SCHOOL OF PUBLIC HEALTH

COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF GHANA

FACTORS AFFECTING HEALTH SEEKING BEHAVIOURS FOR SEXUALLY TRANSMITTED INFECTIONS AMONG CLIENTS ATTENDING THE STI CLINIC OF THE UNIVERSITY OF GHANA HOSPITAL, LEGON

BY

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DECLARATION

I, Armah Grace Naa Ardua hereby declare that this proposal is a result of my independent work produced from research undertaken under supervision. References to other works have been duly acknowledged. I further declare that this thesis has not been submitted for the award of any degree in this institution and other universities elsewhere.

…….. …….

GRACE NAA ARDUA ARMAH DATE

(STUDENT)

……. ……..

DR. COLLINS STEPHEN AHORLU DATE

(ACADEMIC SUPERVISOR)

DEDICATION

I dedicate this work to my entire family, to my best friend; Nii Lous Nelson, my former Sales Manager; Samuel Quayson and my colleagues at Pfizer Specialties Ghana.

ACKNOWLEDGEMENT

I thank God Almighty for His continuous gift of life and strength.

Thanks to my entire family, who have remained steadfast in prayer and support throughout the course of this program.

I also wish to acknowledge the immense guidance and contribution of my supervisor Dr. Collins Ahorlu.

Lastly, to all my friends and colleagues who made this course bearable, I say

Thank you.

ABSTRACT

INTRODUCTION - Health, as defined by the World Health Organisation is a state of complete physical, mental and social well-being and not just the absence of disease or infirmity. Health Seeking Behaviours refers to those actions undertaken by individuals to find appropriate solutions in response to illness or health problems. STIs are estimated to constitute one of the ten main health challenges in developing countries responsible for the loss of healthy life years.

OBJECTIVES -This study sought to examine the rationale behind the patterns of health care seeking behaviours and attitudes of clients who patronised the STI Clinic of the University of Ghana Hospital, Legon.

METHOD - The study was a descriptive cross-sectional study which employed quantitative data collection tools and techniques. The dependent variable was health seeking behaviour of clients and the independent variables were age, gender, marital status, occupation, religion, and educational status. The target populations were males and females 16years and above who reported at the STI Clinic during the study period. Two hundred people were involved in the study. Data was collected using structured questionnaires administered to participants after seeking their permission. A pre-test of the questionnaire was carried out at the La General Hospital a month to the study.

RESULTS – About 49% participants displayed adequate knowledge on STIs with scores between 12 and 15. Almost 93.9% of respondents first sought care in a hospital with the main reason being that they offer better services and have the right expertise to conduct diagnostic tests.

A chi square analysis to establish a relationship between Knowledge on STIs and where patients will first seek care revealed a significant relationship (p= 0.017, 95% CI, OR=12.092). Almost a quarter of respondents, 24.6%, indicated they will wait for more than a week before seeking care for STIs. The main reason associated with this delay being stigma.

CONCLUSION – There is the need for intensive education on STIs especially among young adults in order to control the rate of transmission of the infection.

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AIDS – Acquired Immune Deficiency Syndrome

ANC – Antenatal Clinic

ENT – Ear, Nose and Throat

GDHS – Ghana Demography and Housing Survey

GHS – Ghana Health Service

GSS – Ghana Statistical Service

HBM – Health Belief Model

HIV – Human Immunodeficiency Virus

HPV – Human Papilloma Virus

HSB – Health Seeking Behavior

HSV – Herpes Simplex Virus

MOH – Ministry of Health

NHIS – National Health Insurance Scheme

PID – Pelvic Inflammatory Disease

RCH – Reproductive and Child Health

STI – Sexually Transmitted Infections

USA – United States of America

WHO – World Health Organization

OR – Odds Ratio

CMV – Cytomegalovirus

MAC – Mycobacterium Avium Complex

CHAPTER ONE

INTRODUCTION

1.1 Background

Health, as defined by the World Health Organisation is a state of complete physical, mental and social well-being and not just the absence of infirmity or disease(WHO, 2012). In this assertion, a dynamic equilibrium between an organism and its environment may be seen as health. Normal function, homeostatic control and dynamic stability can therefore be said to correspond to good health. Ill health on the other hand may be seen as a state of imbalance, lack of functionality and inability to regulate self (Sarfo, 2015).

Good health is one of the essential things that bring meaning to human existence. It empowers humans to live up to their full potentials. Health contributes to both social and economic prosperity and it has far reaching implications on the overall well-being of individuals involved (Jaafar, Ainin, & Yeong, 2017).

From time immemorial, mankind has sought to heal from aches and pains of all types irrespective of cause (Amegbor, 2017). These processes have depended essentially on concepts of the universe and available resources. Individuals in an attempt to find appropriate solutions to symptoms experienced, resort to various kind of habits ranging from self-medication, seeking physicians' advice to adherence of physicians' advice (Ogden et al., 2013).

1.1.1 Health-seeking behaviour

Health Seeking Behaviours refers to those initiatives undertaken by individuals to find appropriate solutions in response to illness or health problems (Shaikh, 2008). It has also been defined as the cycle of activities which individuals go through to correct a perceived health related issue (Begashaw, Tessema, & Gesesew, 2016). It is an interplay of factors that involves data collection on duration between on-set of disease and time for seeking medical care, the type of medical care opted for and reason for the choice made as well as compliance to medications prescribed.

Evidence suggests that individuals' view of their illness accounts for a notable measure of the variation between the gravity of clinical disease and sequel (Shaikh, 2008). Certain credence must be viewed as inappropriate due to them acting as hurdles to compliance or forecasting greater levels of disability and lower quality of life.

Over time, the concept of health seeking behavior has transformed into one of the main tools used to understand how and why people employ health care system in their localities. The concept has been broadened enough to include socio-economic determinants of health and not merely health care in isolation (Shaikh, 2008). The decision to seek healthcare at any point in time for an ailment is influenced by factors such as financial predicament, time constraints, accessibility to healthcare facilities, people's advice and previous experience with a particular illness and its treatment (Afolabi, Daropale, Irinoye, & Adegoke, 2013).

A number of studies have revealed that clients' decision to utilize a particular healthcare service is informed by not just socio-economic variables but also other variables like sex, age, type of medical condition, access to service, knowledge on the disease condition as well as quality of service as perceived by the client (Jaafar et al., 2017).

1.1.2 Sexually Transmitted Infections

Sexually Transmitted Infections are the leading causes of acute morbidities, infertility, permanent disability and mortality worldwide. The far-reaching psychological and medical consequences of STIs affect countless males, females, children, families and communities worldwide. Despite the high morbidity and mortality, most of them are preventable (Mabey, 2014).

An individual's exposure to another STI increases his or her risk of being infected when exposed to HIV. In reducing the spread of HIV, STI control is a very significant process. Timely identification and management of STIs have been proven to slow down incidences of HIV/AIDS (Wilton, 2012). A study conducted to examine the rates of seroconversion among individuals with similar sexual exposure as well as different occurrence rates of STIs showed that one's chances of acquiring HIV while either ulcerative or non-ulcerative STI is present is doubled or increased by 6 folds (Mensch, Hewett, Gregory, & Helleringer, 2008).

The time frame within which an infected individual continues to have sex is one criterion that dictates the dynamics of STI transmission in a said population. In spite therapeutic regimens' efficacy, the influence of an STI management program is dependent on the timely seeking of care by individuals and the degree to which they have sex without protection during the period. (Adam, Wit, Bourne, Story, & Edwards, 2009).

STIs continue to remain a secret plague due to the shame surrounding sexuality (Wilkinson & Marmot, 2003). The repercussion include sustained STI outbreaks with widespread HIV leading to great personal and economic loss (Hughes & Lowndes, 2014). The risk of complications and the chances of infecting others is dependent on how long an individual has an STI.

Determinants of prolonged periods of infectiousness are therefore of massive clinical and public health relevance.

Research on health seeking behaviors among patients with STIs showed a common attitude of delay in seeking care (Wetmore, Manhart, & Wasserheit, 2010). Their response to illness is to wait and observe if symptoms persist, worsen or subside. The utilization of health care facilities in developing countries, is deemed complex in comparison to developed countries on the basis of preferences among different health care systems (Moorman, James, McGlinchey, & Aston-Jones, 2015).

Though data on the prevalence of STIs in Ghana is accessible, data on care seeking behavior with regard to individuals with STIs is limited (Adanu et al., 2008). In the control of STIs, it is required to have an in depth understanding of the factors which influence individuals' care seeking behavior Knowledge about these factors may help in the development of health education programs and public health initiatives.

1.2 Problem Statement

STIs are estimated to constitute one of the ten major health challenges in developing countries responsible for the loss of healthy life years. Due to the asymptomatic nature of most STIs, individuals with the infection may continue to engage in sexual activities which further increases

the cycle of transmission. There are over thirty infections transmitted sexually and the four most common ones are gonorrhoea, syphilis, chlamydia and trichomoniasis (Newman et al., 2015).

Worldwide, more than 1 million STIs are acquired on a daily basis with about 498 million new curable infections occurring yearly (WHO, 2016). Developing countries record the highest proportion of STIs; South and Southeast Asia, then Sub Saharan Africa, Latin America and the Caribbean (Dupas, 2011). It is common among the 15-49 age group, peaking between 20-29 years (Newman et al., 2015). These infections could lead to acute illnesses such as inflammation of the cervix, urethritis and ulceration of the genitals, harsh conditions such as Pelvic Inflammatory Diseases, ectopic pregnancy, infertility, cardiovascular diseases, blindness, severe or long term disability in infants and finally death.

A thorough understanding of the healthcare seeking behavior of patients with STIs is very necessary in the implementation of STI control programs (Mapp, Wellings, Hickson, & Mercer, 2017).

1.3 Justification

An understanding of the dynamics and interactions that make a person decide why, when and where to seek care is very vital (Jayapalan, 2015). The effectiveness of STI prevention and treatment programs of a population is dependent on ample comprehension about their healthcare seeking behavior (Veldhuijzen et al., 2013). This study seeks to examine the basis for the patterns of healthcare seeking behaviors of patients who were present at the University of Ghana Hospital during the study period. Findings may be used to improve STI services, i.e.- incorporating more of the medicines used in the management of STIs into the NHIS, getting separate facilities for managing STIs to improve on the privacy of patients.

1.4 Objectives

1.4.1 General Objective

This study sought to identify the health seeking behavior of patients attending the University of Ghana Hospital and to examine the factors that affect these behaviors.

1.4.2 Specific Objectives

1. To assess participants' knowledge on STIs.
2. To determine the factors which influence patients' preferred treatment seeking option on experiencing an STI symptom.
3. To identify factors associated with patients' delay in seeking care.

