The findings throw more light on the widely held perception among the respondents that HTC facilities are not client friendly. This situation is alarming, since it has the tendency to make justification for inability to utilize the HTC services stronger and even erodes the confidence respondents have in the health workers at the facilities. This result is contradictory to that contained in the HIV Sentinel Survey report of 2010 (Chris-Cola, 2012 citing GSS, 2010).

5.4 Severity of HIV and AIDS against other diseases

The third objective of the study seeks to compare how the youth rate the severity of HIV and AIDS against that of other diseases in order of seriousness. As depicted in Table 4.4 above, (55.9%) of the respondents altogether strongly agreed or agreed with the statements that, "the thoughts of HTC scares me" while those in disagreement were 136 (32.4%) implying that majority of respondents consider HIV and AIDS as a serious disease. Again, the results raise the argument that the socio-cultural belief among the respondents that once, their HIV status is known, their "well-being" would start deteriorating should not be swept under the carpet. This belief must be demystified through continuous educational interventions. Also, majority of the respondents 271 (66.2) when asked; stated their preference to die from any other disease other than HIV and AIDS. The respondents' preference to die from any other disease than HIV and AIDS is because of the erroneous belief that HIV and AIDS is a deadly terminal disease which has no cure. The advent of Antireteoviral Therapy has helped persons living with HIV and AIDS to look healthy and live their normal life and from these developments one would have expected the youth to exhibit a less fearful attitude towards HIV and AIDS. However, the findings from this study is an indication that although the other deadly diseases such Ebola and Cancer have killed people in recent times, many still perceive HIV and AIDS as a serious threat. This finding is similar to Downing-Matibag and Geisinger, (2009).

5.5 Construct of the Health Belief Model and HTC

The fourth and last objective of the study determines how some of the constructs of the health Belief model specifically perceived susceptibility, perceived barriers perceived benefits and cues to action relate to HTC participation. Results from the study shows that only a high number of the respondents (25%) perceived susceptibility to HIV testing and counseling. Thus, perceived

susceptibility was found to be significantly related to HTC. The results raised critical issues about motivation for HIV testing. Generally human beings, regardless of their status in the society need some form of motivation to change a particular behavioural pattern. The study discovered that the respondents perceived their susceptibility to HIV infection as high. This could be that most of the respondents had low level of motivation for HIV testing. This could explain why some of the respondents went for HTC, meaning that respondents who went for HTC perceived themselves to be at risk to HIV and AIDS and therefore their vulnerability to the epidemic might have determined their decision to get find out their HIV status.

In terms of other constructs of the model such as perceived barriers and perceived benefit as the study revealed, perceived barriers had no impact on HTC among the youth in the district, meaning it was insignificant to the uptake of HTC. This explains that the few respondents who went for HTC could have done so not because of any barriers associated to HTC but on other factors. On the other hand, he study revealed that perceived benefit and cues to action were highly associated to HTC participation. The implication is that other factors could have influenced the respondents' decision to uptake HTC. The finding is rather counter-intuitive because according to the tenets of health belief model, human beings would change their behavior in view of perceived or anticipated benefits or barriers associated with the behavior in context. However this finding is contrary to a study carried out in Addis Ababa in Ethiopia among students by Abede and Mike (2009) where perceived barriers and perceived benefits were found to be closely associated with HTC, while over half of the respondents were found not to be susceptible.

Apart from the construct of the health belief model, some other demographic factors were used to test their association with HTC. The demographic variables of the respondents in the study include sex, age, place of residence, educational level and religion. It was revealed that modifying factors

such as sex, age, and place of residence of respondents were found to be significant to the uptake of HTC. According to the results, the interactional effect of the demographic variables influenced the attitudes and beliefs of the respondents' towards HIV and AIDS in terms of decision to seek HIV testing and counselling services at health facilities. However, factors such as religion, level of formal education were found to be insignificant to HTC, contrary to the findings in Southern Ethiopia (Hirus, 2014).

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

In this chapter, a summary of the study is given with recommendations made to give suggestions on the way forward and concluded based on the findings from the study.

