

REGIONAL INSTITUTE FOR POPULATION STUDIES (RIPS)

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**HEALTH SEEKING BEHAVIOUR AMONG PERSONS WITH
STIs IN GHANA**

BY

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DECLARATION

I, Ruth Tobi Sawyerr, hereby declare that except for references made other people's work which have been duly acknowledged, this thesis is as a result of my own research carried out at the Regional Institute for Population Studies, University of Ghana, under the supervision of Prof. John Kwasi Anarfi and no part of this work has been presented elsewhere for the award of another degree.

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DEDICATION

This thesis is dedicated to God Almighty; Whose grace and endless blessings saw this to a successful end. I would also like to dedicate this to my wonderful father and brother who never stopped encouraging and praying for me. God bless you both.

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ABSTRACT

Over the years, the meaning of health seeking behaviour (HSB) has gone beyond just the use of health care facilities to include understanding what social and cultural factors influence a person's decision to utilize a healthcare facility. Although most STIs are treatable, a range of social and cultural factors prevent access to healthcare treatment and this contributes to the burden of untreated infection. An important tool in effective sexually transmitted infection (STI) control is to understand the health seeking behaviour of people with STIs and the factors that influence this behaviour. Although data on STI prevalence in Ghana is accessible, studies on health seeking behaviour with regards to individuals with STIs is limited. This study aims to examine the demographic and socio-economic determinants of the health seeking behaviour of persons with STIs in Ghana using data from the 2014 Ghana Demographic and Health Survey (GDHS). A sample of 1974 females and 307 males between the ages of 15-49 years was used in this study. Analyses were carried out at three levels; univariate, bivariate and multivariate levels of analyses. Univariate analysis was used to provide a description of the background characteristics of the sample population. Chi-square tests were used to test for associations between the independent and dependent variables as well as the intermediate and dependent variables while binary logistic regression tests were used to determine predictors at a 95% confidence level. Findings showed that 70.2% of respondents sought STI treatment. Results from the bivariate analysis revealed that age, place of residence, ethnicity, educational level, region of residence, religion, wealth quintile, knowledge about STIs, health insurance were found to have a significant relationship with health seeking behaviour. However, sex, marital status and employment status were not statistically significant with health seeking behaviour. This study brought to the fore the fact that even though the majority of respondents sought STI treatment, teenagers, individuals with lower levels of education, poorer individuals, traditionalists, individuals with no health insurance and individuals with poor knowledge about STIs had lesser likelihoods of seeking STI treatment. This implies that age, education, wealth, religion, health insurance and knowledge about STIs are predictors of health seeking behaviour in Ghana. This study therefore recommends that, the sub-groups less likely to seek STI treatment need to be targeted during policy formulation to improve health seeking behaviour and subsequently sexual and reproductive health.

Key words: health seeking behaviour, sexually transmitted infection, demographic and socio-economic determinants, Ghana

TABLE OF CONTENTS

| | |
|---|------------|
| DECLARATION..... | ii |
| DEDICATION..... | iii |
| ACKNOWLEDGEMENT..... | iv |
| ABSTRACT..... | v |
| LIST OF TABLES..... | x |
| LIST OF FIGURES..... | xi |
| LIST OF ABBREVIATIONS AND ACRONYMS..... | xii |
| CHAPTER ONE..... | 1 |
| INTRODUCTION..... | 1 |
| 1.1 Background..... | 1 |
| 1.1.1 Health..... | 1 |
| 1.1.2 Sexually Transmitted Infections..... | 1 |
| 1.1.3 Health seeking behaviour..... | 3 |
| 1.2 Statement of the problem..... | 4 |
| 1.3 Research questions..... | 6 |
| 1.4 Research objectives..... | 6 |
| 1.5 Rationale..... | 7 |
| 1.6 Organization of study..... | 7 |
| CHAPTER TWO..... | 9 |
| LITERATURE REVIEW..... | 9 |
| 2.0 Introduction..... | 9 |
| 2.1 Concept of Health Seeking Behaviour..... | 9 |
| 2.2 Knowledge and Misconceptions about STIs..... | 10 |
| 2.3 Barriers to Health Seeking Behaviour..... | 12 |
| 2.4 Demographic and Socio-Economic Factors..... | 15 |
| 2.4.1 Age and Health Seeking Behaviour..... | 15 |
| 2.4.2 Sex and Health Seeking Behaviour..... | 16 |
| 2.4.3 Level of Education and Health Seeking Behaviour..... | 17 |
| 2.4.4 Type of Place of Residence and Health Seeking Behaviour..... | 18 |
| 2.4.5 Wealth quintile and Health Seeking Behaviour..... | 19 |

| | | |
|---|---|-----------|
| 2.4.6 | Employment status and Health Seeking Behaviour | 20 |
| 2.4.7 | Religious Affiliation | 22 |
| 2.4.8 | Marital Status and Health Seeking Behaviour | 23 |
| 2.4.9 | Ethnicity and Health Seeking Behaviour | 24 |
| 2.4.10 | Region of Residence and Health Seeking Behaviour..... | 25 |
| 2.5 | Other health seeking related factors (intermediate variables) | 25 |
| 2.5.1 | Health Insurance and Health Seeking Behaviour..... | 25 |
| 2.5.2 | Knowledge about the disease (STIs)..... | 26 |
| 2.5.3 | Access to health care facilities | 27 |
| 2.6 | Theoretical Framework..... | 28 |
| 2.7 | Conceptual Framework..... | 31 |
| 2.8 | Hypotheses | 33 |
| CHAPTER THREE..... | | 35 |
| METHODOLOGY | | 35 |
| 3.0 | Introduction | 35 |
| 3.1 | Study Area..... | 35 |
| 3.2 | Source of Data..... | 36 |
| 3.3 | Sample design and Selection | 37 |
| 3.4 | Variables | 38 |
| 3.4.1 | Dependent Variable | 38 |
| 3.4.2 | Independent Variables | 39 |
| 3.4.3 | Intermediate Variables | 40 |
| 3.5 | Method of Analysis | 41 |
| 3.6 | Limitation of the Study..... | 42 |
| CHAPTER FOUR..... | | 44 |
| DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS..... | | 44 |
| 4.0 | Introduction | 44 |
| 4.1 | Demographic and Socio-economic Characteristics of Respondents | 44 |
| 4.1.1 | Age of Respondents | 44 |
| 4.1.2 | Sex of Respondents..... | 45 |
| 4.1.3 | Marital Status | 46 |
| 4.1.4 | Place of Residence | 47 |

| | | |
|--|---|-----------|
| 4.1.5 | Ethnicity | 48 |
| 4.1.6 | Educational Level | 49 |
| 4.1.7 | Religion..... | 50 |
| 4.1.8 | Wealth Quintile..... | 50 |
| 4.1.9 | Region of Residence | 51 |
| 4.1.10 | Employment Status | 52 |
| 4.1.11 | Knowledge about the Disease (STIs)..... | 53 |
| 4.1.12 | Health Insurance | 54 |
| 4.1.13 | Health Seeking behaviour of respondents..... | 55 |
| 4.2 | Relationship between Respondents' Background Characteristics and Health Seeking Behaviour | 56 |
| 4.2.1 | Age of respondents and Health Seeking Behaviour..... | 58 |
| 4.2.2 | Sex and Health Seeking Behaviour..... | 58 |
| 4.2.3 | Marital Status and Health Seeking Behaviour | 59 |
| 4.2.4 | Place of Residence and Health Seeking Behaviour | 62 |
| 4.2.5 | Ethnicity and Health Seeking Behaviour | 62 |
| 4.2.6 | Education and Health Seeking Behaviour..... | 62 |
| 4.2.7 | Religion and Health Seeking Behaviour | 63 |
| 4.2.8 | Wealth Quintile and Health Seeking Behaviour | 64 |
| 4.2.9 | Region of Residence and Health Seeking Behaviour..... | 64 |
| 4.2.10 | Employment Status and Health Seeking Behaviour | 65 |
| 4.2.11 | Knowledge about STIs and Health Seeking Behaviour | 66 |
| 4.2.12 | Health Insurance and Health Seeking Behaviour..... | 66 |
| CHAPTER FIVE | | 67 |
| DETERMINANTS OF HEALTH SEEKING BEHAVIOUR IN GHANA | | 67 |
| 5.0 | Introduction | 67 |
| 5.1 | Model 1: The Influence of Demographic Variables on Health Seeking Behaviour | 68 |
| 5.2 | Model 2: The Influence of Socio-economic Variables on Health Seeking Behaviour | 70 |
| 5.3 | Model 3: The Influence of Health Insurance and Knowledge about STIs on Health Seeking Behaviour | 74 |
| 5.4 | Model 4: The Influence of Demographic, Socio-economic and Intermediate Variables on Health Seeking Behaviour..... | 75 |

| | | |
|---|-----------------------|-----------|
| 5.5 | Discussion..... | 81 |
| CHAPTER SIX | | 85 |
| SUMMARY, CONCLUSION AND RECOMMENDATIONS..... | | 85 |
| 6.1 | Summary..... | 85 |
| 6.2 | Conclusion..... | 88 |
| 6.3 | Recommendations | 89 |
| REFERENCES..... | | 91 |

LIST OF TABLES

| | |
|--|----|
| Table 4.1: Percentage distribution of Respondents Age Groups | 45 |
| Table 4.2: Percentage distribution of Respondents Place of Residence | 48 |
| Table 4.3: Percentage distribution of Respondents Ethnicity | 48 |
| Table 4.4: Percentage distribution of Respondents Religion | 50 |
| Table: 4.5 Percentage distribution of Respondents Region of Residence | 52 |
| Table 4.6 Crosstabulation Showing the Relationship Between Demographic Variables and Health Seeking Behaviour | 57 |
| Table 4.7 Crosstabulation Showing the Relationship Between Socio-Economic Variables and Health Seeking Behaviour | 59 |
| Table 4.8 Crosstabulation Showing the Relationship Between Knowledge about STIs, Health Insurance and Health Seeking Behaviour | 65 |
| Table 5.1 A Binary Logistic Regression Model of Demographic Variables and Health Seeking Behaviour | 69 |
| Table 5.2 A Binary Logistic Regression Model of Socio-economic Variables and Health Seeking Behaviour | 72 |
| Table 5.3 A Binary Logistic Regression Model Showing the Relationship between Health Insurance, Knowledge about STIs and Health Seeking Behaviour | 74 |
| Table 5.4 A Binary Logistic Regression Model showing the Relationship between Demographic, Socio-economic, Intermediate Variables and Health Seeking Behaviour | 78 |

LIST OF FIGURES

| | |
|---|----|
| Figure 2.1: Conceptual Framework Showing the Relationship Between some Socio-economic and demographic variables and Health Seeking Behaviour for STI..... | 31 |
| Figure 4.1: Percentage distribution of Respondents Sex | 46 |
| Figure 4.2: Percentage distribution of Respondents Marital Status..... | 47 |
| Figure 4.3: Percentage distribution of Respondents by Educational Level | 49 |
| Figure 4.4: Percentage distribution of Respondents Wealth Quintile..... | 51 |
| Figure 4.5: Percentage distribution of Respondents Employment Status..... | 53 |
| Figure 4.6: Percentage distribution of Respondents Knowledge about the Disease (STIs) | 54 |
| Figure 4.7: Percentage distribution of Respondents by Health Insurance | 55 |
| Figure 4.8: Percentage distribution of Respondents by their Health Seeking Behaviour..... | 56 |

LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|--------|--|
| AIDS | Acquired Immune Deficiency Syndrome |
| CEWH | Centre of Excellence for Women's Health |
| CHPS | Community-Based Health Planning and Services |
| DANIDA | Danish International Development Agency |
| GAC | Ghana AIDS Commission |
| GDHS | Ghana Demographic and Health Survey |
| GHS | Ghana Health Service |
| GSS | Ghana Statistical Service |
| HIV | Human Immuno-deficiency Virus |
| HPV | Human Papillomavirus |
| HSB | Health Seeking Behaviour |
| HSS | HIV Sentinel Survey |
| HSV | Herpes Simplex Virus |
| ILO | International Labour Organization |
| MOH | Ministry of Health |
| MSM | Men who have sex with men |
| NCCE | National Commission for Civic Education |
| NHIS | National Health Insurance Scheme |
| NHRC | Navrongo Health Research Centre |
| NMCP | National Malaria Control Programme |
| RTI | Reproductive Tract Infection |
| SPSS | Statistical Package for Social Sciences |

| | |
|--------|--|
| STI | Sexually Transmitted Infection |
| UNAIDS | Joint United Nations Programme on HIV/AIDS |
| UNDP | United Nations Development Programme |
| UNFPA | United Nations Population Fund |
| UNICEF | United Nations Children's Fund |
| WHO | World Health Organization |

CHAPTER ONE

INTRODUCTION

1.1 Background

1.1.1 Health

Good health is one major developmental and human rights issue of importance to governments globally. No wonder the Sustainable Development Goals have one goal and over 50 targets related to health (WHO, 2018). Although a healthy life is desired by everyone, not everyone is healthy (Iyalomhe & Iyalomhe, 2012). The concept of health as characterized by the World Health Organization is “a state of complete physical, mental and social well-being, and not merely the absence of disease or illness or infirmity” (WHO, 2001). Beyond the absence of a disease, an individual’s ideal state of well-being, also depends on the availability of resources that can help the individual cope with circumstances that are beyond his or her control and also be able to recover from difficult situations. Fundamentally, for an individual to live a healthy life, he or she would have to adopt a lifestyle that sustains his or her physical, mental and social well-being.

1.1.2 Sexually Transmitted Infections

A sexually transmitted infection (STI) according to WHO (2019), is an infection caused by bacteria, virus or parasite that can be passed on from one person to another during sex or intimate contact. According to the definition of health by the World Health Organization, persons who have a Sexually Transmitted Infection, are classified as unhealthy (WHO, 2001).

Sexually transmitted infections are predominantly spread between sexual partners through unprotected oral, vaginal or anal sex (Yarbrough & Burnham, 2016). It can also be passed on from an infected mother to her child during pregnancy or childbirth.

It has been documented that more than thirty different bacteria, viruses and parasites are transmitted through sexual activities (Casillas-Vega et al., 2017). Eight of these are the most commonly occurring with four being curable. These four include; syphilis, gonorrhoea, chlamydia and trichomoniasis. However, the four incurable viral infections are hepatitis B, herpes simplex virus (HSV or herpes), Human Immuno-deficiency Virus (HIV) and Human Papillomavirus (HPV) which can however be managed with proper medical treatment (WHO, 2019).

There is growing evidence that STIs negatively affect individuals and the society at large (Newton & McCabe, 2008). STIs have been linked to various sexual and reproductive health outcomes such as infertility, cervical cancer and foetal and neonatal deaths (WHO, 2012). Beyond the initial detection that STIs will lead to negative sexual and reproductive health, it has also been demonstrated that the quality of life of individuals is also affected. Studies have indicated that STIs dwindle the personality of infected individuals and further diminishes their ability to handle day to day issues (Passanisi et al., 2013). A great number of individuals, particularly women with STIs often experience frustration, anxiety, anger, fear of rejection, isolation, guilt, embarrassment, shame and feelings of physical contamination (Passanisi et al., 2013).

The STI burden on a country's health care systems and healthcare expenditure is great. STIs are among the most common reasons for health care visits regardless of the country's national resources. Due to their high prevalence, particularly in developing countries, STIs result in substantial productivity losses for individuals and communities (World Bank, 2008).

Even though STIs are a worldwide epidemic, there are distinctive variations across the various regions. The highest prevalence rates for some STIs have been recorded in Africa (Newman et al., 2015). According to the World Health Organization, Africa, especially the Sub-Saharan region is the most affected region in the world, with 25.7 million people living with HIV in the year 2017, accounting for over two thirds of total global new HIV infections. Of the estimated 6000 new infections that occur globally each day, two out of three are in Sub-Saharan Africa with young women continuing to bear a disproportionate burden.

According to the United Nations Programme on HIV and AIDS (UNAIDS) in 2017, there were 19,000 new cases of HIV infections in Ghana and 16,000 AIDS-related deaths (UNAIDS, 2018). The Ghana Demographic and Health Survey in 2014 also reported that 2% of Ghanaians aged 15-49 years were HIV positive (GSS et al., 2015). The Ghana Statistical Service stated in its 2008 Ghana Demographic and Health Survey report that 20.6% of females aged 15-49 years had some form of STI 12 months prior to the survey and 40% of them did not seek medical attention (GSS, GHS & ICF , 2009). In comparison with other Sub-Saharan African countries, the number of people who have STIs including HIV in Ghana seems minimal but the goal is to have a population that is STI/HIV free.

1.1.3 Health seeking behaviour

Health seeking behaviour is defined as an action undertaken by individuals who perceive themselves as having a health problem or to be ill for the purpose of finding an appropriate remedy (Wade & Halligan, 2004). Health seeking behaviour also regulates how the available health care facilities in a region are utilized, which in turn determines the health outcomes for that population (Musoke et al., 2014). The study of health seeking behaviour provides a description of the social

determinants that either encourage or prevent people from behaving in a particular way when seeking resolutions for health-related issues (Azu et al., 2018).

Individuals choose to seek health care from the range of available health care service providers. In most developed countries, there is often the option of choosing from either a private or a public health care provider. In a developing country like Ghana, however, there is the option of choosing between private and public health care, traditional healers, drug peddlers and pharmacists.

The issue of health seeking behaviour is of utmost importance to all societies because they rely on their human capital to achieve economic growth and development. Thus, a healthy population is likely to be a productive one and a productive population will lead to a growing economy.

It is therefore important to improve accessibility and quality of health care services related to sexually transmitted infections as well as promote appropriate health seeking behaviour (Ward et al., 1997) especially in a developing country like Ghana. This will contribute to the development of appropriate health education programs that will help reduce the spread of STIs in both male and female populations in the country.

1.2 Statement of the problem

The burden of morbidity and mortality worldwide resulting from sexually transmitted infections compromises quality of life, including sexual and reproductive health as well as infant and child health. Sexually transmitted infections impose substantial strain on the budgets of households and health systems in middle-and low-income countries, and have an adverse effect on the overall well-being of individuals (WHO, 2016).

Every day, more than one million people acquire a new STI, and each year, there are occurrences of over 340 million new cases of curable STIs globally (WHO, 2016). Despite the interest and substantive motivations for tackling this issue, incidence rates of STIs continue to be high. Despite the availability of several simple, cheap and cost-effective interventions to combat STIs, little progress has been made.

According to the World Health Organization WHO (2012), untreated STIs not only cause infertility in both men and women but may also result in stillbirth and new born death while a woman is pregnant (WHO, 2016). STIs also impose costs related to loss of productivity due to STI morbidity and mortality (WHO, 2016).

Most STIs are treatable, however a range of social and cultural factors prevent access to healthcare treatment and this contributes to the burden of untreated infection (Mapp et al., 2017). Thus, what people do when they have symptoms or suspicion of an STI has major implications for transmission and consequently, for disease control. Delays in symptom recognition and seeking treatment can increase the incidence of disease. However, reducing the time between onset of infection and seeking treatment, through improved utilization of health care services could play an important part in STI control.

Most studies on health seeking behaviour in relation to STIs have focused more on specific sub-groups such as adolescents, men only, women only and even some studies on the aged population. This study however seeks to examine the health seeking behaviour of all persons with STIs because there is a connection between all sub-groups. Studies have shown that Sexually Transmitted Infections are spread from one group to another (WHO, 2016). For example men may be infected by women and vice versa, also, adolescents may be infected by older age groups and vice versa. Thus, it would be prudent to study the general population and not one group in isolation. Although

data on the prevalence of STIs in Ghana is accessible, studies on health seeking behaviour with regard to individuals with STIs is limited (Adanu et al., 2008).

1.3 Research questions

Drawing on the statement of the problem, this study seeks to ask the following questions;

1. What are the demographic and socio-economic characteristics of persons with STIs?
2. What associations exist between the demographic and socio-economic characteristics and the health seeking behaviour of persons with STIs?
3. What are the demographic and socio-economic determinants of health seeking behaviour of persons with STIs?

1.4 Research objectives

The main objective of this research is to examine the health seeking behaviour of persons with STIs in Ghana.

Specifically, the study aims to:

1. Assess the proportion of persons who seek STI treatment in Ghana.
2. Examine how a person's knowledge about STIs influence their health seeking behaviour.
3. Determine which demographic and socio-economic factors influence health seeking behaviour of persons with STIs in Ghana.

1.5 Rationale

There have been countless global initiatives targeted at reducing STI prevalence but this has not yielded much impact especially in Sub-Saharan Africa (Newman et al., 2015). Factors that prolong the period of infectiousness of sexually transmitted infections are of great clinical and public health importance. Thus, early healthcare seeking is important in the early detection and control of STIs (Ward et al., 1997).

Where health systems are characterized by high out-of-pocket payments and a range of healthcare providers, understanding the health seeking behaviour of the population is very important if adequate access to health care service is to be achieved (Grundy & Annear, 2010).

Also, where prevention of the disease fails, it is important to understand the health seeking behaviour of persons with STIs and the social and cultural factors that influence this behaviour in order to reduce further spread of the disease and also prevent other conditions such as cervical cancer, infertility, pelvic inflammatory disease and HIV/AIDS.

Sexual health care policies and programmes require knowledge about the health seeking behaviour of a group of people so that possible difficulties with early diagnosis, effective treatment of STIs can be identified and the appropriate interventions implemented.