1.5 Conceptual Framework

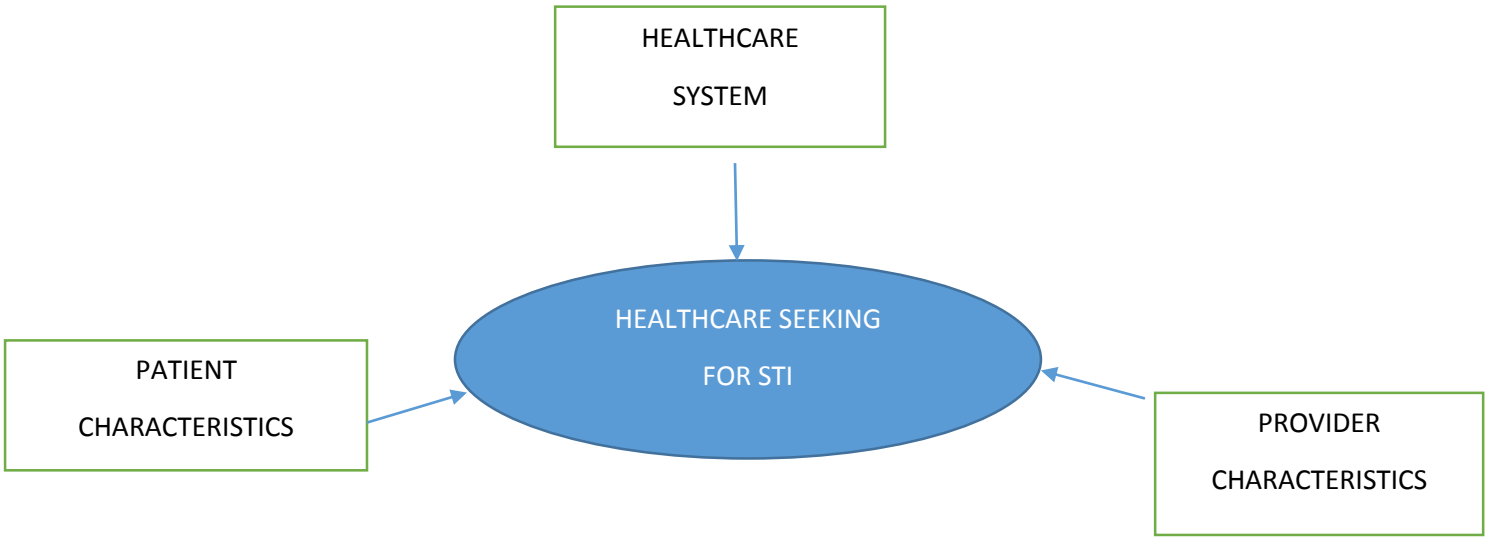


Figure 1: Factors influencing STI Healthcare Seeking Behavior.
Adapted from (Jayapalan, 2015)

1.6 Narrative

Clients' decision to seek treatment on time for STIs is largely influenced by three categories of behavioral and social factors which are patients' characteristics (behavior), provider characteristics (attitudes of health care providers), and the healthcare system itself (organization of the system of healthcare delivery) (Kenyon, Buyze, & Colebunders, 2014). At various levels, the timely and appropriate healthcare seeking behavior of patients with STIs is influenced by these factors. An understanding of the factors that impact peoples' decision to seek care for STIs will give an idea of where people seek for STI treatment and who goes where.

For example, people may prefer to seek for treatment at a particular pharmacy based on their previous encounter with the service providers and their perceived potency of the therapy provided by the facility.

Patient characteristics such as educational level, financial status, health insurance coverage, age, sex, race or ethnic background, religious affiliation and marital status also influence where people go to be treated. Delay in seeking care appears to be greatly associated with extreme age ranges. Younger age groups more often do not have adequate knowledge of STIs hence they may underestimate the risks.

Healthcare system characteristics may also impact the choices of patients. These include geographic dissemination, support services availability, quality of care, satisfaction and confidentiality.

CHAPTER TWO

LITERATURE REVIEW

2.1 Literature Search Strategy

'Sexually Transmitted Infections' and 'Health Seeking Behaviors' were the key words used in searching for significant articles that were published in the English language between the years 2007 and 2017. Useful databases such as HINARI, PubMed, Science Direct, JSTOR, African Journals on Line as well as Google Scholar were employed in the search. The websites of the WHO, UNAIDS and the World Bank were also visited for relevant documents. About 40 articles were reviewed in all.

2.2 Sexually Transmitted Infections

STIs, otherwise known as Veneral Diseases or Sexually Transmitted Diseases are infections of the genital tracts generally acquired through sexual intercourse with an infected partner or through body fluids (Workowski & Berman, 2010). The term STI is preferred to STD because it is possible to contract the infection from a person who seems healthy and not aware of being infected. Many STIs cause no symptoms in some people (Mensch et al., 2008).

The history of STIs has been proven by both ancient and modern evidences which include Biblical records, Hippocrates in 460BC, Christopher Columbus, Charles VII of France, the World War Two and Slims Disease in the 1970s (Kenyon et al., 2014). STIs infect both sexes equally, however, it's health as well as social implications are far greater for women than for men reflecting the involvement of a wide range of biological, economic and social factors (Thompson et al., 2016).

2.3 Epidemiology

Globally, STIs are regarded as an important public health menace. Almost 30 different STIs have been established; some are easily managed while others are not treatable (Mabey, 2014). Developing countries record the highest proportion of STIs; South and Southeast Asia, then Sub Saharan Africa, Latin America and the Caribbean (Dupas, 2011). STI prevalence and incidence has to be quantified in order for interventions and resource advocating to be planned (Newman et al., 2015).

Periodically, the WHO gives an estimate of the global as well as regional prevalence of four STIs which are curable – Trichomoniasis, Chlamydia, Syphilis, Gonorrhea. In 2012, the global prevalence among individuals in their reproductive years was estimated as follows;

Table 1: Prevalence of four curable STIs in 2012 (Newman et al., 2015).

INFECTION	Women	Men
CHLAMYDIA	4.2%	2.7%
GONORRHOEA	0.8%	0.6%
TRICHOMONIASIS	5.0%	0.6%
SYPHILIS	0.5%	0.48%

These numbers equate to 131million new cases of Chlamydia, 78million incident cases of Gonorrhea, 170 million cases of Trichomoniasis and 12million new cases of Syphilis (Newman et al., 2015). The transmissibility of most STIs is more efficient from men to women than from women to men. A woman is twice as likely as a man to acquire Gonorrhea or Chlamydia with just an encounter of unprotected sex with an infected person (Thompson et al., 2016).

Behavioral as well as social patterns may increase a woman's susceptibility to STIs. Quite a number of men have more than one sex partnerships, which may increase their risk of infecting their female sex partners. Adding to that, some younger females have sexual relations with males older than they are and this poses them to greater risks of being infected. Biologically, women are more vulnerable to infections when exposed to pathogens which are transmissible through sex (Kenyon et al., 2014).

2.4 Mode of Transmission

Human beings are the only known host for 90% of STIs. STIs may be passed on from one person to another through blood and blood products, semen, vaginal fluid and other body fluids such as saliva, sweat and lymph fluids. The major transmission routes are sexual intercourse which could be peno-vagina, peno-anal or peno-buccal (Workowski & Berman, 2010).

Other transmission routes include blood transfusion, contaminated sharp objects, mother to child transmission, body contacts and kissing (Newman et al., 2015).

The mode of infection is different for the various STIs.

Certain bacteria or viruses reside in vaginal secretions or semen, example is HIV and Gonorrhea while others are shed from the genitals, i.e.; Herpes Simplex Virus and Human Papilloma Virus. Infections typically occur during sexual activities or when the genitals come into close contact. It can occur during oral sex as well –from an oral lesion to the genitals or vice versa (Golden & Wasserheit, 2009).

2.5 Classification of STI

The various causative agents responsible for various STIs are either bacterial, viral, fungi, parasitic or protozoan. The table below summarizes the various infections and their causative agents.

Table 2: Classification of STIs (Agambire, 2013)

INFECTION	CAUSATIVE AGENT
	BACTERIA
Gonorrhoea	*Neisseria gonorrhoea*
Chlamydia	*Chlamydia trachomatis*
Syphilis	*Treponema palladium*
Bacterial Vaginosis	*Gardenella vaginalis/Lactobacilli acidophilic*
Chancroid	*Haemophilus ducreyi*
	VIRAL
Genital Herpes	*Human Herpes Simplex Virus II (HSV II)*
Genital Warts	*Human Papilloma Virus (HPV)*
AIDS	*Human Immunodeficiency Virus (HIV)*

Hepatitis	*Hepatitis B virus*
Molluscum Contangiosum	*Molluscum contangiosum virus (MCV)*
	FUNGI
Candida albican	*Candidiasis*
	PARASITES
Scabies	*Sarcoptic scabiei*
Pubic lice	*Pthirus pubis*
	PROTOZOA
Trichomoniasis	*Trichomonas vaginalis*

2.6 Synopsis of Common STIs

2.6.1 Chlamydia

This is the commonest bacterial STI in recent times (Kenyon et al., 2014). Its greatest prevalence is found between individuals of age 15 and 24 years. It mostly affects the cervix and urethra. Occasionally, the eye, rectum or even the throat may be affected as well. Penetration or ejaculation do not need to necessarily occur for transmission. It may be transmitted from an infected mother to her baby through birth and this could result in eye or lung infection.

Many individuals with Chlamydia are asymptomatic, however, symptoms may start appearing after the second to the sixth week after initial exposure to the bacteria. Chlamydia is more often than not associated with untreated or undetected infections. Individuals with Chlamydia infection stand a higher likelihood of contracting and infecting others with HIV. This infection can however be treated with antibiotics.

2.6.2 Gonorrhoea

Gonorrhea, an STI which shares similar symptoms with Chlamydia is ranked second among bacterial STI in the world. In Canada, almost two-thirds of all reported cases are in men (Wilton, 2012). Individuals aged between to 15-29 years report with the greatest incidences.

It can affect the very organs which Chlamydia affects since they often occur as a mixed infection. Most often, women are asymptomatic but those that show symptoms may include excessive vaginal discharge, excruciating urination, lower abdominal pain, post coital bleeding or in between menstruation, pain during sex as well as pain, itching or discharge at the rectum. In men symptoms such as discharge from the penis (thick, yellowish-green discharge), pain on urination and testicular swelling develop within two to seven days of being infected.

2.6.3 Syphilis

Symptoms of this infection mimic other common medical conditions hence in the early stages it may go unnoticed. On contracting syphilis, it is highly infectious in the first year. Direct contact with bacteria present in syphilitic sores or rash are most likely scenarios of contracting this STI. An infected mother could also pass it on to her unborn child resulting in fetal death or adverse birth outcomes as a result of congenital syphilis. An estimated 900,000 pregnant women in 2012 were infected with Syphilis which resulted in about 350,000 birth defects including still birth (Hughes & Lowndes, 2014). In men, the early symptom of the disease is a painless sore on the penis which is where the bacteria entered the body. This occurs three days to three months on exposure requiring little to no treatment for the condition to heal. Though self-healing is a possible, the infection however, still remains.

Common symptoms that may occur later are rashes characteristically on the palm or sole of the feet, hair loss mostly occurring in patches as well as the genital areas developing warts which are flat and smooth in nature. Response to Syphilis treatment must be monitored for effectiveness.