6.1 Summary

This study sought to examine HIV Testing and Counselling among the youth of Fanteakwa District of the Eastern Region of Ghana through the Health Belief Model. The study had the objective to examine the knowledge level of the youth on HTC and again, to assess the extent to which the youth of Fanteakwa District Utilize HTC Services. Thirdly, to compare how the youth rate the severity of HIV and AIDS against other diseases. Lastly, to determine how the constructs of the Health Belief Model relates to HTC participation.

Based on these objectives a sample size of 424 youth in Fanteakwa District within the ages of 15-24 years was selected and responses were elicited from them through the use of questionnaires. The findings revealed from the study are as follows:

- A large percentage of over 80% of the sampled youth admitted having heard about HTC and also knew where to go for HIV test.
- The study also revealed that about 63% of the respondents were ignorant of the fact that it was highly impossible for someone to know his/her HIV status especially through Antibody test if he/she takes the test one week after having unprotected sex.

- It also came out from the study that as little as 25% had ever taken HIV test at the time of the study. And out of those who had taken the test, more males (56.6%) had taken the test as compared to the (43.4%) females.
- It was also reported that out of those who had ever taken the test 57.1% indicated to have been given pre-counselling service before the test
- It was again shown that 67.3% went back for their test results.
- It was again revealed that most of the respondents (55.9%) were scared of HIV and AIDS and three out of five indicated their preference to die from other diseases instead of HIV and AIDS.
- Furthermore, in terms of rating their level of readiness to undertake various medical tests, the participants were least ready to take HIV test as compared to Ebola, Hepatitis B, Cancer and Malaria Tests.
- It was also found that factors such as sex, age and place of residence of respondents each had significant impact on the level of HTC participation. Other factors such as level of formal education, religion and marital status had no significance on HTC.
- Among the construct of the health belief model, only perceived susceptibility was significantly related to HTC.

6.2 Conclusion

- The threat that HIV and AIDS poses to infected persons, the affected families and the nation cannot be under estimated. When no treatment is applied or if left to take its natural course, this condition can ravage the lives of individuals most dear to us and could lead to the death of our children, fathers, mothers, brothers, wives, uncles and aunties. For this reason, no effort must be spared to find best ways or strategies to get vulnerable populations such as the youth to know their HIV status, since this is the only gateway to treatment and healthy life for all infected persons. It must be stated that the low patronage of HTC as revealed by the study from the respondents of Fanteakwa is a wake-up call to all stakeholders, if the 90-90-90 target set by UNAIDS and also the Ghana AIDS Commission is to become a reality and not just a mere dream. Inspite of all the efforts that may be put in place to get 90% of persons living with HIV and AIDS to know their status by the year 2020, it has become even more important to understand the complexity of decisions that the youth go through regarding HIV testing and Counselling.

6.3 Recommendations

To enhance HTC services, the following recommendations are proposed based on the findings of the study for practice and further research:

6.3.1 Ghana Health Service/District Health Directorate

- It is recommended that public health education programmes on HTC be intensified for more people to realize the dying need for them to know their HIV status.

- The health service should advocate using messages on HTC from social media such as facebook, instagram, twitter, tango and many others to emphasise that all persons are susceptible to HIV and AIDS infection.
- Stakeholders on HIV and AIDS such as the government, the Ministry of Health should attach celebrities such as musicians, movie actors and well-known footballers to know your HIV status campaign programmes. This will help increase the uptake of HIV testing and counselling as individual, especially the youth see these celebrities as role models.
- Health personnel must also interact with young people to educate them about issues on HTC especially the availability of treatment and also the window period.

6.3.2 Policy Makers

- Since electronic media has proven to be an effective tool for disseminating information, government through the district assembly should ensure electricity is extended to all rural areas. The provision of electricity will help the individuals to charge their mobile phones and use their personal computers because of adequate supply of power. This will enable all persons to get information on health particularly on HTC at their door step.

- There is the need for government to establish more HTC centres to add to the only one in the district in order to bring HTC service closer to the youths.
- The development of self-testing kits for HIV is being advocated as it removes the issue of confidentiality. This is similar to what is obtained in self-pregnancy testing

using the serology based test kit. However, these test kits should be put at places where one could pick at will without any confrontation from any other person. This can later be followed by counselling at an HTC centre if the person discovers that he/she is HIV positive.