1.6 Organization of study

This study is organized into six chapters. Chapter One begins with an introduction to the study. It gives a brief background of the study, statement of the problem, outlines the research questions and objectives and finally the rationale of the study. Chapter Two follows with a review of relevant literature on Sexually Transmitted Infections (STIs), health seeking behaviour (HSB) for STIs and

the factors that influence the health seeking behaviour of persons who have STIs. This chapter ends with a conceptual framework and hypotheses. Chapter Three presents the methods used for the study and points out the limitations of the study. Chapter Four undertakes an analysis of the demographic and socio-economic characteristics of respondents in the study. The first section of this chapter describes the background characteristics of the sample population using charts and tables. The second section presents the results of the bivariate analysis where associations are established between demographic and socio-economic variables and health seeking behaviour. Chapter Five presents results from a multivariate analysis, which show the extent of influence of the selected demographic and socio-economic variables on health seeking behaviour. It also undertakes a discussion of the findings of the study in light of findings of similar studies undertaken elsewhere in the world and finally, Chapter Six presents the summary, conclusion, and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides an overview of existing literature relevant to health seeking behaviour for STIs. It reviews literature from around the world centering on the concept of health seeking behaviour, barriers to seeking STI treatment and some demographic and socio-economic factors that play a role in the health seeking behaviour of persons with STIs. It also throws light on other factors that influence the health seeking behaviour of persons with STIs such as health insurance, access to health care facilities and knowledge about STIs.

2.1 Concept of Health Seeking Behaviour

Health seeking behaviour is viewed as the varied response of individuals to states of ill-health, depending on their knowledge and perception of health, socioeconomic constraints, adequacy of available health services and attitudes of healthcare providers (Afolabi et al., 2013) . It has evolved over the course of time and has ultimately become a tool for understanding how people employ the health care systems. In developing countries, the use of healthcare facilities is seen to be complex as compared to developed countries (Kroeger, 1983).

In Ghana just as in most developing countries, there exists some avenues for addressing health issues including STIs. These include seeking medical care at a government health facility, seeking medical care at a private health facility, traditional/herbal medical care, self-medication and faith healers.

Evidence from some developing countries show that majority of adolescents who tested positive for STIs or reported STI symptoms as a first point of call, try to treat their infections themselves or seek treatment from alternative sources such as traditional healers and patent medicine sellers and only turn to formal health care facilities as a last resort (Msiska et al., 1997; Dehne & Riedner, 2005). A study in Bangladesh discovered that female adolescents preferred to seek treatment from pharmacies and local healers (Barkat et al., 2000). Consistent with these findings, Webb (1997) found that respondents only went to the clinic after failing to get help from traditional healers or when traditional treatments did not work. Several other studies found the cost of mainstream medical care and lack of access to health care facilities as important determinants of what health care services people employ (Audu et al., 2014; O'Donnell, 2007; Shaikh & Hatcher 2005).

2.2 Knowledge and Misconceptions about STIs

Sexually Transmitted Infections (STIs) are caused by bacteria, virus or parasite that can be passed on from one person to another during vaginal, anal or oral sex. Some STIs are also spread through non-sexual means such as blood transfusion. Many other STIs such as chlamydia, gonorrhoea, hepatitis B, HIV and syphilis can be transmitted from mother to child during pregnancy and childbirth (WHO, 2016). Visiting a formal health care facility is the appropriate source of treatment for STIs. These remain the facts about STIs. However, some myths and misconceptions exist about the disease mainly because of sexual stigma and thus people are not able to access the right sources of information about sexual health and STIs.

Some studies have cited some misconceptions about the mode of transfer of STIs/HIV such as, touching an infected person (Giffin & Lowndes 1999; Grosskurth et al., 2005), transmission through mosquitoes, flea or bedbug, stepping on someone's urine/stool, sharing clothes, hugging and shaking hands (Radhakrishnan et al., 2017).

Although such misconceptions have been found to exist in all age groups, they are more prominent among adolescents and young people (Dubois et al., 2006). Several studies on young people and STIs have brought out several of these misconceptions that exist among this group. Agambire & Clerk, (2013) found in their study in Ghana that, participants reported sharing under pants were the causes of STIs. A study in Zambia also discovered that some adolescents are relatively unconcerned about STIs as the male youth believed that their female counterparts were the main carriers of STIs and that it is normal and part of the growing up process for a man to acquire an STI (Zambezi et al., 1996).

These misconceptions also influence an individual's choice of treatment. Supernatural causes have been cited in a few studies as ways of contracting STIs and thus people who hold this belief seek treatment from traditional healers. For instance, Pearson & Makadzange (2008) reported that some Zimbabweans held the belief that STIs were as a result of supernatural causes and that they were punishment for a man's immoral, social or sexual behaviour. Other studies have cited that as a result of holding on to these beliefs about STIs, individuals engage the services of traditional healers as they are considered to be the most appropriate point of contact for STI treatment (Zachariah et al., 2002).

These misconceptions and lack of knowledge about the mode of transmission of STIs not only leave people at a higher risk of contracting STIs but are also powerful obstacles to seeking appropriate treatment.

2.3 Barriers to Health Seeking Behaviour

A number of factors have been identified as either influencing, disrupting the process of seeking health care or preventing persons who experience STI symptoms from seeking appropriate treatment. According to Malta et al. (2007), several factors that may influence, disrupt or prevent persons from seeking health care for an STI come to play. These include patient characteristics such as gender, age and educational level; symptoms of the diseases; health care services such as accessibility, cost and quality of care and finally socio-cultural factors such as gender roles and norms. They identified issues of STI-related knowledge and stigma as two of the most universally acknowledged issues in relation to seeking health care by persons with STIs.

Similarly, Aral & Wasserheit (2009) identified three broad categories that influence a person's decision to seek prompt treatment. They include, patient characteristics, provider characteristics and the healthcare system. These factors influence the timely and appropriate care seeking of persons with STIs.

Most studies on health seeking behaviour mention delay as a reoccurring factor among persons with STIs. This is consistent with findings from Agambire & Clerk (2013). The study revealed that, 64.3% of the 185 patients that visited the Suntreso clinic in Kumasi, Ghana delayed for more than 4 weeks before seeking treatment for a possible STI. The reasons cited for not reporting as soon as patients identified symptoms were because they were embarrassed, they hoped that the

symptoms would go away, they did not know where to go and that they thought the symptoms were not important. Consistent with these findings, a Kenyan study found that 41% of 471 clients attending an STI clinic waited for 4 weeks and 23% delayed for more than 2 weeks before seeking treatment. These clients delayed seeking treatment because of the attitude of staff and a lack of privacy (Fonck et al 2001). Another study in Singapore showed that 73% of the respondents waited for 4 weeks and 27% delayed for over 2 weeks before seeking treatment. Their reasons for delay were that they feared public exposure, embarrassment, the lack of privacy at health care facilities and the stigma they may face being tagged as promiscuous (Leenars et al., 2003).

Decision to seek medical treatment, identifying and reaching a medical facility and receipt of adequate and appropriate treatment have been identified as the three delays in the use of healthcare facilities especially with respect to maternal healthcare. An individual's decision to seek medical treatment may be impaired by fear of being ill-treated in the health facility, failure to recognize danger signs, lack of money to pay for medical expenses and cost of transportation. Challenges in identifying and reaching a medical facility may be impaired by the distance from home to a facility, lack of roads or poor condition of roads and lack of awareness of existing services. Finally, receiving adequate and appropriate treatment may be impaired by the lack of healthcare personnel, gender insensitivity of healthcare providers, shortages of supplies and lack of equipment.

It must also be noted that due to the stigma attached to sexually transmitted infections, many people do not seek treatment from recognized health care practitioners. They either choose to self-medicate, buy drugs from drug peddlers or visit traditional healers. Some studies have reported that this is a contributing factor to delay in seeking proper medical care. For example, in Ghana, STI patients who had bought STI drugs over the counter had mostly received inappropriate doses and advice and then later had to attend a public STI clinic (Adu-Sarkodie, 1997).

Agambire & Clerk (2013) again noted that delay in health seeking behaviour was significantly associated with a client's knowledge about STIs and specific STI symptoms. A significantly higher proportion of respondents who had not heard about STIs sought treatment late as compared to those who had knowledge about the disease.

Although it is important that persons with STIs are knowledgeable about the disease so that they are able to identify symptoms for prompt treatment, some studies have shown that a lack of knowledge about the disease is not always the determining factor for delay in seeking treatment (Meyer-Weitz et al., 2000; Liu et al., 2003). For example, Malta et al., (2007) in their study done in Brazil found that, men who had sex with men (MSM) were more knowledgeable about STIs as compared to the other respondents because they had received a considerable amount of information from their peers. They however avoided STI treatment in order to avoid being stigmatized and discriminated against because of their sexual orientation. Another study on MSM in China found that an alarming 648 out of 1096 respondents sought no treatment at all for an STI. Xu et al., (2017) noted that social stigma deterred these individuals from seeking treatment. However, another study conducted in the UK found interestingly that stigma might actually encourage some people to test for an STI because they wanted to set things straight with regards to their character being maligned (Mulholland & Van Wesch, 2007).

Several studies on adolescents seeking treatment for an STI mention cost of service and accessibility to health care facilities as major deterrents within this sub-group. Biddlecom et al., (2007) also noted in a study conducted in Ghana, Burkina Faso, Malawi and Uganda that adolescents either felt afraid, were embarrassed or were too shy to seek health care services. The cost of services and not knowing where to go were also reported as barriers in obtaining STI

treatment. Fear of notifying parents served as a barrier to seeking treatment among 45% of the adolescents in Thyolo, Malawi (Zachariah et al., 2002).

2.4 Demographic and Socio-Economic Factors

2.4.1 Age and Health Seeking Behaviour

Age has been demonstrated in several studies to be an important determinant of healthcare utilization. Extreme age groups tend to delay seeking treatment as compared to the other age groups. (Zachariah et al.,2002). There are certain reasons why it may be difficult for adolescents to seek treatment for STIs, particularly in formal health care settings. First and foremost, many adolescents lack knowledge and information about infections. For example, a study conducted among adolescents in the US attending an STI clinic found that clients aged 18-23 years reported not knowing how serious the disease was and this was associated with delay in seeking treatment (MacDonald et al., 2003). With regards to not seeking treatment at all, a study done in rural Nigeria found that 43% of the young women who tested positive for an STI had not received any treatment (Brabin et al.,1995).

A study in Uganda among STI patients, found that 74% of patients aged 50 years and over waited 4 weeks and over before seeking treatment. The reasons cited were embarrassment and the social implication of being seen as STI patients (Bearinger et al., 2007). In contrast however, Agambire & Clerk (2013) found that the younger age group that is, those who were between the ages of 26–35 years, tend to delay seeking treatment as compared to the older age groups and adolescents.

In seeking treatment, older females in comparison to younger ones tend to utilize formal health care facilities because they are more aware of the reproductive health services that are offered at these formal health care facilities (Mmari et. al., 2010).

2.4.2 Sex and Health Seeking Behaviour

Health seeking behaviour may be influenced by patient characteristics; and a person's sex is categorized under patient characteristics.

Some studies have argued that, in comparison with women, men do not utilize health care services and also fail to seek early treatment (Noone & Stephans, 2008). The idea of hegemonic masculinity acts as an impeding factor to seeking proper and timely health care for an illness. Men who share this ideology tend to delay seeking treatment even when they experience symptoms (Galdas et al. 2005). Health seeking and health service utilization is an indictment to their hegemonic masculinity traits.