2.6.4 Genital Herpes

Genital herpes is transmitted by the simplex virus well known to be associated with cold sores. Globally, an estimated 500million people have been infected with Genital Herpes (WHO, 2016). Research shows that transmission can occur in one of many ways; a person with a history of cold sores engaging in oral or anal sex with another; direct vaginal contact; asymptomatic shedding; infected mother passing it onto a child during pregnancy or birth; and less commonly through contaminated objects such as towels. Genital herpes is likely to occur in a single breakout or in the instance of a recurrence, triggered by sexual intercourse, emotional stress, menstrual cycle in women, surgery, therapeutic treatments that expose a person to the sun such as tanning and the use of certain medication. In some infected persons, initial infection symptoms emerge between 2 to 21 days. Symptoms might not develop in all infected person but in cases in which they do, infected persons have burning sensations in areas of the skin first affected by the disease, genital pain, urethritis, fever, inflammation and redness, muscular pain or cervicitis. Research shows that condoms are not effective means of preventing genital herpes since during sex their use doesn't cover the entire genital area

2.6.5 Chancroid

Also referred to as chancre venereal sore, Chancroid is caused by a minute, gram-negative rod organism known to be prevalent in the developing world. Yearly, more than 4000 cases are recorded. Although it may affect people of all ages, younger adults are at the greatest risk.

It is curable and has no long-term effects. Chancroid causes painful, irregularly shaped, oval or round sores with sizes varying from 1-2 mm up to several centimeters but it is usually 1-2 centimeters in diameter. Unlike the chancre of syphilis, the chancroid ulcer edge is soft.

First signs of infection appear from 3-5 days and up to 2 weeks after exposure. A raised bump which is normally tender develops at the site where the bacteria entered the body; inside or outside the vagina or rectum, occasionally on the hands, thighs, mouth or the penis. Within 1-4 days the bump transforms into one or more shallow sores which break open and deepen, becoming filled with pus, inflamed, painful, and eventually rupture. The next stage may persist for several weeks and may result in a painful open sore, a purulent ulcer, several lesions merging to form gigantic ulcers. In over half of untreated cases, the cancroid bacteria infect the lymph glands in the groin (Lusti-Narasimhan, Ndowa, & Pires, 2011).

The lymph glands in the groin may swell, creating a pus-filled bulge known as inguinal bubo. This enlarges until it burst through the skin, drains continuously, remain open and become infected by other bacteria.

2.6.6 Hepatitis B

The Hepatitis B virus is found in blood and body fluids such as vaginal secretions, semen, breast milk and saliva of infected individuals. Most infected people (90%) naturally produce antibodies to fight the disease, but some develop chronic hepatitis B, that is, they carry the virus all their lives and are infectious for life. Chronic infection can significantly damage the liver which includes liver scarring (Cirrhosis) and cancer. Most common in developing countries (Samkange-Zeeb, Spallek, & Zeeb, 2011).

It can be transmitted through anal, vaginal or oral sex with an infected person, through exposure to infected blood or blood products, occasionally from contact with shared household items (such as toothbrushes or razors) and during childbirth (transmission from mother to infant).

In up to 50% of people, there are no outward signs of infection. Up to eight weeks after exposure to the virus, some people experience flu like symptoms including tiredness, nausea and vomiting, decreased appetite, rashes, joint pains and in rare cases, yellowing of the eyes and skin.

All sexual and household contacts of people with hepatitis B should be advised to be vaccinated to prevent infection. Individuals who develop chronic hepatitis B infection require liver-function monitoring and may benefit from treatment with interferon or an anti-viral medication. Babies born to mothers with hepatitis B are at a high risk of becoming chronic carriers.

They should receive an injection of antibodies immediately after birth, followed by the vaccine. In about 93% of countries, Hepatitis B vaccine is included in the Infant Immunization Schedule. This has prevented almost 1.3 million deaths from cancers and liver diseases.

2.6.7 HIV

This virus destroys cells relevant to a person's immune system, robbing the body of its ability to fight other infections and illnesses. The virus weakens the immune system over time until other infections occur and AIDS develops. It is transmitted when the body fluids of an infected person enter the blood stream of another individual specifically from unprotected vaginal, oral or anal sex, use of contaminated sex toys, shared needles or other drug equipment,

HIV infected blood or blood products, household items such as toothbrushes and razors that have touched infected blood, transmission during pregnancy, childbirth or breastfeeding. HIV is not

transmitted through mosquito bites or other insects that have made contact with infected blood, nor can it be transmitted through saliva, sweat, tears, urine or feces of infected, individuals, unless blood is present.

Two to four weeks after exposure, some infected individuals may experience mild flu-like symptoms that last a few weeks then disappear. For most people, symptoms don't appear until years after exposure. Once the immune system is weakened, the following may develop: frequent fever or sweats, joint or muscle pain, persistent skin rashes, swollen glands, sore throat, fatigue or lack of energy, headaches, rapid unexplained weight loss, nausea, vomiting or diarrhea.

A blood test to check for HIV antibodies is the only way to detect HIV infection. It may take up to 3months for the infection to be detected (Wilton, 2012).

Anyone at high risk who tests negative initially must retest 3months later for certainty. Once AIDS has set in, other infections such as pneumocytis jiroveci, CMV causing loss of vision, esophageal, lungs, bronchial or vaginal candidiasis, MAC, mycobacterium tuberculosis, cervical or anal cancers, kaposi sarcoma and lymphoma may occur. Increased frequency or severity of herpes outbreaks, chronic intestinal disturbances as well as conditions affecting the brain such as toxoplasmosis may occur. Partner notification is important, infected individuals should seek guidance from their healthcare providers.

2.6.8 Human Papilloma Virus

Over a hundred types of HPV exist, 40 of them can cause anogenital infection. It is estimated that 75% of adults will have at least one HPV infection in their lifetime. An estimated 290 million people have been diagnosed with HPV type 1 infection.

Low-risk HPV types cause benign lesions and anogenital warts. High-risk HPV types cause 528,000 cases of cervical cancer and almost half the number end up dying annually (Sonnenberg et al., 2013)

2.7 General Clinical Presentation

The sign of an STI refers to what is seen on the patient by a healthcare professional during inspection. Symptoms however are what the patient tells the clinician. They are subjective feelings. All STIs have common interrelated signs and symptoms. The major presentations associated with STIs of common origin are;

- Urethral discharge – Gonorrhoea, Chlamydia, Trichomoniasis
- Vaginal discharge – Bacterial vaginosis, Yeast Infection, Gonorrhoea, Chlamydia
- Genital Ulcers/Sore - Syphilis, Chancroid, Granuloma, Inguinale, Genital herpes,
- Inguinal Bubo - Lymphogranuloma venereum, Chancroid
- Scrotal swellings – Gonorrhoea and Chlamydia
- Rashes/Bumps
- Unusual Vaginal odour

The minor ones include;

- Lower Abdominal Pain – PID caused by Gonorrhoea or Chlamydia
- Itching
- Pain during sex
- Dysuria
- Weight loss

- Jaundice
- Unusual vaginal bleeding

2.8 Diagnosis of Sexually Transmitted Infections

Despite the fact that STIs occur as a result of various pathogens, a number of them may present with overlapping or comparable clinical appearances. These signs and symptoms may easily be recognized giving what is known as a syndrome which indicates the presence of one or more pathogens. For instance, a urethral discharge in a man could be an indication of gonorrhea only, chlamydia alone or both infections (Veldhuijzen et al., 2013) .

In the diagnoses of STIs, the traditional routine is through a test conducted in the laboratory. However, unavailability or inability to afford by clients poses a challenge (Workowski & Berman, 2010).

The WHO has therefore recommended a syndromic approach to diagnose and manage patients with STIs based on consistent recognizable signs and symptoms of a particular STI (WHO, 2016).

How serious an individual perceives symptoms may influence his or her decision to delay health care seeking. If the symptoms do not interfere with one's sexual activity, and if it is not considered as severe, the patient may delay seeking of care. Among women, STIs may present as asymptomatic infections for a while before showing mild to moderate symptoms (Jayapalan, 2015) .

2.9 Global Strategy to Control STIs

STI control remain a prime concern for the WHO (WHO, 2016). A global strategy has been endorsed for the prevention and effective management of STIs. This strategy admonishes all countries to check the transmission of STIs by executing a number of interventions among which are;

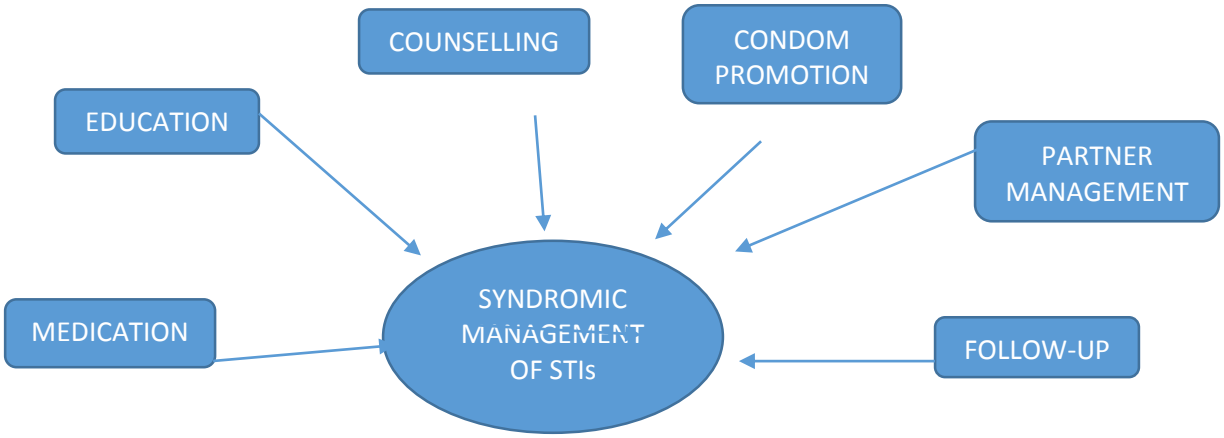
- Prevention by the promotion of safer sexual practices
- General accessibility to condoms of high quality and at an affordable cost
- Promoting quick options to health services by patients with STIs and their sexual partners
- Including STI treatment in basic health services
- Services which are specific to populations experiencing frequent and unplanned high risk sexual behaviours such as commercial sex workers, military personnel, teenagers and long-distance truck drivers.
- Adequate management of STIs. i.e. use of efficacious medicines, partner management, as well as education and counselling
- Screening of patients who are clinically asymptomatic where possible. For example, syphilis and chlamydia.

2.10 Syndromic Approach

The Syndromic Approach is a holistic management approach designed by the WHO in 1990 to give a new face to STI management. In Ghana, it has been infused into the primary health care system. This incorporation has been made formal and STI clinics at regional and national levels are functioning as referral sites for managing STI complications which are brought in from the peripheries (Ghana Health Service, 2007).

As specified in the Safe Motherhood Guidelines, screening for syphilis has become compulsory at all Ante Natal Clinics. Staffs at these sites have been trained to use the syndromic management approach. RCH Service Providers have also been trained in the syndromic management of reproductive tract infections and appropriate referrals. Reproductive and Child Health services at the districts include reproductive tract infections identification, management and recording (Ghana Health Service, 2007).