- From these findings, the study is of the view that, there should be a proper analysis of diagrammed paths for the constructs of the health belief model (as shown in figure 1) and a sum up of the corresponding item as the appropriate treatment items. Hence, a direct path way should be designed from modifying factors such as sex, age and place of residence to preventive health behaviour to create a more appropriate diagramme.

6.3.3 Other stakeholders

- The various departments and agencies under the ministries, non-governmental organisations, the media, chiefs, the clergy, opinion leaders should spearhead the promotion of health especially HTC during their yearly activities and durbars.

6.3.4 Counsellors or Health Personal at HTC centre

- Counsellors should re-organise facilities at the centre to provide a friendlier atmosphere full of privacy to the youth.
- Counsellors should attend more refresher courses or workshops to update their knowledge on HTC so that adequate information could be supplied to the youth who may need their services.

6.4 Suggestions for Further Research

- The study is a quantitative survey; however, not every aspect of HTC could be exhausted by the study. A further study on this regard using qualitative approach would be appropriate to give it more insight into utilization of HIV.
- Further studies could also be conducted to find out the attitude of the youth towards persons living with HIV and AIDS.

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APPENDIX A

UNIVERSITY OF GHANA
ETHICS COMMITTEE FOR THE HUMANITIES (ECH)
P. O. Box LG 74, Legon, Accra, Ghana

19th May, 2017

My Ref. No.....

Mr Kennedy Nyeseh Ofori
Department of Adult Education and Human Resource Studies
School of Continuing and Distance Education
University of Ghana
Legon

Dear Mr. Ofori,

ECH 112/16-17: HIV TESTING AND COUNSELLING AMONG THE YOUTH OF FANTEAKWA DISTRICT: AN APPLICATION OF THE HEALTH BELIEF MODEL

This is to advise you that the above reference study has been presented to the Ethics Committee for the Humanities for a full board review and the following actions taken subject to the conditions and explanation provided below:

Expiry Date:	16/11/17
On Agenda for:	Initial Submission
Date of Submission:	12/04/17
ECH Action:	Approved
Reporting:	Quarterly

UG./ISSER/ECH VALID UNTIL 16 NOV 2017 APPROVED DOCUMENT

Please accept my congratulations.