In contrast however, some studies have indicated that women tend to delay seeking treatment longer than men do. Women who experience symptoms may delay seeking treatment because they believe that the symptoms are normal or not STI related (Voeten et al., 2004; Do et al., 2007). Women may generally be confused about whether a vaginal discharge is normal or whether it is an STI symptom. This may lead to delays in seeking STI treatment or not seeking treatment at all. Again, due to the fact that a high proportion of STIs among women are asymptomatic, there is no telling for sure that a woman might have an STI unless she undergoes asymptomatic screening (Adanu et al., 2008).

Furthermore, women tend to be more stigmatized than their male counterparts because having an STI is often perceived as a sign of promiscuity (Dehne & Riedner, 2005). As a result, they may choose not to open up about experiencing symptoms even if these symptoms present an unusual discharge. Also, married women out of fear of possible repercussions may choose to treat STIs themselves rather than risk going to a public health facility that might share their information with their husbands (Ezumah, 2003). This brings to bear the issue of confidentiality.

2.4.3 Level of Education and Health Seeking Behaviour

Educational level is closely linked with health. Over the period of time studies have shown that level of education directly or indirectly impacts health. Having a higher education will lead to higher income which will in turn make for easier access to quality health care. In essence, individuals with good education make better health related decisions (Nanjunda, 2013).

Education is imperative for knowledge and awareness about STIs and having knowledge about STIs not only allows individuals to make better sexual health choices but also helps them seek timely health care for a sexually transmitted infection. Vandemoortele & Delamonica (2000) stated that knowledge about the various aspects of HIV/AIDS increased with higher levels of education. Also, Monazz & Greta (2010) found that better education was positively related to attitudes toward health. It is therefore argued that better educated people are more aware of a health problem, able to correctly identify symptoms, understand the seriousness of symptoms, are more knowledgeable about the availability of health care services and can access proper health care facilities. A study in India found that the prevalence of STI symptoms in women was highest among the illiterate respondents and decreased significantly with increasing level of education (Verma et al., 2015).

Low literacy or lower levels of education pose a barrier to accessing health care for sexually transmitted infections. Fotenberry et al., (2001) in a study done in the US found that respondents with low literacy not only perceived themselves to be at higher risk of acquiring gonorrhoea than the other respondents with relatively higher literacy and yet they were less likely to seek STI treatment. Anjana et. al., (2015) found in their study in India that the prevalence of reproductive tract infection (RTI) or STI symptoms among the women in the study decreased significantly with increasing levels of education while health seeking behaviour increased with educational status of the women in the study.

The factor of delay comes to play again. Carolyn, et al., (2010) found that individuals with low levels of education delayed in seeking treatment when they noticed some symptoms unlike better educated individuals who responded much faster to these symptoms. Education thus influences one's response to issues pertaining to health.

2.4.4 Type of Place of Residence and Health Seeking Behaviour

Where individuals reside may either facilitate or deter their use of a healthcare facility. It has been documented that people who reside in urban areas have an edge over those in the rural areas with regards to knowledge and awareness about STIs and accessibility to health care facilities. For instance, a study in Uganda found that rural residency was associated with higher incidence of STIs and lower STI rates were observed among the urban residents. The study noted that this was because the urban participants continuously received condom promotion messages and counseling and this was evident by lower condom use among rural participants than was observed among urban participants (Okoboil et al.,2019).

Comparing the health status of urban and rural women, there is an unequal utilization of health care between these two groups. Among the reasons for such differences include the lack of access to health information and health care, the poor quality of health care facilities, culture and the factor of cost in the rural areas (Byles et. al., 2006; Center for Excellence for Women's Health (CEWH), 2004). Evidence from a study in India show that among the women who experienced STI symptoms, 73% of urban dwellers sought treatment as against 45.6% of rural dwellers. This was attributed to factor of health awareness (Verma et al., 2015). Some studies have also shown that the closeness of rural communities deter women who are sick from seeking the needed health care especially if the illness is stigmatized (Thorndyke, 2005) such as sexually transmitted infections.

In contrast however, a study in Kenya found that rural dwellers had better access to health care services than some urban dwellers especially those who lived in slums because of high level of poverty (Dodoo et al., 2007). Also, some studies found that individuals who resided in rural areas were more likely to seek treatment than those in the urban areas (Talpur & Khowaja, 2012; Cherie & Berhane, 2012; Joshi et. al., 2006).

2.4.5 Wealth quintile and Health Seeking Behaviour

The risk of acquiring an STI is found to be associated with income (wealth) in that, lower income is associated with less access to preventive information and healthcare and an increased use of sex for economic purposes (Hogben & Leichliter, 2008). Studies have shown that a poor person is at a higher risk of contracting an STI because he or she does not have the resources to seek treatment (Harling et al., 2014). This is corroborated in a study in India that found that among some socio-

economic factors such as place of residence, media exposure and women's autonomy, women from higher wealth index households were less likely to have an STI than women from lower wealth index households (Ravi & Nair, 2011).

Some studies have also shown that wealth plays a major role in determining whether an individual accesses a health care facility or not. Cherie & Berhane (2012) found that adolescents in Addis Ababa, Ethiopia who had STIs and did not seek treatment did so mainly because they could not afford treatment. Adanu et al., (2008) also found that respondents who sought treatment or advice for an STI were wealthier than those who did not seek STI treatment.

Wealth not only influences an individual's decision either to seek treatment or not to seek treatment but it also influences the choice of health care service they access. Findings from some studies show that individuals with lower income are more likely to turn to the relatively cheaper herbal treatments for their health care needs than wealthier individuals (Shewamene et al., 2017; Yeh, et al., 2015).

Where there is high out-of-pocket payment for health care services, an individual's income may influence their health seeking behaviour so that those who are better placed financially, are a more advantaged group. For instance, a study in Ghana found that respondents who made up the richest wealth quintile group were more likely to seek treatment at a health facility during their last illness than respondents who made up the poor and poorest wealth quintile groups (Kuuire et. al., 2015).

2.4.6 Employment status and Health Seeking Behaviour

Being employed has a close link with access to good health care in that, they promise a regular flow of income and as such individuals are able to take proper decisions about their health concerns

(Nanjunda, 2013). Van der Hoeven et al., (2012) iterated this in their study in South Africa where they found that participants in the urban areas were more gainfully employed than participants from the rural areas. As a consequence of being unemployed participants from the rural areas had a significantly available lower budget not only for health care but for transportation to the health care facility. Urban participants who on the other hand were gainfully employed, had a more substantial weekly budget for health care. A similar study in India found that a higher proportion of working women sought health care for STIs as compared to non-working women (Mani et. al, 2013). These findings are comparable to a study done by Sabarwal & Santhya (2012) in India, where they found that the greater proportion of women who were employed sought treatment in comparison to women who were not employed.

Some studies also revealed that being employed is associated with economic independence and an increased power in decision making, thereby improving health seeking behaviour. Bhanderi & Kannan (2010) found that women who were gainfully employed had low untreated reproductive morbidities which they stated might be due to the power that they had in making financial decisions giving them some autonomy and the opportunity to seek treatment for an infirmity.

The type of job/occupation a person is engaged in is said to be a risk factor for acquiring STIs. For example, long distance truck driving and mining are jobs that require a person to be on the move and away from their partners. These group of people tend to have higher infection rates than those stationed at one place (Johnson & Ledbetter, 2002). Additionally, Mohan et al. (2005), found that in India, the unskilled profession, many of whom are unemployed were also predictive of STIs.

2.4.7 Religious Affiliation

Some studies have shown that individuals with no religious affiliation have a higher chance of getting a sexually transmitted infection as compared to those who are affiliated with a religious group in that, those who do not belong to any religious group have sexual liberality and those who belong to religious groups are sexually normative (Leiblum et al., 2010). This is confirmed in Gray's (2004) study, where he found a negative association between Islam and the prevalence of HIV infections in Sub-Saharan Africa.

Belonging to a religious group has also been shown in some studies to improve health outcomes of individuals and allow for individuals to make good health care seeking choices. Pargament et. al., (1998) found a positive influence of religion on health behaviour. Likewise reading the Bible, praying and attending church have been shown in some studies to improve health outcomes of individuals and their health behaviour (Matthews, 1998; Koenig, 2000; Levine, 2001).

In contrast however, some studies have shown that religion may have a negative effect on people's health seeking behaviour. Kremer et. al., (2009) found that belief in God was associated with not taking antiretroviral for HIV because the respondents believed that God was the one who controlled health. Also, some religious teachings have been identified as unwelcoming of people with HIV which in turn stigmatize people who are HIV positive influencing their decision to seek early treatment (Herek et. al., 2002). Crute (1998) again revealed that African American women and women from other minority groups believed that they are God-fearing people and that whatever happened to them happened for a reason and that no drug could help them.

2.4.8 Marital Status and Health Seeking Behaviour

There is reason to suspect that STI prevalence and the use of STI healthcare facilities may differ according to marital status. Some studies have shown that women who have ever been married have a higher HIV prevalence rate than women who have never been in a marital union. This may be attributed to certain factors such as low economic independence, low level of formal education, low knowledge about HIV transmission and prevention which could result in poor or inability to negotiate safe sex (Adebayo et al., 2013). For instance, divorced or separated women in Guinea were found to be three times more likely to be infected with HIV than never married women and widowed women are almost seven times more likely to be living with HIV than never married women (Neondo, 2009). Similar studies in Uganda show that the risk of HIV among widowed persons is almost 5 times higher than that seen amongst married individuals, while the risk of HIV among separated is twice that of married respondents (Kasamba et al., 2009). Adebayo et al., (2013) explained that a possible reason for this occurrence is that the society often stigmatizes divorced women drawing the attention of other interested male partners who may promise to relieve their economic burden but in disguise only want a sexual relationship.

On the other hand, some studies have reported that married people are at a higher risk of being infected with an STI. Nyarko et al., (2014) stated that early marriage exposes the young women especially in Northern Ghana to STIs as a result of this cultural practice. In contrast, study in Northern Nigeria found that females who belong to Islamic religious sects marry earlier than their Christian counterparts and this has tendency to prevent them from having sexual partners. This in effect reduces their sexual activity and hence reduces their chances of contracting STIs (National Population Commission & ICF Macro International, 2008)

In seeking treatment for an STI at a health facility, Barua & Kurz (2001) noted that married women are reluctant to seek medical treatment because of the cost of treatment, lack of privacy and a lack of female doctors at the health facilities. In contrast however, some studies have reported that unmarried individuals have reduced access to resources and this may in turn affect their healthcare utilization than those who are married (Waite, 1995; Lillard & Waite 1995).

2.4.9 Ethnicity and Health Seeking Behaviour

Over the years disparities have existed in rates of STIs among some racial or ethnic groups. One of such exists between African American and the Whites. Higher prevalence of STIs have been recorded among black and Hispanics as higher rates of chlamydia and gonorrhoea were recorded compared with the European-American population (Institute of Medicine, 1997). Some studies have also shown that a large percentage of African Americans and other minority groups work in jobs that do not provide health insurance and as such are less likely than the Whites to have a usual source of health care (Smedley et al., 2003). Even when health care is readily available to the ethnic minority, distrust of health care facilities, social and cultural discrimination, language barriers, provider bias or the perception that these exist will negatively affect their health seeking behaviour (Berk & Schur, 2001; Perez-Escamilla, 2010).