2.10.1 Cascade of Syndromic Approach



Adapted from (Mabey, 2014)

Figure 2: Cascade of Syndromic Approach

MEDICATION: First Line Medicines for STIs

Gonorrhea – Cefixime / Ceftriaxone

Chlamydia – Doxycycline / Tetracycline / Erythromycin / Azithromycin

Bacteria Vaginosis / Trichomoniasis – Metronidazole

Candidiasis – Clotrimazole / Miconazole

Syphilis – Benzathine Penicillin / Procaine Penicillin

Chancroid – Ciprofloxacin / Cefixime

Scabies – Benzyl Benzoate

Herpes – Acyclovir

Body Lice/ Pediculosis Pubics – Permitrin

HEALTH EDUCATION

This is always linked to Health Promotion. It involves equipping patients with knowledge on the nature of their condition. This includes the name of their disease, its causes, signs, and symptoms, how it is diagnosed, and its complications as well as how it is managed and prevented. The health educator must be knowledgeable in that regard and communicate well.

COUNSELLING

This is otherwise known as PSYCHOTHERAPY.

Its ultimate aim is to enable the client to make their own preferences, reach their own decisions and to act upon them accordingly.

Before undertaking any test for an STI, patients must be taken through a Pre-Test Counselling. After testing, a Post-Test Counselling must take place and if there is need for patient to be put on medication, he or she should be taken through Adherence Counselling and finally, Index Partner Counselling.

CONDOM PROMOTION

Condoms act as barrier devices used during sexual activity to minimize one's risk of contracting STIs. In the bid to offer dual protection, the promotion and provision of quality male and female condoms to sexually active individuals should be enforced.

PARTNER MANAGEMENT

Partners of STI patients are likely to be infected and must therefore be treated. These sexual partners must be referred for diagnosis and treatment to prevent further transmission and re-infection. Management and advice of sexual partners have become a required aspect of the syndromic approach. One main challenge facing the usage of the Syndromic Management and the control of STIs in general is the huge populations with infections yet showing no symptoms (Ghana Health Service and Ministry of Health, 2003). In women, almost 75% of STIs are asymptomatic hence partner notification and management provides the opportunity to identify and treat individuals who otherwise may not receive treatment.

FOLLOW – UP

There is the need to follow up on patients till they are completely treated.

2.11 Health Care Seeking for STI

Illness refers to an unhealthy condition of body or mind. The word 'Patient' denotes an individual under medical treatment. Although an illness leads to a person seeking care, not all those with illness become patients.

Symptoms are subjective evidence of illness and these symptoms as perceived, evaluated and acted on is defined as 'Illness behavior'(Kuuire, Bisung, Rishworth, Dixon, & Luginaah, 2017). Illness behavior may not always compel an individual to seek health care. A person has to take action in order to get relief from a symptom or illness(Denison, Bromhead, Grainger, Dennison, & Jutel, 2018).

Any attempt therefore at finding a remedy for a perceived illness is defined as 'Health Seeking Behavior'(Adanu et al., 2008). One of the interventions as stated in the WHO Global Strategy for STI is the 'Promotion of early recourse to health services by people suffering from STIs and by their partners'(WHO, 2016). This aims at the promotion of seeking healthcare early among individuals. Timely and accessible STI treatment and prevention programs are key to reducing the global burden associated with STI.

In developing countries, the use of healthcare facilities is seen to be complex as compared to what happens in developed countries on the account of choices between various health care systems (Kroeger, 1983). In most developing countries, patients self- medicate first on experiencing symptoms of STIs. They may also seek treatments from other informal health sectors (Dupas, 2011). Over-the-counter purchases of antibiotics at pharmacies or licensed chemical sellers as well as quack doctors are almost everywhere despite laws that forbid it's distribution (Afolabi et al., 2013).

Treatments obtained from such places are mostly inadequate or ineffective. Patients do not often receive the benefit of prevention education including condom use and their sexual partners are not treated or counselled either (Råssjö, Mirembe, & Darj, 2011).

In Uganda and Kenya, studies with regard to seeking care have shown that STIs are assumed to be managed properly by traditional healers (Fonck et al., 2001). These findings relate to the decisions about place to go for care.

Similar studies in Malawi indicated that 53% of clients had sought treatment at other places with the most popular alternative source being the traditional healer (Mensch et al., 2008)

In the USA and South Africa, a study carried out among adolescents revealed that ignorance of the seriousness of STIs was associated with them not seeking care early enough. About 54% of the subjects thought symptoms would resolve and therefore waited longer than ten days for symptoms to subside. Also, the fear of informing parents was also a hindrance to seeking care among 45% of the young adults(Gauld et al., 2012). About 68% of older study participants, 45 years and above delayed seeking care for reasons such as ; waiting for symptoms to subside (34%) and stigma of attending the STI clinic (24%) (Ogden et al., 2013).

2.12 Complications of STIs

Improper management of STIs can lead to a varied degree of complications. Some of which are;

- Infertility
- Ectopic pregnancy
- Urethral stricture
- Cervical cancer
- Premature mortality
- Congenital syphilis
- Foetal wastage

- Low birth weight
- Prematurity
- Ophthalmic neonatorium

The number of deaths due to STIs affects productivity economically and one's quality of life on the whole (Ghana Health Service and Ministry of Health, 2003)

CHAPTER THREE

METHODS

3.1 Study Type

The study was a descriptive cross-sectional study which aimed at exploring the factors that affect Health Seeking Behavior for STIs among clients visiting the STI Clinic of the hospital. It employed quantitative data collection tools and techniques.

3.2 Study Location

The location of the study was the University of Ghana Hospital. It is located on the Legon - Madina road in the Greater Accra Region. The hospital has a surgical, medical, pediatric, emergency, dental, ENT, antenatal and pharmacy department. The STI clinic is currently being housed in the antenatal department making privacy a big challenge. About 15 STI patients are seen on a daily basis. The clinic is headed by a retired midwife assisted by a medical officer and other house officers. The three most common conditions often seen at the Legon STI clinic are Gonorrhea, Genital Warts and Herpes. Apart from privacy being an issue, the unavailability of some important medicines for STI treatment in the facility's pharmacy also poses a big challenge.

3.3 Variables

The dependent variable was health seeking behaviors for STIs among clients. This was measured using the time it takes from first symptom to first treatment seeking from a health facility, reasons for seeking care early or late and other treatment options available. The independent variables were age, gender, marital status, occupation, religion and educational status.

3.4 Study Population

The target population was males and females 16 years and above who reported to the University of Ghana Hospital during the study period.

3.5.0 Inclusion and Exclusion Criteria

3.5.1 Inclusion Criteria

Patients, 16years and above who consented to participate in the study were included.

3.5.2 Exclusion Criteria

Patients were excluded from the study if they failed to give consent.

3.6.0 Sampling

3.6.1 Sample Size

The sample was calculated using the Utilities functions in Epi info based on the following assumptions: about 15 new clients are seen at the clinic daily. About 50% of patients would have gone elsewhere for treatment prior to reporting to a hospital or clinic based on findings from other studies (Ortayli, Ringheim, Collins, & Sladden, 2014). Using a 5% margin of error and 95% Confidence Interval, the above assumptions were entered into Epi Info. From the Utilities function, the sample size was calculated to be 168. A non-response rate of 32 was added, hence, a total of 200 patients were involved in the study.

3.6.2 Sampling Method

Clients attending the hospital during the study period were randomly approached to take part in the study. Eligible and willing clients were recruited to partake in the study till the sample size was reached.

3.6.3 Data Collection Technique

Data was collected using structured questionnaires administered to participants after seeking their permission. Information collected included socio-demographic characteristics and patterns of health seeking behavior. The questionnaire was administered by either the Principal Investigator or well-trained research assistants.

The reason for choosing this data collection tool was the ease and straight forward process of tabulating closed-ended questions. Despite these advantages of using a questionnaire, some limitations were the inability to probe further and failure of respondents to complete the questionnaire (Finn, J., & Jacobson, 2008).

3.6.3 Quality Control

Support was sought from a more experienced researcher to conduct a three-day training for two assistants who assisted in collecting the data. During the training, the study objectives were explained to the data collectors. Similarly, all filled questionnaire collected were checked to ensure that all entries were appropriately filled.

3.6.4 Pre-Testing

The questionnaire was pre-tested at the La General Hospital a month to the study. The pre-testing was done to address the issues such as the willingness of participants to answer the questions, the reliability of the data collection tool to generate the information needed and the acceptability of the method used to establish contact with participants as well as the time needed to administer the questionnaires. After pre-testing, the data collection tool was revised to improve consistency, reliability and validity.

3.6.6 Data Processing and Analysis

Data gathered from the respondents was coded. The data were subsequently keyed into the computer using the STATA software (version 15) for processing and analysis. Inferential and descriptive statistical tools were used in analyzing the data. Excel was used to develop simple tables, charts and graphs to represent the findings of the study.

3.7 Ethical Consideration Issues

Ethical approval was sought from the GHS Ethical Review Board. A letter was sent to the Medical Director of the University of Ghana Hospital to seek permission to carry out the research. Informed consent was sought from participants after the objective of the study was explained clearly to them. Participants were told they could opt out of the study whenever they wanted to without any penalties. Any information obtained from participants was handled with maximum confidentiality and will be discarded after a period of at most five years. There were no financial or material incentives for study participants. The study posed minimal potential harm to respondents. I had no conflict of interest in the study.

The research was only on account of academic and public health relevance.

CHAPTER FOUR

RESULTS

This chapter presents the findings originating from the study.

4.1 Socio-Demographic characteristics

The respondents interviewed had different socio-demographic characteristics. The age of respondents ranged from 18 to 40 years with a modal age range of 18-25 years**.** The mean age was however between 26 to 30 years. Out of the 200 participants that were interviewed, approximately 56% were men while 44% were women.

Results revealed that a substantial proportion of the respondents, approximately 99.5% had some formal education. Almost all respondents (97.5%) were Christians, with only 2.5% being Muslims. Most of the respondents were students from the University of Ghana as well as other neighboring tertiary institutions such as UPSA, GIMPA and Trinity Theological Seminary. This was so because the data collection was done when school was in session. They constituted more than half (52%) of the sample size. About 3% were skilled artisans such as plumbers, hairdressers, seamstresses and masons.