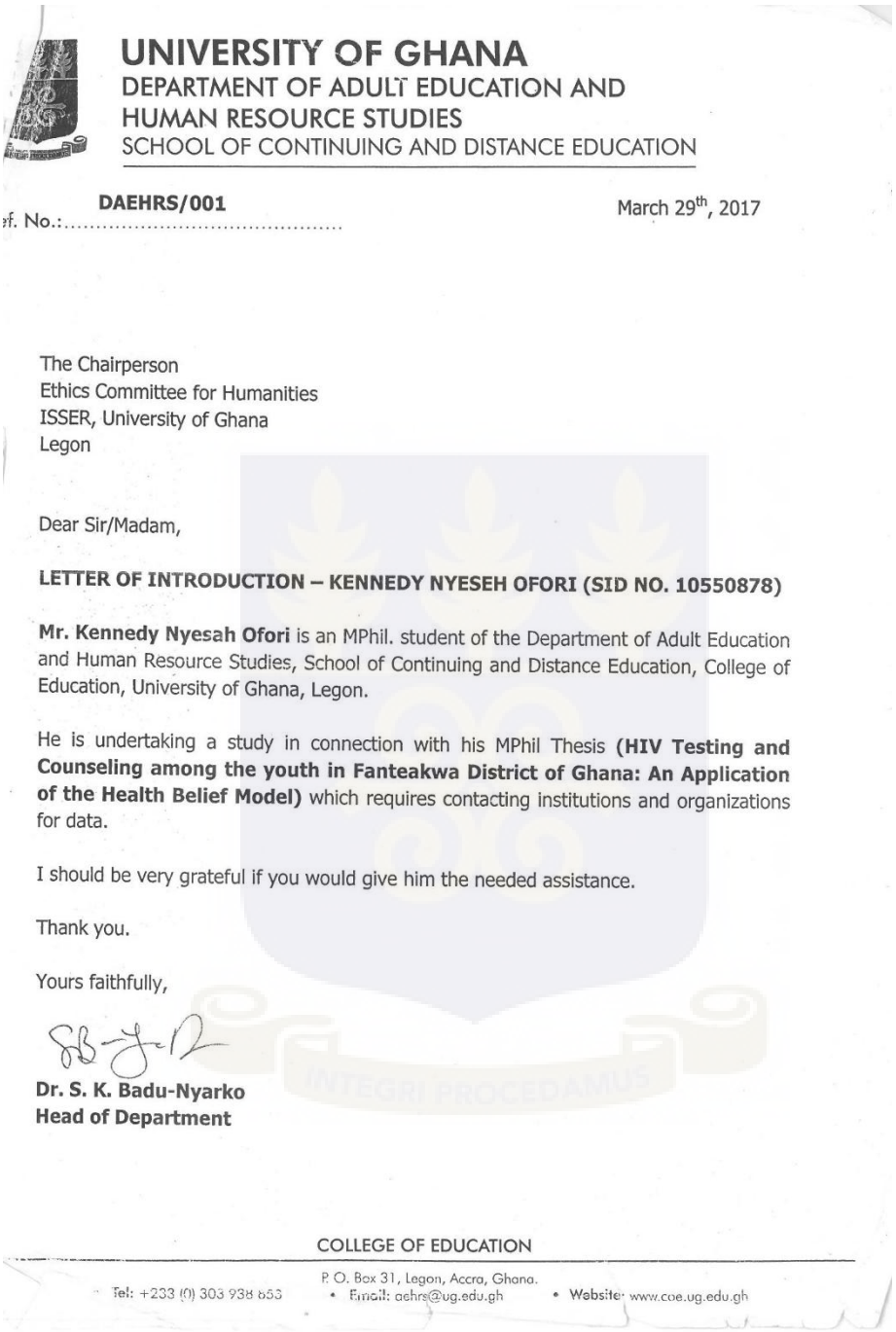
Yours Sincerely,

Rev. Prof. J. O. Y. Mante
ECH Chair

CC Dr. S. K. Badu-Nyarko, Department of Adult Education and Human Resource Studies, University of Ghana

Tel: +233-303933866 Email: ech@ug.edu.gh | ech@isser.edu.gh

APPENDIX B



UNIVERSITY OF GHANA
DEPARTMENT OF ADULT EDUCATION AND HUMAN RESOURCE STUDIES
SCHOOL OF CONTINUING AND DISTANCE EDUCATION

Ref. No.: DAEHRS/001

March 29th, 2017

The Chairperson
Ethics Committee for Humanities
ISSER, University of Ghana
Legon

Dear Sir/Madam,

LETTER OF INTRODUCTION – KENNEDY NYESEH OFORI (SID NO. 10550878)

Mr. Kennedy Nyesah Ofori is an MPhil. student of the Department of Adult Education and Human Resource Studies, School of Continuing and Distance Education, College of Education, University of Ghana, Legon.

He is undertaking a study in connection with his MPhil Thesis **(HIV Testing and Counseling among the youth in Fanteakwa District of Ghana: An Application of the Health Belief Model)** which requires contacting institutions and organizations for data.

I should be very grateful if you would give him the needed assistance.

Thank you.

Yours faithfully,

Dr. S. K. Badu-Nyarko
Head of Department

COLLEGE OF EDUCATION

Tel: +233 (0) 303 938 653 • P. O. Box 31, Legon, Accra, Ghana. • Email: aehrs@ug.edu.gh • Website: www.coe.ug.edu.gh

APPENDIX C

UNIVERSITY OF GHANA
DEPARTMENT OF ADULT EDUCATION AND
HUMAN RESOURCE STUDIES
SCHOOL OF CONTINUING AND DISTANCE EDUCATION

Ref. No.: **DAEHRS/001** December 14, 2016

The Director
Ghana Health Service
Fanteakwa District
Begoro, E/R.

Dear Sir/Madam,

LETTER OF INTRODUCTION – KENNEDY NYESAH OFORI (SID NO. 10550878)

Mr. Kennedy Nyesah Ofori is an MPhil. student of the Department of Adult Education and Human Resource Studies, School of Continuing and Distance Education, College of Education, University of Ghana, Legon.