In Ghana, minority ethnic groups have been reported as having lower utilization levels for most of the components of skilled maternity care (Ganle, 2015).

2.4.10 Region of Residence and Health Seeking Behaviour

Although the HIV prevalence rate in Ghana is 1.5% (HSS, 2016), a breakdown into the various regions show the different variations in HIV prevalence rate. The regional HIV prevalence ranged from 2.7% in the Volta and Brong Ahafo regions as the regions with the highest prevalence to 0.7% in Northern Region the lowest (HSS, 2016). In 2015, Eastern Region recorded the highest prevalence rate of 3.7% (GAC, 2015) but in 2016 dropped to having a 2.6% prevalence rate making them and the Ashanti Region the regions with the second highest prevalence rates (HSS, 2016).

2.5 Other health seeking related factors (intermediate variables)

2.5.1 Health Insurance and Health Seeking Behaviour

Health insurance has emerged as a key instrument in current health financing reforms of middle- and low-income countries with the aim of achieving universal health coverage while encouraging timely health seeking behaviour, discouraging self-treatment and the use of alternative forms of care among people especially the poor (Robyn et al., 2011). Prior to this implementation in Ghana in 2004, patients were required to pay for their health care needs and this restricted access to health services and this resulted in adverse effects on health seeking behaviour (Kuuire et al., 2015).

This situation however has remained almost unchanged as a good number of Ghanaians are not enrolled on the National Health Insurance Scheme (NHIS) program and thus are unable to afford health care services even though the NHIS covers 95% of diseases in Ghana including STIs. According to the National Health Insurance Scheme in 2014, 10.5 million Ghanaians making up 40 percent of the Ghanaian population were enrolled in the NHIS. Having health insurance has been shown to be a large predictor of whether or not a person will access health care.

Studies have shown that a lack of health insurance is a barrier to accessing health care especially for the poor. Health care of any form comes at a cost and an individual's income may directly influence their health seeking behaviour such that those who are better placed financially can pay for health services directly and indirectly through the purchase of health insurance coverage. Abaerei et al., (2017) in their study stated that insured individuals were more likely to visit a health care facility as compared to uninsured individuals. Kuuire et al., (2015) however stated that income rather than health insurance was the determining factor for accessing health care services. In their study, individuals who were enrolled in the NHIS and belonged to the poor and poorest wealth quintiles were less likely to seek treatment at a health facility during their last illness relative to their counterparts in the richest wealth quintile who were also enrolled in the NHIS.

2.5.2 Knowledge about the disease (STIs)

Usually, the starting point for seeking health care treatment for an STI is the recognition of symptoms. It is one thing to have heard about STIs and another to actually know and identify STI symptoms. Having knowledge about sexually transmitted infections and being able to identify symptoms have been said to influence the health seeking behaviour of persons who experience these symptoms. Recognizing symptoms and seeking treatment depends on how symptoms are perceived, whether they are perceived as a threat and if they are, what treatment plans will be undertaken.

A study in Addis Ababa among high school students revealed that most of the participants were unaware of symptoms and thus did not seek treatment (Cherie & Berhane, 2012). Also, Pachuri (1994) found that women who were aware of sexually transmitted infections were twice more

likely to report symptoms than women who lacked knowledge about the infection. Thus, as awareness increases, so does a person's health seeking behaviour improve.

Compared to the older age groups, individuals in the younger age groups including adolescents often lack knowledge about STIs and this might cause them to underestimate the risks involved. A study conducted among adolescents in America and South Africa found that ignorance of the seriousness of STIs was found to be associated with delay in seeking treatment as respondents thought that the symptoms they were experiencing would subside (Bearinger et. al., 2007).

Further studies show that both delayed treatment and not seeking treatment at all were frequently associated with a lack of understanding especially among the youth who did not know what they had or had no idea that the symptoms they experienced were STI related (Prasad et. al, 2005; Joshi et. al., 2006).

2.5.3 Access to health care facilities

What may influence an individual's decision to seek treatment for an STI is the availability of health care facilities and how accessible they are. Some studies have cited cost, long distance to healthcare facilities, lack of privacy, not knowing where to get treatment and the long waiting time at the healthcare facility as reasons that prevent people from visiting healthcare facilities. A study in Uganda found that nearly all the participants had ever experienced one challenge or the other accessing health care facilities. High cost of service, long distances to health facilities and unavailable drugs were cited as the more prominent challenges they faced (Musoke et al., 2014). Similarly, Phrasisombath et al., (2012) discovered in their study in Laos that not knowing where

to get treatment, the long wait at clinics and the inconvenient location of clinics were the main barriers for not seeking early treatment even though STI symptoms were being experienced.

All these barriers to seeking treatment at a formal health facility make persons who have STIs or experience symptoms look for alternative sources of treatment. A study in Ghana reported that some people sought herbal medicine from close relatives, herbalists and some prepared by themselves because herbal medicine was a more convenient, affordable and effective form of treating STIs (Azu et al., 2018). Ngo et. al., (2007) in like manner found that when most of the women in their study noticed symptoms, the pharmacy was their first point of call because of the cost of treatment and judgmental attitudes of service providers.

Consistent with these findings, Fonck et. al., (2001) discovered that STI clinics were often a last resort for treatment because of the lack of privacy, affordability and the social implication of being seen as an STI patient.

2.6 Theoretical Framework

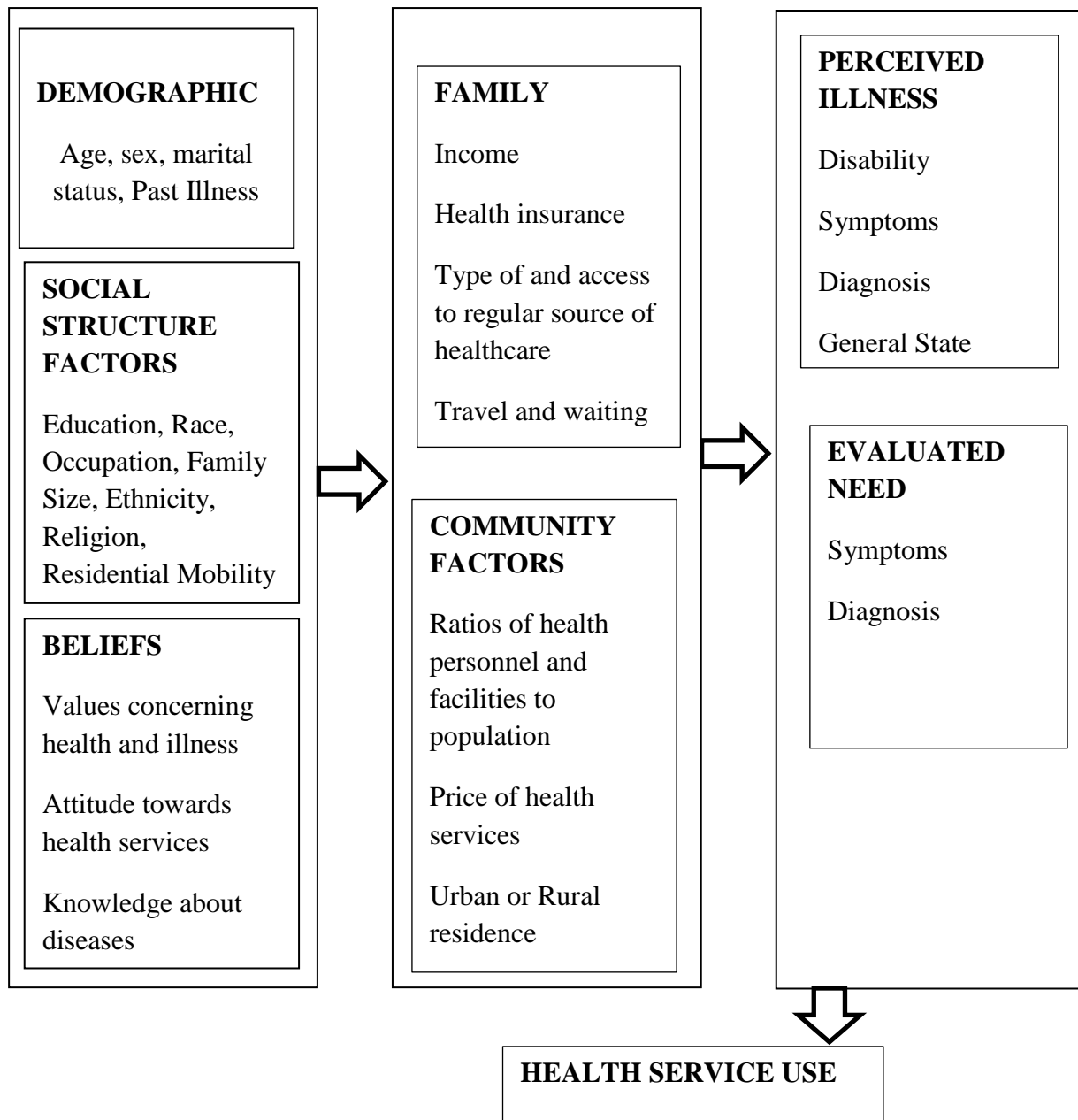
This study is based on the Health Belief Model (HBM) and the Andersen and Newman's Health Utilization Model. Both models describe the factors that influence or determine whether or not a person will seek treatment for an illness.

The health belief model (HBM) proposes that whether a person performs a particular health behaviour is influenced by two major factors. These factors are the degree to which the disease is perceived by the person as threatening and the degree to which the health behaviour is believed to be effective in reducing the risk of a negative health outcome. The first factor, which is the perceived threat, is determined by whether someone believes he or she is susceptible to the disease

and how severe that person believes it would be if it developed. The second factor, which is the perceived effectiveness of the preventive behaviour, takes into account not only whether the person thinks the behaviour is useful, but how costly it is to carry out the preventive behaviour.

The Andersen and Newman's Health Utilization Model (1973) also talks about how certain factors influence an individual's use of a health service and helps predict the pattern and level of utilization. The model groups these factors into three; predisposing factors, enabling factors and need factors. Predisposing factors include demographic factors such as age, sex and marital status. It also includes social structure factors such as education, race, occupation, family size, ethnicity, religion and residential mobility. Beliefs like values concerning health and illness, attitude toward health services and knowledge about the disease are also included in the predisposing factors. Enabling factors include family, income, health insurance, travel and waiting time, cost of health service and urban-rural residence. Need factors include perceived illness symptoms, diagnosis and general state of wellbeing.