Table 3: Socio-Demographic Characteristics

VARIABLE	Frequency= n(%), N=200
AGE	
18-25	83(41.5)
26-30	59(29.5)
31-35	38(19.0)
36-40	20(10.0)
SEX	
Male	111(55.5)
Female	89(44.5)
EDUCATION	
No formal Education	1(0.5)
Middle/JHS	3(1.5)
Senior High/Senior secondary	20(10.0)
Tertiary	176(88.0)
RELIGION	
Christianity	195(97.5)
Islam	5(2.5)
MARITAL STATUS	
Never Married	148(74.0)
Married	50(25.0)
Separated/Divorced	1(0.5)
Widowed	1(0.5)
OCCUPATION	
Student	104(52.0)
Unemployed	14(7.0)
Professional	64(32.0)
Skilled Artisan	6(3.0)
Others	12(6.0)

4.2 Knowledge on STIs

Table 4: Respondents Knowledge on STIs

KNOWLEDGE ON STIs	FREQUENCY =n (%), N=200 TRUE
Anyone who engages in sexual activity can get an STI	173(86.5)
You can tell that someone has an STI by looking at them	8(4.0)
If I have an STI, I will be able to tell	99(49.5)
The best way to test for an STI is through a blood test	162(81.0)
You can get an STI from giving or receiving oral sex	166(83.0)
Once you have been treated of an STI, you can't get it again	55(27.5)
Wearing two condoms provides double the protection	33(16.5)
To pass on an STI, you will need to have visible sores	60(30.0)
One can get an STI from a toilet seat	81(40.5)
Taking a shower after sex will avoid STI transmission	183(91.5)
If two people have an STI, they don't need to use condoms	54(27.0)
Untreated STIs can cause infertility	162(81.0)
Having another STI increases your risk of infection	159(79.5)
STIs can be transmitted through anal sex	182(91.0)
Untreated STIs could eventually lead to death	186(93.0)

The level of knowledge of respondents was tested with statements adapted from "std-kq_questionnaire," (n.d.) as presented in Table 4. Respondents selected True or False for each statement. The respondents were graded based on their responses to know their level of knowledge. Participants who scored 7 and below were regarded as having little knowledge on STIs, those who scored between 8 and 11 had moderate knowledge and those scoring 12 and above graded as having adequate knowledge. In this study, about half (49%) of the respondents, were classified as having adequate knowledge while 4% of them had little knowledge on the statements presented to them. The results are presented in the pie chart;

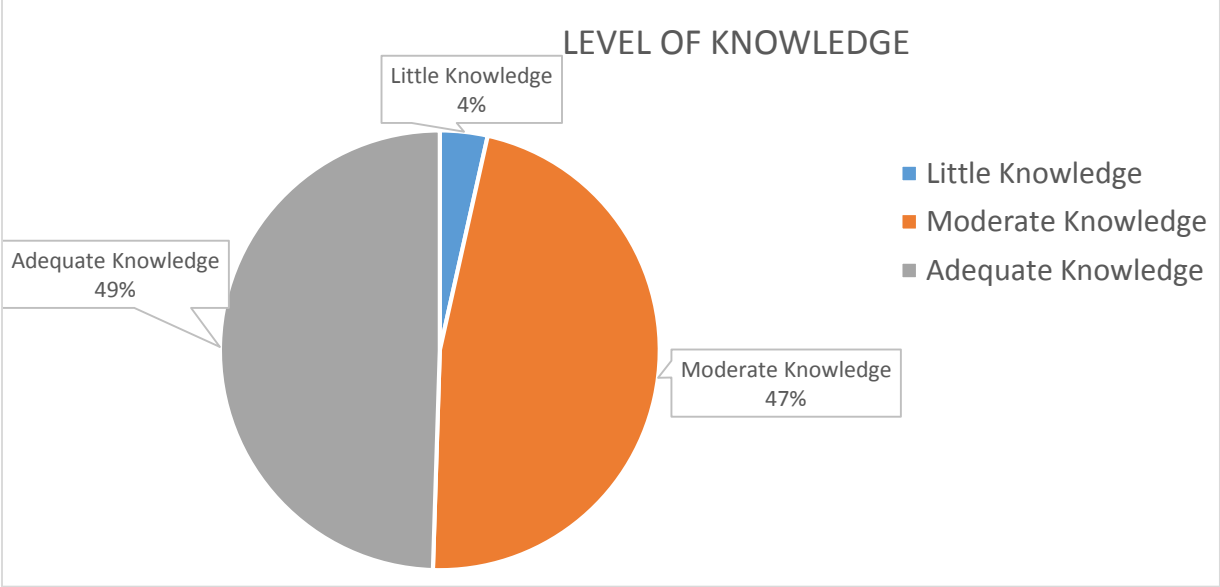


Figure 3: Measure of level of knowledge

4.3 Cross Tabulation of Socio-Demographic Characteristics and Knowledge on STIs

A chi square test was carried out to establish if there was any association between level of knowledge on STIs and Socio-Demographic Characteristics.

Table 5: Socio Demographic Characteristics by level of Knowledge on STIs

	KNOWLEDGE LEVEL Frequency = n (%), N=200			p-value	OR	Chi^2
	Little	**Moderate**	**Adequate**			
AGE				0.48	5.609	5.513
18-25	3(42.8)	48(51.1)	32(32.3)			
26-30	2(28.6)	27(28.7)	30(30.3)			
31-35	2(28.6)	13(13.8)	23(23.2)			
36-40	0(0.0)	6(6.4)	14(14.2)			
Total	7	94	99			
SEX				0.826	0.383	0.383
Male	4(57.1)	50(53.2)	57(57.6)			
Female	3(42.9)	44(46.8)	42(42.4)			
Total	7	94	99			
RELIGION				0.322	2.499	2.269
Christianity	7(100.0)	90(95.7)	98(99.0)			
Islam	0(0.0)	4(4.3)	1(1.0)			
Total	7	94	99			
EDUCATION				0.00	20.21	28.739
No formal Education	0(0.0)	1(1.1)	0(0.0)			
Middle/JHS	0(0.0)	1(1.1)	2(2.0)			
SSS/SHS	3(42.9)	9(9.5)	8(8.1)			
Tertiary	4(57.1)	83(88.3)	89(89.9)			
Total	7	94	99			
				0.879	3.17	2.407
MARITAL STATUS						
Never Married	5(71.4)	68(72.3)	75(50.7)			
Married	2(28.6)	24(25.5)	24(48.0)			
Separated/Divorced	0(0.0)	1(1.1)	0(0.0)			
Widowed	0(0.0)	1(1.1)	0(0.0)			
Total	7	94	99			
				0.114	7.46	10.268
OCCUPATION						
Student	1(14.3)	54(57.4)	49(49.5)			
Unemployed	1(14.3)	9(9.6)	4(4.1)			
Professional	2(28.6)	22(23.4)	39(39.4)			
Skilled Artisan	2(28.6)	1(1.1)	3(3.0)			
Others	1(14.3)	8(8.5)	3(3.0)			
Total	7	94	99			

With a P-value of 0.00, a statistically significant relationship was found to exist between participants' level of education and their level of knowledge on STIs. However, no relationship was found between the other Socio-Demographic Characteristics and level of knowledge on STIs

4.4 Health Seeking Behaviour of respondents

4.4.1 Past Experience with STIs

Most (60%) of the respondents in the study area indicated their ability to identify symptoms of an STI while 40% indicated their inability to detect common symptoms of an STI.

4.4.2 Where STI was diagnosed

About 77 % of respondents were diagnosed of their STI in a Clinic or Hospital. The Pharmacy/Drugstore had 1% of respondents being diagnosed there. This is seen in the figure below;

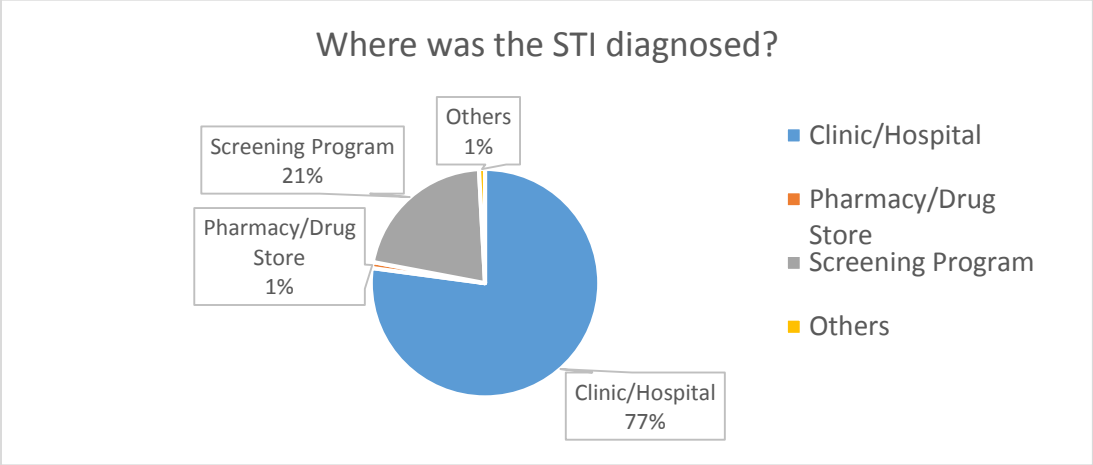


Figure 4: Where STI was diagnosed

4.4.3 Willingness to test for STIs

Prior to the day of filling the questionnaire,97.5% of respondents stated that they sought healthcare the last time they experienced a symptom of an STI but 2.5% indicated their inability to seek any form of healthcare when they experienced a symptom of an STI.

4.4.4 Period of Delay

Respondents were asked about the period of time it took them to seek healthcare on experiencing symptoms of an STI. About 75.4% of respondents indicated that they sought treatment in less than a week with another 4.6% of respondents indicating that they waited 3 weeks before seeking care. This is indicated in Figure 6.

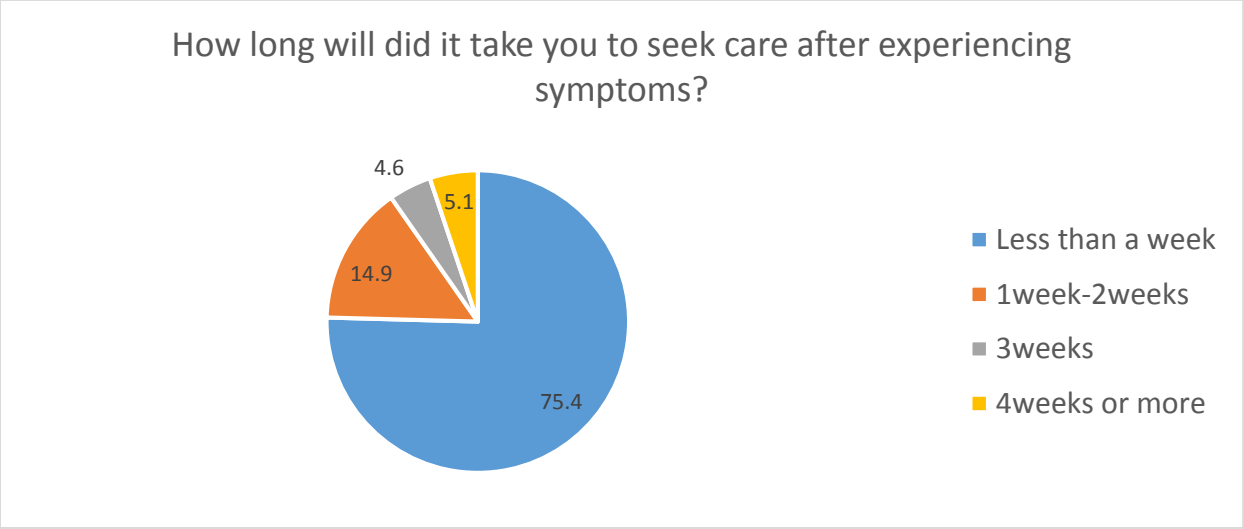


Figure 6: How long it took respondents to seek care for STI

4.4.5 Cross tabulation of Demographic Characteristics and Period of Delay

A statistically significant relationship was seen between participants' level of education and the period they delayed before seeking care. (P-value= 0.002). This is seen in Table 6 below.