He is undertaking a study in connection with his MPhil Thesis **(HIV/AIDS Voluntary Counseling and Testing among youth in Fanteakwa District of Ghana: An Application of the Health Belief Model)** which requires contacting institutions and organizations for data.

I should be very grateful if you would give him the needed assistance.

Thank you.

Yours faithfully,

Dr. S. K. Badu-Nyarko
Head of Department

COLLEGE OF EDUCATION
P. O. Box 31, Legon, Accra, Ghana.
• Tel: –233 (0) 303 938 853 • Email: aehrs@ug.edu.gh • Website: www.coe.ug.edu.gh

APPENDIX D

Informed Consent form

Protocol title: HIV Testing and Counselling among the youth of Fanteakwa District of Ghana

Principal investigator: Kennedy Ofori

Address: Department of Adult Education and Human Resource Studies

University of Ghana, Legon.

General Information about Research

My name is Kennedy Nyeseh Ofori, and I am a masters student of the Department of Adult Education and Human Resource Studies, University of Ghana, Legon, The study you are requested to partake is for academic purpose, leading to the award of Master of Philosophy in HIV and AIDS Management at the University of Ghana.

The purpose of the study is to examine the factors that contribute to HIV Testing and Counsellinng (HTC) utilization among the youth in Fanteakwa District of Ghana in the light of the Health Belief Model.

You will be required to answer a questionnaire, which will take you between 30 to 40 minutes.

The findings will be discussed by comparing it to other related researches and conclusion drawn

Benefits/Risks of the study

You will not be exposed to any risk during the research.

Confidentiality

All the information you will provide will be known exclusively to the researcher and his supervisors. Your name will not be included in any of the information you give me. The information you provide will be kept under lock for five years and if the need to use it again

arise permission will be sought from you.

Contacts for Additional Information

You may ask me any questions about this study. You can call me at any time *on 0244576529* or talk to me the next time you see me.

Please talk about this study with your parents before you decide whether or not to participate. I will also ask permission from your parents before you are enrolled into the study. Even if your parents say "yes" you can still decide not to participate.

Your rights as a Participant

This research has been reviewed and approved by Ethics Committee for Humanities, ISSER, University of Ghana If you have any questions about your rights as a research participant you can contact the Administrator of the Ethics Committee for Humanities, ISSER, University of Ghana at ech@isser.edu.gh / ech@ug.edu.gh or 00233- 303-933-866.

Voluntary Agreement

By making a mark or thumb printing below, it means that you understand and know the issues concerning this research study. If you do not want to participate in this study, please do not sign this assent form. You and your parents will be given a copy of this form after you have signed it.

This assent form which describes the benefits, risks and procedures for the research titled; HIV Testing and Counselling among the youth of Fanteakwa District: An application of the Health Belief Model has been read and or explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate.

Child's Name:…… **Researcher's**

Name:……

Child's Mark/Thumbprint…… **Researcher's**

Signature:……

Date: …… **Date: ……**

APPENDIX E

Parent/Guardian Consent form

Protocol title: HIV Testing and Counselling among the youth of Fanteakwa District of Ghana

Principal investigator: Kennedy Ofori

Address: Department of Adult Education and Human Resource Studies

University of Ghana, Legon.

General Information aboutResearch

The Principal Investigator is Kennedy Nyeseh Ofori, currently a masters student of the Department of Adult Education and Human Resource Studies, University of Ghana, Legon, The study your ward is requested to partake is for academic purpose, leading to the award of Master of Philosophy in HIV and AIDS Management at the University of Ghana.

The purpose of the study is to examine the factors that contribute to HIV Testing and Counselling (HTC) utilization among the youth in Fanteakwa District of Ghana in the light of the Health Belief Model.

Your ward will be required to answer a questionnaire which will take him or her between 30 to 40 minutes.

The findings will be discussed by comparing it to other related researches and conclusion drawn

Benefits/Risks of the study

Since HIV and AIDS is a very sensitive issue, and persons living with HIV/AIDS may become emotional to some of the questions, the researcher will have to pause for some time to enable such persons to recover before continuing. However, if they are not still feeling comfortable then the administering will have to be discontinued and the individual recommended to a professional counsellor for psychological assistance.