Schematic Representation of Andersen and Newman's Health Utilization Model (1973)

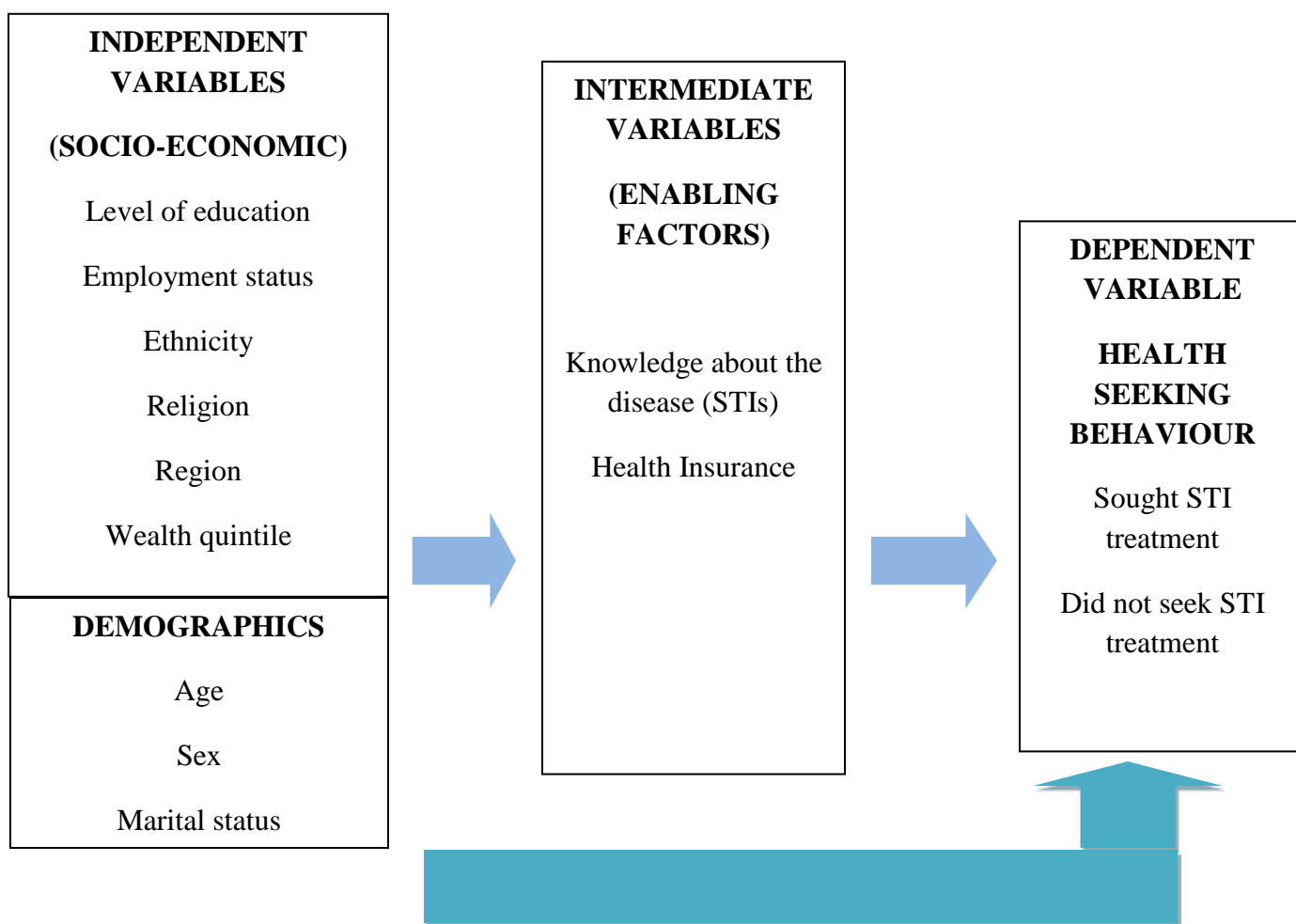


Source: Andersen & Newman (1973)

2.7 Conceptual Framework

Figure 2.1: Conceptual Framework Showing the Relationship Between some Socio-economic and demographic variables and Health Seeking Behaviour for STI.

Based on the Andersen and Newman's Health Utilization Model (1973), this study develops a conceptual framework to show the Relationship between some socio-economic and demographic variables and health seeking behaviour for Sexually Transmitted Infections.



Source: Adapted from (Andersen & Newman 1973)

This study seeks to identify what demographic and socio-economic variables influence health seeking behaviour among persons with STIs in Ghana. Adapting the Andersen and Newman Health Utilization model (1973), this study identifies some predisposing and need factors in the model as independent variables in this study. Age, marital status, sex, level of education, ethnicity, religion, region of residence, place of residence, employment status and wealth quintile were identified as independent variables in this study. Based on literature reviewed and the Health Utilization model, these variables have been identified as having an influence directly on whether or not a person seeks treatment for their STI.

In this study, a person's level of education is identified as having an influence on their knowledge about STIs and whether or not they have health insurance and this in turn determines his or her health seeking behaviour. A person's level of education also directly influences a person's health seeking behaviour. Whether a person is employed or not will influence whether he or she has health insurance or not and also their level of knowledge about STIs which will in turn influence his or her decision to seek STI treatment. A person's employment status also directly influences his or her health seeking behaviour. Ethnicity is also identified in this study as not only directly influencing a person's health seeking behaviour but also influencing his or her health insurance status and level of knowledge about STIs which in turn determine his or her health seeking behaviour. Religion has also been identified in this study as having direct influence on a person's health seeking behaviour and also having influence on a person's knowledge about STIs and his or her health insurance status which in turn determines his or her health seeking behaviour. From literature reviewed, a person's Region of residence may directly influence a person's decision to seek STI treatment, and also indirectly influence a person's decision to seek STI treatment through his or her knowledge about STIs and health insurance status. Again, how wealthy a person is may

directly influence the decision to seek STI treatment and also indirectly through his or her health insurance status and knowledge about STIs. Demographic factors such as age, sex and marital status determines a person's health seeking behaviour. A person's age, sex and marital status will determine their health insurance status and their knowledge about STIs which in turn determines whether he or she will seek STI treatment or not.

This study also identifies two need factors in the Health Utilization model as intermediate variables. Health insurance and knowledge about STIs are identified in this study as directly influencing the decision to seek STI treatment or not. They also act as mediating factors between each independent variable and health seeking behaviour.

Not all the variables in the Andersen and Newman (1973) framework are used in this study due to data limitation. Variables such as cost of health service, attitude toward health service, diagnosis and general state of wellbeing among others are not used in the framework because the survey had no questions on them.

2.8 Hypotheses

The study proposes the following based on the theoretical framework (Andersen and Newman's Health Utilization Model) and literature reviewed.

1. Rural dwellers are less likely to seek STI treatment than urban dwellers.
2. Teenagers are less likely to seek STI treatment than older people.
3. Individuals with Health Insurance are more likely to seek STI treatment than individuals who do not have health insurance.

4. Individuals with little or no education are less likely to seek STI treatment than individuals with higher education.
5. Individuals with no religious affiliation are less likely to seek STI treatment than individuals who belong to religious groups.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter provides an overview of the methodology used in this study. It begins with a brief discussion on the study area focusing on some geographic and demographic information as well as discussions on Ghana's health care system. It moves on to discuss the main source of data used, the research design, methods of analysis, the variables of interest and the limitations of the study.

3.1 Study Area

Ghana is a lower middle-income country centrally located on the West African coast bordered by three French-speaking countries; Togo to the east, Burkina Faso to the north and northwest and Cote d'Ivoire to the west. Ghana's population was estimated at 27 million in 2014 (GDHS 2014) and the country was subdivided into 10 administrative regions which included; Western, Central, Greater Accra, Volta, Eastern, Ashanti, Brong Ahafo, Northern, Upper East, and Upper West. These regions were further subdivided into 216 districts.

However, in 2018, the country was divided into 16 administrative regions. The six new additions were created out of the Volta, Brong Ahafo, Northern and Western regions. The Oti Region was carved out of the Volta Region, Bono East and Ahafo were created out of the Brong Ahafo Region while the former Brong Ahafo Region is now the Bono Region. North East Region and Savannah Region were carved out of the Northern Region. Western North was also created out of the Western

Region. The Ashanti, Eastern, and Greater Accra regions together constitute about 50 percent of the country's population.

Ghana is a developing country with 38% of its population under age 15 and 5% of its population aged 65 years and older (GDHS, 2014). This youthful age structure suggests a high fertility rate which is perked at approximately 4 births per woman. The country has a sex ratio of 95.2 males per 100 females in 2010 (GDHS, 2014).

There are four main categories of health care delivery systems in Ghana. These are the public, private (non-profit), private-for-profit, and traditional system (MOH, 1997). The healthcare system revolves around the Ministry of Health. Administratively, it has a hierarchical organizational structure from the central headquarters in Accra; which is the capital city, to the various regions, districts, and sub-districts. There are five levels of health care systems in the country. At the first level there are health posts or outreach sites and mobile health services. The second level consists of health centers and clinics. District hospitals, Regional hospitals and Tertiary hospitals exist at the third, fourth and fifth stages respectively (Ministry of Health, 1997).

3.2 Source of Data

This quantitative study uses data from the 2014 Ghana Demographic and Health Survey (GDHS) which is the sixth round of the population and health surveys conducted in Ghana as part of the global Demographic and Health Surveys Program. The survey was conducted by the Ghana Statistical Service (GSS) in collaboration with the Ghana Health Service (GHS) and ICF International, with funding from USAID and other development partners.

It presents information on housing and household characteristics, education, maternal and child health, nutrition, fertility, family planning, prevalence and knowledge about HIV/AIDS. These information were collected on a nationally representative sample of 4,388 men aged 15-59 years, 9,396 women aged 15-49 years and from 12,831 interviewed households.

This study employs the use of the Ghana Demographic and Health Survey (GDHS) 2014 over the other nationally representative surveys because all the variables employed in this study were available in the dataset. Other nationally representative surveys such as Ghana Living Standard Survey (GLSS) and Ghana Maternal Health Survey did not have all the variables needed for this study. Thus, the 2014 GDHS was appropriate for carrying this research out.

3.3 Sample design and Selection

The sampling frame used for the survey is an updated frame from the Ghana Population and Housing Census conducted by the Ghana Statistical Service. Selection of participants was done in two stages. The first stage involved selecting clusters from the 216 districts in the country. The 426 clusters identified were made up of 216 clusters in urban areas and 211 clusters in rural areas. At the second stage, a random selection of households from a household listing conducted in selected Enumeration Areas was done. 30 households were randomly selected from each cluster which constituted a total sample size of 12,831 households (GSS et al., 2015).

Three sets of questionnaires were used for this survey. These included the women's questionnaire which were responded to by females in their reproductive years (15-49), men's questionnaire which were responded to by males aged 15-59 years and household questionnaires. In the survey, 9396 females and 4388 males responded to the questionnaires.

However, for the purpose of this study, men and women aged 15-49 years who had STIs and were asked whether or not they sought advice or treatment for an STI or STI symptoms in the 12 months preceding the survey were selected. Thus, 1974 females and 308 males form the sample size of this study; making a total sample size of 2,282 participants.

3.4 Variables

For the purpose of this study, some variables from the GDHS 2014 were listed as independent variables, some as intermediate variables and health seeking behaviour was listed as the dependent variable. Again, for the purpose of this study, the men's and women's files were appended to form one dataset from which the analyses were done.