Table 6: Demography compared to how long respondents took to seek care

	PERIOD OF DELAY Frequency=n(%)				Tot.	OR	$\chi 2$	p-val
	≤ 1week	1week-2weeks	3weeks	≥4week				
AGE GROUP						9.95	8.8	0.4
18-25	63(75.9)	13(15.7)	2(2.4)	5(6.0)	83			
26-30	42(76.4)	6(10.9)	3(5.5)	4(7.3)	55			
31-35	16(64.0)	5(20.0)	3(12.0)	1(4.0)	25			
36-40	7(58.3)	2(16.7)	2(16.7)	1(8.3)	12			
SEX						2.43	2.3	0.5
Male	68(71.6)	16(16.8)	6(6.3)	5(0.5)	95			
Female	64(80.0)	10(12.5)	2(2.5)	4(5.0)	80			
EDUCATIONAL BACKGROUND						13.6	2.6	0.0
No formal Education	1(100.0)	0(0.0)	0(0.0)	0(0.0)	1			
Middle/JHS	3(100.0)	0(0.0)	0(0.0)	0(0.0)	3			
SHS/SSS	12(66.7)	5(27.7)	0(0.0)	1(5.6)	18			
Tertiary	116(75.8)	21(13.7)	8(5.2)	8(5.2)	153			
RELIGION						2.67	2.8	0.4
Christianity	129(75.9)	24(14.1)	8(4.7)	9(5.3)	170			
Islam	3(60.0)	2(40.0)	0(0.0)	0(0.0)	5			
MARITAL STATUS						5.98	4.6	0.8
Never Married	100(76.3)	18(13.7)	4(3.1)	9(6.9)	131			
Married	31(73.8)	8(19.1)	3(7.1)	0(0.0)	42			
Separated/Divorced	1(100.0)	0(0.0)	0(0.0)	0(0.0)	1			
Widowed	0(0.0)	0(0.0)	1(100.0)	0(0.0)	1			
MAIN OCCUPATION						14.2	1.4	0.3
Student	67(75.3)	13(14.6)	3(3.4)	6(6.7)	89			
Unemployed	10(76.9)	2(15.4)	1(7.7)	0(0.0)	13			
Professional	43(78.2)	9(16.4)	2(3.6)	1(1.8)	55			
Skilled Artisan	2(40.0)	2(40.0)	1(20.0)	0(0.0)	5			
Others	9(75.0)	0(0.0)	1(8.3)	2(17)	12			

4.4.6 Cross Tabulation of Period of Delay and Level of Knowledge on STIs

With a p-value of 0.021, there was a statistically significant relationship between an individual's level of knowledge on STIs and the period he or she delayed before seeking healthcare. (Table 9)

Table7: Period of Delay by Level of Knowledge on STIs

	KNOWLEDGE=n(%)						
	Little	**Moderate**	**Adequate**	**Total**	**p-value**	**Chi^2**	**OR**
DELAY PERIOD					9.107	14.952	0.021
Less than a week	2(1.5)	63(47.7)	67(50.8)	132			
1week-2weeks	2(7.7)	9(34.6)	15(57.7)	26			
3weeks	1(12.5)	4(50.0)	3(37.5)	8			
4weeks or more	1(11.1)	1(11.1)	7(77.8)	9			

4.4.7 Reasons for delay in seeking care

From the results, it becomes apparent that majority of the respondents were particular about the embarrassment STI brings. Almost a third of the respondents indicated that Embarrassment/Stigma prevented them from reporting immediately after the onset of symptoms of STI. It was instructive to find that judgmental staff was the least reason for which respondents delayed in seeking care. The result is indicated in Figure 7.

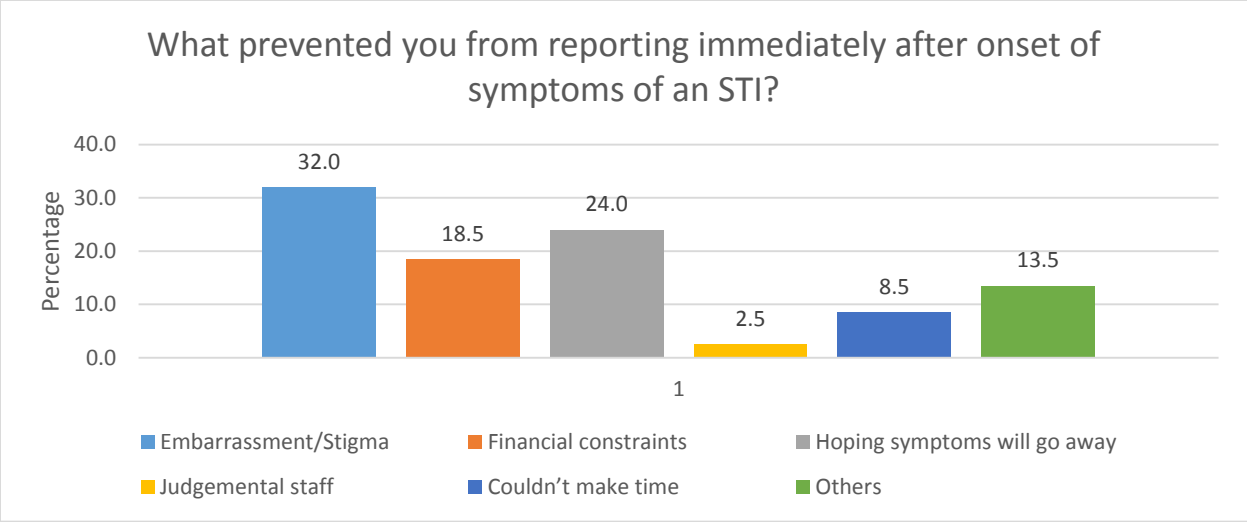


Figure 7: Responses on what prevented respondents from reporting as early as possible

4.4.8 First Place of Seeking Care for STIs

In terms of where respondents first sought care on experiencing symptoms of STIs, 93.9% of the participants reported at a Hospital/Clinic. However, 0.5% sought care from other places such as a traditional healer or herbal medicine practitioner.

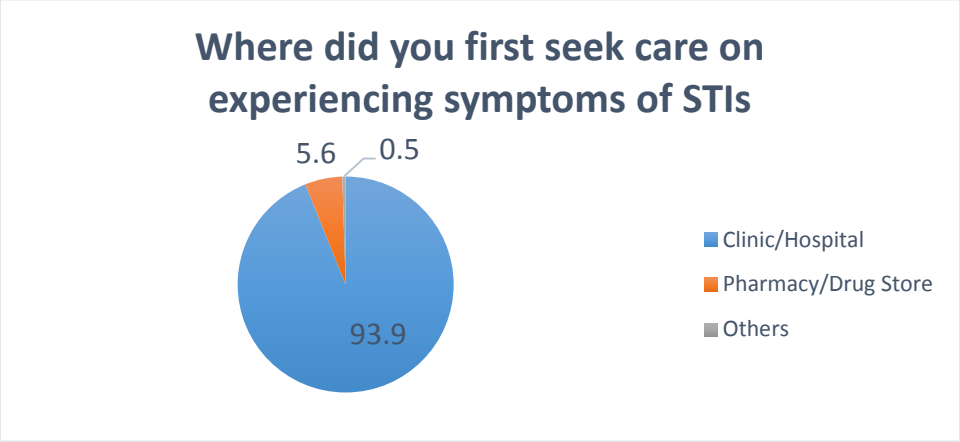


Figure 8: First Place of seeking care for STI

4.4.9 Who decided where you should seek care

About 91.5% of respondents indicated that they decided where to seek care themselves while 1% cited friends as those who decide for them where to seek care. This is shown in Figure 9 below:

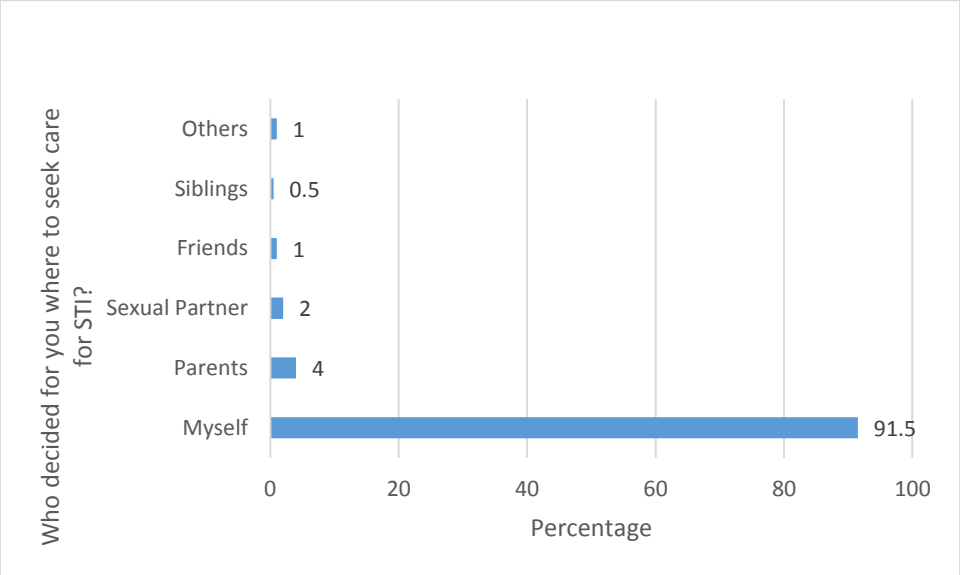


Figure 9: Who decided where you seek care for an STI

4.4.10 Socio-Demographic Characteristic which informed where you sought care

According to respondents, their level of education greatly influenced where they sought care.