Confidentiality

All the information you will provide will be known exclusively to the researcher and his supervisors. Your name will not be included in any of the information you give me.

The information you provide will be kept under lock for five years and if the need to use it again arise permission will be sought from you.

Compensation

You will not receive any compensation for participating

Withdrawal from Study

Please be assured that your participation in this study is solely voluntary. You have the right to participate or refuse to participate and this will not result in any penalty in the service you are entitled to. You have the right to drop out of the research at any time you desire.

Contactfor Additional Information

If you ever have any questions concerning this study you should contact the principal investigator Kennedy Nyeseh Ofori, from University of Ghana, Department of Adult Education and Human Resource Studies. Mobile phone number; 0244576529 or email address; kennyofori@yahoo.com. You may also contact Dr. (Mrs) Ellen Mabel Osei-Tutu, who is a supervisor of this study on Mobile phone number

0285045937 or email; emosei-tutu@ug.edu.gh.

Your Child's Rights as a Participant

This research has been reviewed and approved by the Ethics Committee for Humanities, ISSER, University of Ghana. If you have any questions about your child's rights as a research participant you can contact Administrator of the Ethics Committee for Humanities, ISSER, University of Ghana at ech@isser.edu.gh / ech@ug.edu.gh or 00233- 303-933-866.

Participant's Agreement

"I have read or have had some one read all of the above, asked questions, received answers regarding participation in this study, and am willing to give consent for my child/ward to participate in this study.

I will not have waived any of my rights by signing this consent form.

_____

Upon signing this consent form, I will receive a copy for my personal records."

……..

Name of Parent or Guardian

…….. …….

Signature or mark of participants Date

If parent or guardian cannot read and or understand the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the child's parent or guardian. All questions were answered and the child's parent or guardian has agreed that his or her child should

take part in the research.

_____

Name of witness

_____ _____

Signature of witness/Mark Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

_____

Name of Person who Obtained Consent

_____ _____

Signature of Person Who Obtained Consent Date

APPENDIX F

CHILD ASSENT FORM

Protocol title: HIV Testing and Counselling among the youth of Fanteakwa District of Ghana

Principal investigator: Kennedy Ofori Nyeseh

Address: Department of Adult Education and Human Resource Studies

University of Ghana, Legon.

General Information about Research

My name is Kennedy Nyeseh Ofori, and I am a masters student of the Department of Adult Education and Human Resource Studies, University of Ghana, Legon, The study you are requested to partake is for academic purpose, leading to the award of Master of Philosophy in HIV and AIDS Management at the University of Ghana.

The purpose of the study is to examine the factors that contribute to HIV Testing and Counselling (HTC) utilization among the youth in Fanteakwa District of Ghana in the light of the Health Belief Model.

You will be required to answer a questionnaire, which will take you between 30 to 40 minutes.

The findings will be discussed by comparing it to other related researches and conclusion drawn

Benefits/Risks of the study

You will not be exposed to any risk during the research.

Confidentiality

All the information you will provide will be known exclusively to the researcher and his supervisors. Your name will not be included in any of the information you give me. The information you provide will be kept under lock for five years and if the need to use it again arise permission will be sought from you.

Contacts for Additional Information

You may ask me any questions about this study. You can call me at any time *on 0244576529* or talk to me the next time you see me.

Please talk about this study with your parents before you decide whether or not to participate. I will also ask permission from your parents before you are enrolled into the study. Even if your parents say "yes" you can still decide not to participate.

Your rights as a Participant

This research has been reviewed and approved by Ethics Committee for Humanities, ISSER, University of Ghana If you have any questions about your rights as a research participant you can contact the Administrator of the Ethics Committee for Humanities, ISSER, University of Ghana at ech@isser.edu.gh / ech@ug.edu.gh or 00233- 303-933-866.

Voluntary Agreement

By making a mark or thumb printing below, it means that you understand and know the issues concerning this research study. If you do not want to participate in this study, please do not sign this assent form. You and your parents will be given a copy of this form after you have signed it.

This assent form which describes the benefits, risks and procedures for the research titled; HIV Testing and Counselling among the youth of Fanteakwa District: An application of the Health Belief Model has been read and or explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate.