3.4.1 Dependent Variable

The dependent variable in this study is whether an individual who had experienced an STI symptom or had had an STI in the 12 months preceding the survey, sought health care or not (health seeking behaviour). Participants who reported to have experienced an STI symptom or had had an STI in the 12 months preceding the survey were asked if they sought any kind of advice or treatment. If a respondent answered 'Yes' as having sought advice or treatment for an STI, his or her response was coded as "Yes" which was recoded in this study as "1" and if a respondent answered 'No' as not seeking advice or treatment for an STI infection, his or her response was coded as "No" which was again recoded in this study as "0". The STI symptoms that were made reference to in the survey included genital discharge and genital sore or ulcer. The survey listed some sources of treatment that were sought after by the respondents; these include, Government

hospitals or polyclinics, Government health centers or clinics, Government health posts/CHPS, stand-alone VCT centers, family planning clinics, mobile clinics, fieldworkers or outreach or peer educators, private hospitals or clinics, private doctors, pharmacies, chemical drug stores, maternity homes, homes and correctional facilities.

3.4.2 Independent Variables

This study uses some demographic and socio-economic variables as predictor variables in explaining the outcome variable. The listed demographics used in this study are age, sex and marital status. The age of respondents was put into seven mutually exclusive categories; 15-19 years, 20-24 years, 25-29 years, 30-34 years, 35-39 years, 40-44 years and 45-49 years. Although the GDHS listed some males as being over the ages of 49 years (50-59 years), they were not included in this study for the main purpose of being able to compare with the females who were only listed up to the ages of 49 years. Sex of respondents was put into two mutually exclusive categories namely male and female. Marital status was re-categorized into never married, married and ever married. Respondents who had never been in any union at the time of the study were categorized under never married. Those who were either married or living with their partners make up the married category and those who were either widowed, divorced, no longer living together or separated make up the ever-married category.

The listed socio-economic variables used in this study are level of education, employment status, ethnicity, religion, region of residence, wealth quintile and place of residence. Level of education was categorized into no education, primary, secondary and higher just as they were categorized in the GDHS. Other variables that were categorized just as they were in the GDHS are region of

residence, wealth quintile and place of residence. Region of residence was categorized into Western, Central, Greater Accra, Eastern, Ashanti, Volta, Brong Ahafo, Northern, Upper East and Upper West regions; wealth quintile was also categorized into poorest, poorer, middle, richer and richest wealth quintiles and finally place of residence was categorized into rural and urban. Ethnicity was however re-categorized; Mande, Guan, Grusi and other ethnic groups were merged to form 'other' because their individual sample sizes were small in comparison to the other listed ethnic groups. Thus, ethnicity was re-categorized into Akan, Ga/Dangme, Ewe, Mole Dagbani, Gurma and other. Religion was also re-grouped into Catholic, Protestant, Pentecostal/Charismatic, Other Christian, Islam, Traditional or Spiritualist and No religion. Methodists and Anglicans were merged to form the Protestant group. Employment status (currently working) was re-categorized into 'Not Working' and 'Working'; those who responded 'don't know' were added to the 'Not Working' group because there was a greater possibility that they were unemployed rather than employed.

3.4.3 Intermediate Variables

This study identifies two variables that act as either enabling or deterring factors to utilizing health care facilities for an STI. These two variables are health insurance and knowledge about the disease (STIs). Responses to whether or not an individual was covered by health insurance were coded as 'Yes' and 'No', yes' to being covered by a health insurance and 'no' to not being covered by health insurance. A proxy measure of 'knowledge about the disease (STIs) had to be employed in this study because there was no one variable that explicitly measured knowledge about the disease. Two variables formed the proxy measure. Respondents were asked if they had ever heard of a Sexually Transmitted Infection and if they had ever heard about any other STI. Positive responses

were coded as 'Yes' and negative responses were coded as 'No'. In order to establish the extent of knowledge respondents had, scores from 0 - 2 were given based on the responses. Respondents who answered 'Yes' to both questions scored 2 indicating that they had 'good knowledge' while those who answered 'No' to both questions scored 0 indicating that they had 'no knowledge'. Those who answered 'Yes' to one question and 'No' to the other scored 1 indicating that they had 'fair knowledge'. A further recoding of no knowledge, fair knowledge and good knowledge into 'poor knowledge' and 'good knowledge' was done because of the small sample size of those who made up the 'no knowledge' category. Therefore, 'no knowledge' and 'fair knowledge' categories were merged to form 'poor knowledge'.

3.5 Method of Analysis

The method of analysis was carried out using the Statistical Package for the Social Sciences (SPSS) and frequency tables were constructed by exporting analyzed data to Excel. Analyses were carried out at three levels namely the univariate, bivariate and multivariate levels.

At the univariate level, descriptive analyses were done to show the characteristics of the respondents using frequencies and proportions. Using pie charts, graphs and tables, the percentage distribution of respondents were presented according to their age, sex, marital status, level of education, ethnicity, region of residence, place of residence, religion, wealth quintile employment status, knowledge about STIs, health insurance and their health seeking behaviour.

At the bivariate level, cross tabulations using the Pearson chi-square test of significance at a 95% confidence level was used to examine associations between two variables namely an independent and a dependent variable as well as an intermediate variable and a dependent variable; and also, to

examine whether or not there existed some statistical significance amongst these variables. Each independent variable namely age, sex, marital status level of education, employment status, ethnicity, religion, region, place of residence and wealth quintile were tested to show the relationship that exists between them and health seeking behaviour. Intermediate variables namely knowledge about STIs and health insurance were also tested to show the relationship that exists between them and health seeking behaviour.

At the multivariate level, a binary logistic regression was employed in determining the extent to which both the independent and intermediate variables influenced the health seeking behaviour of persons with STIs. Binary logistic regression was used because the dependent variable is dichotomous. Four models were developed to show which variables determine a person's health seeking behaviour. The first model examines the influence of demographic variables such as age, sex and marital status on health seeking behaviour. The second model examines the influence of socio-economic variables such as level of education, employment status, ethnicity, religion, region, place of residence and wealth quintile on health seeking behaviour. The third model examines the influence of health insurance and knowledge about STIs (intermediate variables) on health seeking behaviour. Finally, Model 4 examines the influence of all variables used in this study on health seeking behaviour.

3.6 Limitation of the Study

In determining whether or not a respondent had had an STI, he/she was asked if he or she experienced any genital discharge, sore or ulcer in the last 12 months. This criterion for ascertaining the STI status of an individual used by the GDHS may be flawed for several reasons.

First of all, due to the asymptomatic nature of most STIs, without proper laboratory testing there is no way to truly show that a respondent may or may not have had an STI within the said period of time. Again, because there were no laboratory tests done and data depended on self-reported responses, data could not be provided on many of the different types of STIs such as common types like hepatitis, HIV, chlamydia, gonorrhoea and syphilis. Also, there is a possibility that female respondents may have confused symptoms of other vaginal infections as symptoms of sexually transmitted infections.

There is also the possibility that since traditional healers were not listed as one of the sources of treatment in the survey, a good number of traditionalists may have responded negative to seeking STI treatment when in actual fact they may have visited a traditional healer.

Data provided in the GDHS 2014 does not account for those who may have had an STI multiple times during the said period of time (twelve months preceding the survey) and whether their health seeking behaviour may or may not have changed at these different times.

CHAPTER FOUR

DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS

4.0 Introduction

The first part of this chapter gives a description of the demographic and socio-economic characteristics of the study population. Using charts, graphs and tables, information on respondents age, sex, place of residence, religion, region of residence, ethnicity, educational level, wealth quintile, marital status and employment status is presented in frequencies and percentages. It also gives a description of respondent's health seeking behaviour and mediating factors.

The second part presents the bivariate analyses which examine the relationship between each independent and intermediate variable and the dependent variable which is health seeking behaviour. Pearson's chi-square test statistic is used to show the test of association between each of the independent and intermediate variables and health seeking behaviour at a 95% confidence level.

4.1 Demographic and Socio-economic Characteristics of Respondents

4.1.1 Age of Respondents

Table 4.1 shows that respondents in their 20s make up 45% of the respondents who were reported to have had an STI or symptoms of it. Aside teenage respondents who make up 12.7% of the respondents, the number of respondents who were reported to have had an STI, reduces as age increases. Respondents in their early 30s accounted for 15.1% of the respondents while those in the last age group 45-49, accounted for 5.0%; being the least represented group. This is consistent

with findings from Adanu et. al., (2008) where they revealed in their study that older women would have fewer cases of STI symptoms as compared to younger women because they were less sexually active. Youthful exuberance which include having multiple sexual partners and having unprotected sex may also account for why this is so.

Table 4.1: Percentage distribution of Respondents Age Groups

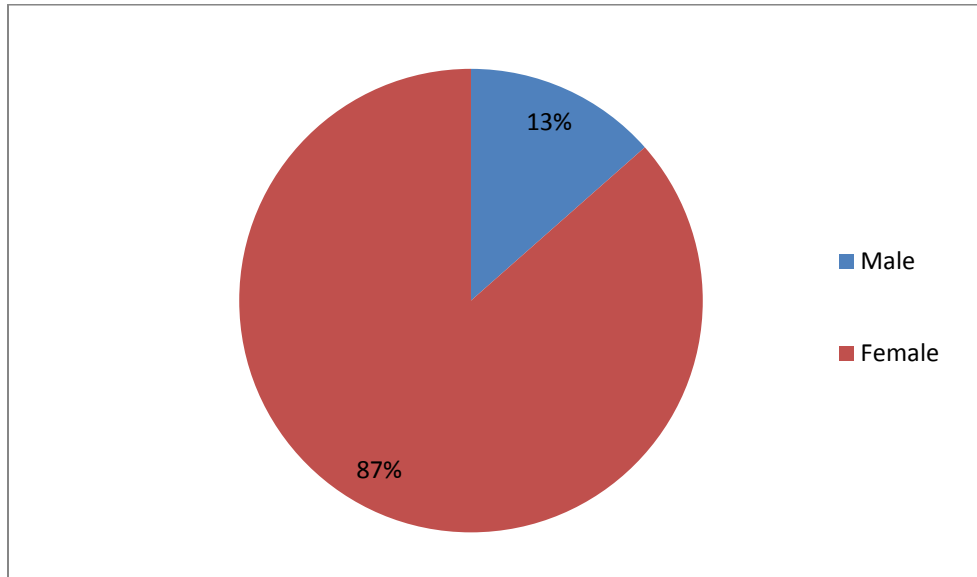
| Age groups | Number | Percent |
|------------|--------|---------|
| 15-19 | 290 | 12.7 |
| 20-24 | 556 | 24.4 |
| 25-29 | 470 | 20.6 |
| 30-34 | 345 | 15.1 |
| 35-39 | 297 | 13.0 |
| 40-44 | 211 | 9.2 |
| 45-49 | 113 | 5.0 |
| Total | 2282 | 100.0 |

Source: Computed from GDHS (2014) data

4.1.2 Sex of Respondents

Figure 4.1 shows that majority of the respondents are female (87%) while male respondents constitute 13% of the sample size. This indicates that more than four-fifth of persons who responded positive to having had an STI or STI symptoms are females.