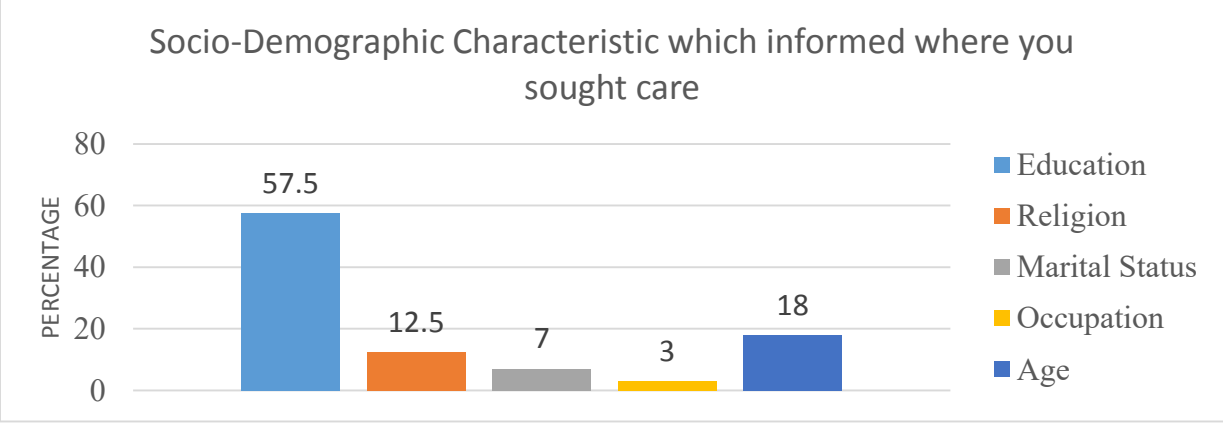


Figure 10: Socio-Demographic Charateristic which informs where respondents sought care

Table 8: Cross Tabulation of Demography and first place of seeking care

	Place of first seeking care on experiencing symptoms of STI Frequency =n(%)						
VARIABLES	**Clinic**	**Pharmacy**	**Others**	**Total**	**OR**	**Chi²**	**P-val.**
AGE GROUP					6.41	4.783	0.57
18-25	76(95.2)	7(8.4)	0(0.0)	83			
26-30	55(93.2)	3(5.1)	1(1.7)	59			
31-35	28(77.8)	6(16.7)	2(5.5)	36			
36-40	12(60.0)	5(25.0)	3(15.0)	20			
					3.29	2.925	0.23
SEX							
Male	105(96.3)	4(3.7)	0(0.0)	109			
Female	81(91.0)	7(7.9)	1(1.1)	89			
EDUCATION					6.83	16.34	0.03
No formal Education	1(100.0)	0(0.0)	0(0.0)	1			
Middle/JHS	2(66.7)	1(33.3)	0(0.0)	3			
SSS/SHS	18(94.7)	0(0.0)	1(5.3)	19			
Tertiary	165(94.3)	10(5.7)	0(0.0)	175			
					0.633	0.331	0.84
RELIGION							
Christianity	181(93.8)	11(5.7)	1(0.5)	193			
Islam	5(100)	0(0.0)	0(0.0)	5			
MARITAL STATUS					2.76	2.083	0.91
Never Married	136(92.5)	10(6.8)	1(0.7)	147			
Married	48(98.0)	1(2.0)	0(0.0)	49			
Separated/ Divorced	1(100.0)	0(0.0)	0(0.0)	1			
Widowed	1(100.0)	0(0.0)	0(0.0)	1			
					10.6	11.11	0.08
OCCUPATION							
Student	98(95.1)	5(4.9)	0(0.0)	103			
Unemployed	13(92.9)	1(7.1)	0(0.0)	14			
Professional	58(93.5)	4(6.5)	0(0.0)	62			
Skilled Artisan	6(100.0)	0(0.0)	0(0.0)	6			
Others	10(83.4)	1(8.3)	1(8.3)	12			

A statistically significant relationship was seen between respondents' level of education and where they sought care. Thus the higher the educational level, the more likely the person is to seek care from the hospital or clinic (Table 8). The same was seen between the level of knowledge on STIs and where participants sought care. This is shown in table 9.

Table 9: Chi Square Test for knowledge and where respondents sought care

	KNOWLEDGE=n(%)						
	Little	**Moderate**	**Adequate**	**Total**	**OR**	**Chi^2**	**P value**
First Place of seeking care					12.092	32.091	0.00
Hospital	5(2.9)	75(43.9)	91(53.2)	171			
Pharmacy	0(0.0)	14(66.7)	7(53.3)	21			
Others	2(33.3)	3(50.0)	1(16.7)	6			

4.4.11 Reason for Seeking Care from Preferred Choice

The main reasons given for seeking healthcare at the hospital or clinic was that they offer better services and have enough expertise to carry out diagnostic tests. This was reflected in the others option which recorded 42%. About 10% of respondents stated that their preference was based on affordability.

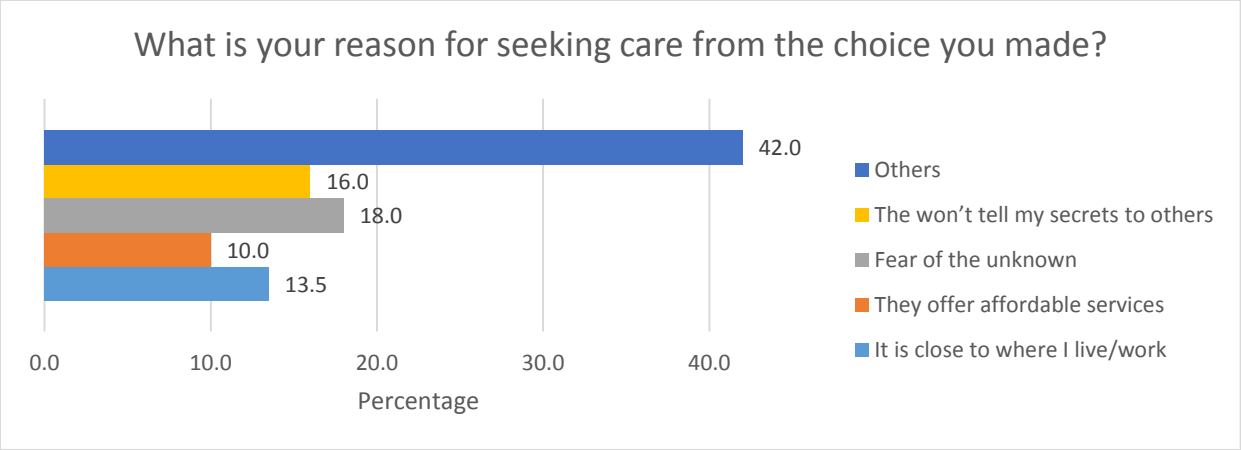


Figure 11: Reasons for preferred choice of first seeking care

Table 10: Cross Tabulation of where patients sought care and their reason

	Reason for seeking care from the choice you made above Frequency=n(%)				
	Proximity to me	**Affordable services**	**Fear of unknown**	**Confidential**	**Other**
Where you first sought care					
Hospital	21(67.7)	19(76.0)	35(87.5)	32(100.0)	64(91.5)
Pharmacy	10(32.3)	6(24.0)	0(0.0)	0(0.0)	5(7.1)
Others	0(0.0)	0(0.0)	5(12.5)	0(0.0)	1(1.4)
Total	31	25	40	32	70

CHAPTER FIVE

DISCUSSION

This chapter discusses the findings of the study and attempts to compare it with earlier research on the topic investigated so as to identify similarities or differences if any exist.

5.1 Knowledge of STIs

This study generally showed that many individuals in the study area had ample knowledge about STIs. Their awareness and consciousness of the infections is necessary if measures are to be put in place to control STIs. Knowledge and awareness may not be key components in an effort to change attitudes and behaviors of individuals towards STIs but they are significant contributors to sex education which helps to empower people with regard to taking informed decisions about their sexuality (Samkange-Zeeb et al., 2011). Individuals who are unconscious of STIs may be unlikely to detect them and further seek treatment. This will in the long run affect the control and management of STIs (Amu, Adegun, Amu, & Adegun, 2015).

Contrary to the moderate to adequate knowledge of STIs realized in this study, a meta-analysis of 15 studies by Samkange-Zeeb et al., (2011) revealed a rather low level of knowledge and awareness of STIs. Quite a number of women as compared to men seemed to have little knowledge and awareness of STIs (Chalker, Chuc, Falkenberg, Do, & Tomson, 2000).

Two out of every 25 respondents had little knowledge of STIs. With this, they stand a greater likelihood of regular infection and not seeking care for their predicament since they are almost ignorant about STIs. As most STIs are asymptomatic, the vicious cycle of infecting others through having unprotected sex is something to worry about (WHO, 2016).

A statistically significant relationship was seen between participants' level of education and their knowledge on STIs. It was realized that as individuals move up the academic ladder, there is a probability that they will read more about STIs and as such their awareness and knowledge will be increased. This finding corroborated with finding reported by Pereboom et al., (2014), which stated emphatically that adults with less education are most likely to have a lower literacy rate on issues pertaining to health. A study in Tanzania to assess knowledge levels on STIs realized that education had an influence on the knowledge and awareness of HIV/AIDS (Journal & Volume, 2006).

5.2 Preferred Treatment Seeking Option

This study revealed that a greater proportion of the respondents (93.9%) preferred to visit the hospital or clinic first on noticing symptoms of an STI. These responses contradict studies which have established a decrease in the utilization of hospitals and clinics due to community pharmacies (Kuuire et al., 2017). In Ethiopia, getting care from a government health care facility was often seen as the final resort for therapy. Reasons given by community members included the stigma of STI only clinic, long waiting time, judgmental staff, payment of consultation fee and lack of privacy (Begashaw et al., 2016).

Despite the relatively fewer number (5.6%) of respondents in this study who indicated they visited a pharmacy as first point of call, studies have shown that between 50,000 to 90,000 cases of STIs are managed in Pharmacies within Accra only (Ghana Health Service and Ministry of Health, 2003). According to the 2007 GDHS, 7% of women and 14% of men seek care and counseling for STIs in Pharmacies or Licensed Chemical Shops (Ghana Statistical Service & Ghana Demographic Health Survery, 2008).

This was suggestive that more men patronized pharmacies for the management of STIs.

This particular study proved otherwise since 7.9% of women and 3.7% of men went to their local pharmacy to seek care for symptoms of STIs.

A greater proportion of participants in the study area with tertiary education preferred to seek care in a hospital because they believed their services were much better. This supports the study by Amegbor, (2017) where about 50.7% of patients with secondary education or higher will prefer to seek care in hospitals or clinics. Similarly, majority of individuals with Professional backgrounds sought care in hospitals first as compared to those who are skilled artisans or unemployed. We believe that this may be due to affordability as these professionals may be able to afford the services offered at the hospitals.

The main reason given for seeking healthcare at a hospital/clinic first (n=79) was the fact that they felt these hospitals or clinics offer better services and have enough expertise to carry out STI tests. A study in India indicated that only about 3% of patients have at least one diagnostic test carried out in public health facilities (Banerjee, Deaton, & Duflo, 2004). Just a handful of Pharmacies in Ghana are able to carry out certain STI tests, the commonest being the RDT for HIV and Syphilis. About 18.7% respondents preferred going to the hospital because they felt their secrets were safe there. These individuals wouldn't patronize community retail pharmacies for lack of privacy and patient confidentiality especially when they live in the same neighborhood where the pharmacy is situated.

Some participants preferred to visit a hospital for treatment on the grounds of cost.

These respondents believed the NHIS will cover their consultation and medication cost therefore there was no need paying for medicines at the retail pharmacy. The NHIS was implemented to bridge the gap between the poor and the rich in accessing health care (Kuuire et al., 2017).

In a study in three districts of Ghana by Amegbor, (2017), 40.5% of patients will not access care in an established biomedical facility because they view their charges as exorbitant

Proximity of health facility to place of residence or work plays a key role in health seeking behavior (Begashaw et al., 2016). More than half of the respondents who first visited a Pharmacy did so on the basis of distance. This is not surprising as there are drug stores and chemical shops springing up in every corner of Accra. A study by Kuuire et al.,(2017) revealed that patients who lived more than 5km away from a health facility are less likely to seek treatment when ill than those who lived within a 5km radius of a health facility.