Child's Name:…… **Researcher's Name:……**

Child's Mark/Thumbprint…… **Researcher's**

Signature:……

Date: …… **Date: ……**

APPENDIX G

UNIVERSITY OF GHANA, LEGON

DEPARTMENT OF ADULT EDU. AND HUMAN RESOURCE STUDIES

RESEARCH QUESTIONNAIRE

This questionnaire is prepared for the research work in partial fulfillment of the award of M.Phil. HIV and AIDS Management. This research is on HIV Testing and Counselling (HTC) among the youth in the Fanteakwa District of Ghana: An application of the Health Belief Model. Your cooperation and honesty will be highly appreciated. All information that would be gathered from you would be treated strictly confidential. You have the right to withdraw from the study anytime you wish to do so.

Thank you.

Kennedy Nyeseh Ofori (Researcher)

SECTION A

For each item, please tick (√) near your preferred response.

Bio-data

1. Sex: a. Male ( ) b. Female ( )
2. Age a. 15-19 ( ) b. 20-24 ( )
3. Place of residence in the district ……..
4. Religion a. Christian ( ) b. Moslem ( ) c. Traditional ( ) f. Others ( )
5. Formal Education level: a. None ( ) b. Primary ( ) c. JHS ( )
   d. SHS and above ( )
6. Marital status: a. Single ( ) b. Divorced ( ) c. Separated ( )
   d. widowed ( ) e. Married ( ) f. In a relationship ( )
7. Living arrangements: a. alone ( ) b. with parents ( ) c. with friends ( )
   d. with other relatives ( ) e. others ( )

Please tick (√) near your preferred response to indicate your level of agreement or disagreement [from the scale of (1) "strongly agree" to (5) "strongly disagree"]

with the statement.

SECTION B: Knowledge of HIV and AIDS and HTC

S/N	ITEM	Strongly agree	Agree	Don't know	Disagree	Strongly disagree
8	Taking a test for HIV one week after having unprotected sex will tell a person if he or she has HIV.					
9	I have heard about HIV Testing and Counselling (HTC)					
10	I know a place where I can go to be tested for HIV					

SECTION C: Utilization of HTC services

	Item	Agree	Disagree
11	I have been tested for HIV		

If you have never been tested for HIV please move to question 15

	Item	Agree	Disagree
12	I have been tested for HIV within the last twelve months		
13	I was given counselling before my blood was taken		
14	I did go back for the results of my test		

SECTION D: Constructs of the Health Belief Model

Perceived Susceptibility

Questions **Responses[Please Tick(√)**

	ITEM	Strongly agree	Agree	Don't know	Disagree	Strongly disagree
15	I believe there are chances of people getting infected with HIV in my locality					
16	I believe that the chances are high that I can get HIV					
17	I worry a lot about getting HIV					

Perceived Benefits

Questions **Responses[Please Tick(√)**

	ITEM	Strongly agree	Agree	Don't know	Disagree	Strongly disagree
18	I believe the use of HTC service is likely to lower the chances of HIV infection.					
19	I believe HIV positive people who know their status are less likely to transmit the virus to someone else.					
20	I believe using the HTC service can help prevent getting it in future if I am found to be negative					

Perceived Barriers

Questions

21	There are religious beliefs or a practice in my community that makes it difficult for me to go for HTC					
22	I believe the cost related to HIV testing and counselling (HTC) services are high					
23	I believe health staff may disclose my results if I go for HTC					
24	I believe people may assume I am HIV positive if I go to the HTC centre					

Cues to Action **Questions**						
25	I often hear about HTC through family and friends.					
26	I know someone who has ever experienced HTC					
SECTION E: Severity of HIV and AIDS						
27	The thought of HTC scares me					
28	I would rather die from any other disease (e.g., malaria, cholera, cancer etc.) than from AIDS.					
29	**Please indicate a number to link your readiness to take the following test as against the others: Most ready (5), more ready (4) much ready (3) quite ready (2) less ready (1)**					
	a. Hepatitis B test					
	b. Malaria test					
	c. HIV Testing and Counselling					
	d. Ebola test					
	e. Cancer					