5.3 Delay in seeking care

Experts in the field of STIs have defined delay in such context as waiting for eight days or more after onset of symptoms before seeking care (Jayapalan, 2015). Countless studies have proven the fact that many people delay in seeking care for their illnesses in general (Getahun, Deribe, & Deribew, 2010). In this study, 14.9% of participants delayed for a week and 9.7% delayed for more than two weeks. A similar study in Kenya involving 471 people attending an STI Clinic revealed that 41% of patients waited for more than a week and 23% delayed for more than two weeks (Adler & Newman, 2002).

More men as compared to women said they delayed for more than a week before seeking care. This contradicted a study by Jayapalan, (2015) where 52.9% men and 64.3% females delayed for more than eight days before seeking cure.

Fewer young people indicated that they delayed for more than a week as compared to older participants between ages 31 to 40.

This contradicts studies which have shown younger people delaying in seeking healthcare for STIs due to little or no information at all about the complications of the conditions (Jayapalan, 2015).

Also, this study showed that people with a higher level of education, up to the tertiary level, delayed less in seeking care. This category of individuals displayed adequate knowledge levels on STIs hence it is assumed they are better informed and empowered to take decisions with regards to their health. The major reason which may be attributed to the delay on the part of those with little education could be that those individuals had little knowledge to detect complications hence they waited for symptoms to resolve or otherwise.

5.3.1 Reasons for Delay in Seeking Care

Delay in seeking care has been attributed to many factors such as socio-demographic characteristics as well as support and behavioral factors (Jayapalan, 2015). A study in Kenya revealed that individuals delayed in seeking healthcare for reasons such as poor staff attitude, little confidentiality as well as age of clients (Adler & Newman, 2002). In this study, the main reason for patients delaying was embarrassment or stigma. Stigma has been named one of the major impediments in seeking care for STIs. A lot of patients may resort to other informal healthcare seeking options rather than facing the shame that comes with walking into a hospital or clinic for treatment.

Delay in seeking care by individuals in this study was also influenced by patients hoping symptoms will go away.

It came to light that financial constraints also contributed to delay in seeking care. Not all medications used in the management of STIs are covered by the NHIS. In the management of Genital Warts, the approved medication for treatment falls outside the scope of the NHIS coverage and some patients may find it costly to purchase hence will delay in the procurement of the drug for treatment. A relationship has been established between delay in seeking care and transmission of STIs. This is because individuals who delay in managing their condition may still continue to have unprotected sex thereby continuing the vicious cycle of infection.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

This study sought to find out the health seeking behaviors for STIs among individuals attending the STI Clinic of the University of Ghana Hospital, Legon. It was a descriptive cross-sectional analysis which employed quantitative data collection tools and techniques. Random sampling was used to employ 200 respondents into the study. A structured questionnaire was used in data collection and this data was analyzed using the latest version of STATA for analysis.

The study found a generally good level of knowledge on STIs among participants. Males displayed adequate knowledge as compared to females. Also, more educated individuals seemed to have adequate knowledge on STIs compared to those with just Senior High School education or lower. This study also confirmed that, comparatively, fewer younger participants had adequate knowledge on STIs than older respondents.

The first treatment seeking option for STI management by was largely to visit the hospital or clinic with just a handful of respondents indicating their preference for a local retail pharmacy on the grounds of proximity. Better services and expertise to conduct diagnostic tests were the chief reasons given by those who will prefer to go to a hospital. More women than men first visited Pharmacies to seek care for STIs.

With regards to delay, both men and women exhibited one form of delay or the other. Educated individuals who had exhibited adequate knowledge levels on STIs indicated that they delayed less. Much more delays in seeking care was observed in the younger age range of the sample, 18-25 years as compared to the oldest age range of 36-40 years.

The main reasons given for delay in seeking care was stigma, hoping symptoms will go away, financial constraints, time constraints as well as judgmental staff at healthcare facilities. Almost one-third of the respondents cited embarrassment, shame, stigma or fear as a reason for their delay. About one-quarter hoped their symptoms will go away hence they held on a little longer.

6.2 Recommendations

The following recommendations have been made for the consideration of future researchers, policy making and implementation.

i. **Health System Strengthening** – From the study, one of the reasons for delay in seeking care was the issue of cost. The scope of medicines falling under the NHIS coverage for managing STIs should be widened to decrease the burden of payments on patients. This should be done by the government.

ii. **Information, Communication and Education** – The University Hospital's STI care providers must be provided with skills for efficient communication in behavior change communication.

iii. **Future Research** – This study found that religious affiliation is associated health seeking behaviours for STIs. A study on the broader role of religion with respect to STIs will be required in a larger sample size for a better understanding of the relationship.

6.3 Limitation

Due to time constraints, a larger sample size could not be employed for the study hence the results could not be generalized. Also, the method of data collection could have made participants give responses which were more socially desirable than what they did in real life.

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APPENDICES

Appendix I – Participant Information Sheet

General information

Project Title: Factors affecting Health Seeking Behaviour for STIs among clients attending the STI Clinic of the University of Ghana of Hospital.

I am **GRACE NAA ARDUA ARMAH**, a student of the Department of Social and Behavioural Sciences in the School of Public Health, University of Ghana, Legon pursuing a Master of Public Health Degree Programme. I am here with my research assistants to carry out a survey to find out the Factors affecting Health Seeking Behaviour for STIs among clients attending the STI Clinic at the University of Ghana of Hospital. This is purely for academic purposes and forms part of the requirement for the award of Master of Public Health Degree. The researcher has no conflict of interest in this study.

Procedure

The study will involve answering questions from a questionnaire about factors affecting Health Seeking Behaviour for STIs among clients attending the STI Clinic. The information you provide will add to what we already know to help us propose some interventions that will enhance our health seeking behaviour for the condition.

Benefits and Risks

There will be no monetary or material compensation for your participation in the study. There are also no known risks associated with this study and I am always available to assist with any questions.

Confidentiality

No name will be recorded. Your name and identity are not needed in the study. However, the information you are going to provide will be coded and will be treated strictly confidential. You are assured of total confidentiality of the information you will give.

Apart from the researcher and the supervisor of this research, no one else will have access to information provided whether in part or whole. Data collected will be stored under lock and key then destroyed after a minimum of three years as per the research protocol.

Voluntary Participation & Withdrawal

Participation in this study is voluntary. You are free to answer part or the entire questionnaire. You can choose to withdraw from the study at any time you want. You can also choose not to answer any question(s) you feel uncomfortable about. Should you choose not to participate; it will not affect you or how you are treated at this hospital in any way. However, you are encouraged to participate fully in this study to help us learn more about the topic.

Conflict of Interest

I hereby declare that there is no conflict of interest. This research is only on account of academic and public health relevance.

Dissemination of Results

Findings and recommendations would be available at the School of Public Health with no reference to you.

Before Taking Consent

Do you have any questions you wish to ask about the study? Yes/No

If yes, please indicate the questions below

……

……

…….....

If you need further clarification concerning this study and/or the conduct of the researcher and research assistants, please do not hesitate to contact the following;

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Ghana Health Service Ethical Review Committee Secretariat

Accra.

Tel: 0507041223/0243235225

Appendix II: Informed Consent

For those who can read and understand English

I have read the information given above, and I understand. I have been given a chance to ask questions concerning this study and questions have been answered to my satisfaction. I now voluntarily agree to participate in this study knowing that I have the right to withdraw at any time without it affecting my current or future use of health care services.

Signature/Thumb print: ……

Date: ……..

For those who cannot read or understand English

DECLARATION BY WITNESS

I, the undersigned, have explained this consent to the respondent in the language he/ she understands. He/She understands the purpose of the study, procedures to be followed as well as the risks and benefits of the study. The participant has fully agreed to participate in the study.

Signature/ Thumb print of participant: …….

SIGNATURE FOR WITNESS ……..

RESEARCHER'S SIGNATURE ……..

Date: ……

Contact detail: ……

Appendix III: QUESTIONNAIRE

TOPIC: FACTORS AFFECTING HEALTH SEEKING BEAHAVIOUR FOR STIs AMONG CLIENTS ATTENDING THE UNIVERSITY OF GHANA HOSPITAL.

Instructions: Please answer every question as honestly as possible. Do not leave any question unanswered. You may select more than one choice where appropriate.

Respondent Number –

Date –

	Variables	Responses	CODE
1	Age		
2	Sex	Male	1
		Female	2
3	What is the highest level of school you attended?	No formal Education	1
		Primary	2
		Middle/JHS	3
		Senior High/Senior secondary	4
		Tertiary	5
4	Religion	Christianity	1
		Islam	2
		African Traditional Religion	3
		Others……..	4
5	Marital Status	Never Married	1

		Married	2
		Separated/Divorced	3
		Widowed	4
6	What is your main occupation?	Student	1
		Unemployed	2
		Retiree	3
		Professional	4
		Skilled Artisan	5
		Others……	6

KNOWLEDGE ON STIs

Complete the following table, indicating whether the statements are True or False

No.	Statement	True[1]	False[2]
7	Anyone who engages in sexual activity can get a sexually transmitted infection		
8	You can tell that someone has an STI by looking at them.		
9	If I have an STI, I will be able to tell		
10	The best way to test for an STI is through a blood test		
11	You can get an STI from giving or receiving oral sex		
12	Once you have been treated and cured of an STI, you can't get it again		
13	Wearing two condoms instead of one provides double the protection against STIs		

14	To pass on an STI to a partner, one person will need to be having visible sores/blisters		
15	One can get an STI from a toilet seat		
16	Taking a shower or cleaning yourself with a hand sanitizer after sexual contact will avoid STI transmission		
17	If two people have an STI, they don't need to use condoms because they both already have the same infection		
18	Untreated STIs can cause infertility		
19	Having another STI increases your risk of infection when exposed to HIV		
20	STIs can be transmitted through anal sex		
21	Untreated STIs could eventually lead to death		

HEALTH SEEKING BEHAVIOUR

22	Are you able to identify symptoms for an STI?	Yes	1
		No	2
23	Where were you first diagnosed of an STI?	Clinic/Hospital	1
		Pharmacy/Drug Store	2
		Screening Program	3
		Others……	4

24	Did you seek any form of care on experiencing symptom of an STI?	Yes	1
		No	2
25	How long did it take you to seek care on experiencing symptoms?	Less than a week	1
		1week-2weeks	2
		3weeks	3
		4weeks or more	4
26	Who decided for you were to seek care for an STI?	Myself	1
		Parents	2
		Sexual Partner	3
		Friends	4
		Siblings	5
		Others…….	6
27	Where did you first seek care on experiencing symptoms of STI	Clinic/Hospital	1
		Pharmacy/Drug Store	2
		Herbalist	3
		Religious Leader	4
		Others…….	5
28	What was your reason for seeking care from the choice you made above?	It is close to where I live/work	1
		They offer affordable services	2
		Fear of the unknown	3
		The won't tell my secrets to others	4
		Others…….	5

29	What prevented you from reporting immediately after onset of symptoms of an STI?	Embarrassment/Stigma	1
		Financial constraints	2
		Hoping symptoms will go away	3
		Judgemental staff	4
		Couldn't make time	5
		Others……..	6
30	Which of these Socio-Demographic Characteristic determined where you sought care	Education	
		Religion	
		Marital Status	
		Occupation	
		Age	
		Others…….	