Figure 4.1: Percentage distribution of Respondents Sex

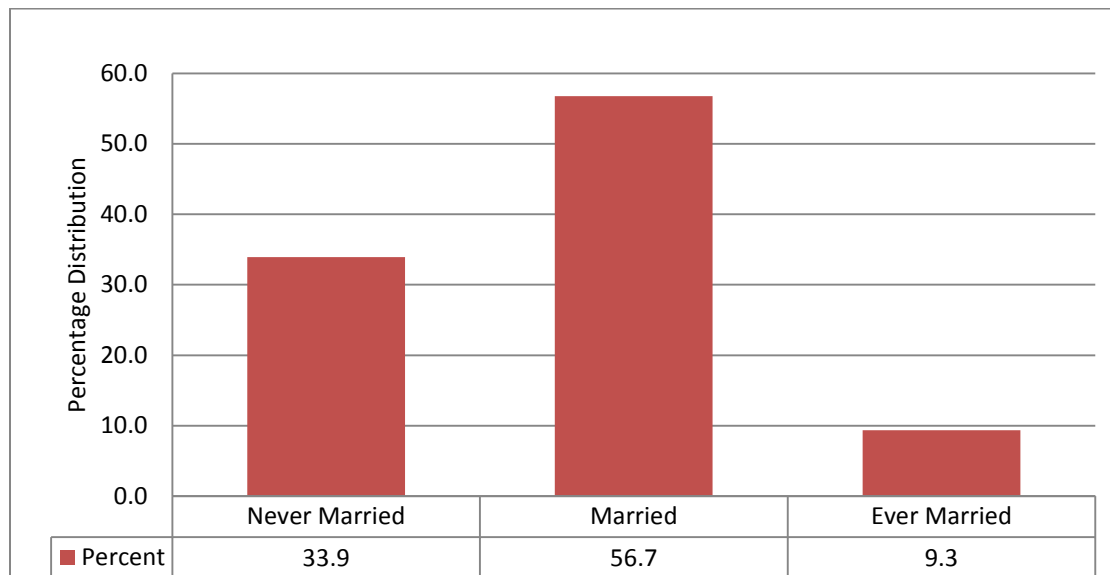


Source: Computed from GDHS (2014) data

4.1.3 Marital Status

From figure 4.2, nearly 57% of the respondents who reported to have an STI were married.

Figure 4.2: Percentage distribution of Respondents Marital Status



Source: Computed from GDHS (2014) data

4.1.4 Place of Residence

Table 4.2 presents the percentage distribution of respondents by place of residence. Majority of persons who had had an STI or STI symptoms (52.2%) reside in the urban areas while the other 47.8% reside in rural areas. The reason for the variation is due to the fact that; the proportion of urban dwellers grew rapidly from 23% in 1960 to almost 51% in 2010 according to the 2010 Ghana Population and Housing Census report. Another reason may be that more and more people are migrating to urban areas. Migration to urban areas, which is mostly borne out of poverty, may for instance result in women not being able to negotiate safe sex with men they depend on financially, leading to spread of STIs in these areas.

Table 4.2: Percentage distribution of Respondents Place of Residence

| Place of residence | Number | Percent |
|--------------------|--------|---------|
| Urban | 1192 | 52.2 |
| Rural | 1090 | 47.8 |
| Total | 2282 | 100.0 |

Source: Computed from GDHS (2014) data

4.1.5 Ethnicity

Every Ghanaian identifies with one ethnic group or the other. Each ethnic group has their set of culture, norms and values that govern its members. Table 4.3 shows that Akans form the largest ethnic group represented by 39.4% of the respondents. The Mole Dagbani and Ewe form the second and third largest ethnic groups with 20.5% and 15.2% respectively. The least represented ethnic group is the Ga Dangme representing 5.5% of the respondents.

Table 4.3: Percentage distribution of Respondents Ethnicity

| Ethnicity | Number | Percent |
|--------------|--------|---------|
| Akan | 900 | 39.4 |
| Ga Dangme | 126 | 5.5 |
| Ewe | 346 | 15.2 |
| Mole Dagbani | 467 | 20.5 |
| Gruma | 211 | 9.2 |
| Other | 232 | 10.2 |
| Total | 2282 | 100.0 |

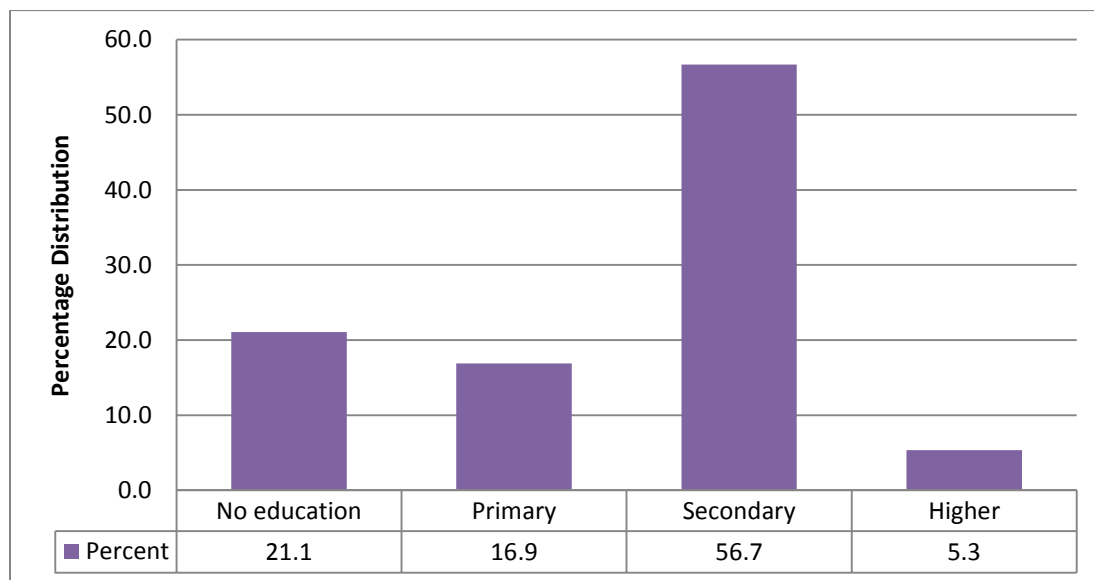
Source: Computed from GDHS (2014) data

4.1.6 Educational Level

Education is important for the social and economic development of any nation. It also increases people's knowledge and improves their attitudes towards sexual and reproductive health. It is therefore important to know what levels of education respondents attained to gain better insight into their knowledge and understanding of their sexual and reproductive health including STIs.

Figure 4.3 shows the percentage distribution of respondents by their educational level. Most of the respondents were educated beyond the primary level. Respondents who had secondary education make up 56.7% of respondents indicating that 6 out of every 10 respondents had attained secondary education while just a handful had attained higher levels (5.3%). Respondents who had never been to school before make up 21.1% of all respondents while those with primary education make up 16.9% of all respondents.

Figure 4.3: Percentage distribution of Respondents by Educational Level



Source: Computed from GDHS (2014) data

4.1.7 Religion

Religion influences the daily activities of the people of Ghana as majority of its population are affiliated to one religious group or the other. From family life to economic activities to all the other facets of life, religion uses different codes to structure people's lives. It is therefore important to know what religious groups respondents are affiliated with.

In Table 4.4, Catholics, Protestants, Pentecostal or Charismatic and other Christians are all identified as Christians making up 74.8% of the respondents. Respondents who profess to the Islamic faith make up 18.8% while traditionalists or Spiritualists make up 3.5% and respondents with no religion make up 2.8%.

Table 4.4: Percentage distribution of Respondents Religion

| Religion | Number | Percent |
|--------------------------|--------|---------|
| Catholic | 313 | 13.7 |
| Protestant | 258 | 11.3 |
| Pentecostal/Charismatic | 849 | 37.2 |
| Other Christian | 288 | 12.6 |
| Islam | 428 | 18.8 |
| Traditional/Spiritualist | 81 | 3.5 |
| No religion | 65 | 2.8 |
| Total | 2282 | 100.0 |

Source: Computed from GDHS (2014) data

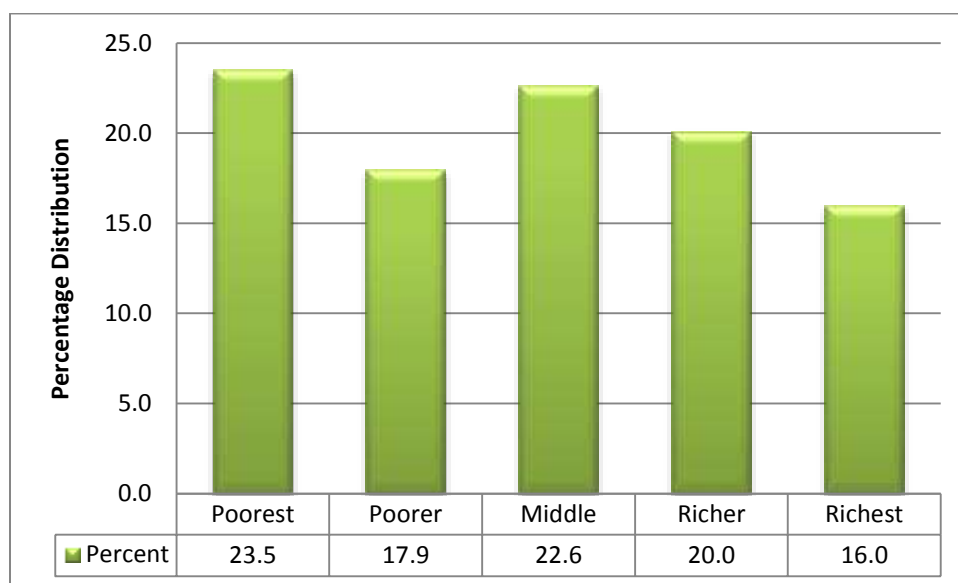
4.1.8 Wealth Quintile

The amount of money a person has may have an influence on his or her sexual health and behaviour. Poorer people may engage in risky sexual behaviour in order to attain some form of

financial stability; leading to dire consequences such as being infected with one STI or the other among many other things. An example of such a group are female sex workers.

Figure 4.4 shows that the poorest respondents had the highest representation with 23.5% while the richest had the least with 16%. This re-echoes earlier statement which suggest that poorer individuals are more likely to acquire an STI than richer people.

Figure 4.4: Percentage distribution of Respondents Wealth Quintile



Source: Computed from GDHS (2014) data

4.1.9 Region of Residence

Table 4.5 shows the percentage distribution of respondents by their regions of residence. The Northern Region recorded the highest number of respondents (15.5%) with the two other regions also located in the northern parts of the country; Upper East and Upper West, recording the least

number of respondents 5.6% and 5.5% respectively. The Brong Ahafo Region follow the Northern Region closely with 15.3% representation. The Ashanti Region, Volta Region and the Greater Accra Region recorded 11.2%, 10.7% and 10.4% representation respectively. The Western, Central and Eastern regions also recorded 9.1%, 8.5% and 8.2% representation respectively.

Table: 4.5 Percentage distribution of Respondents Region of Residence

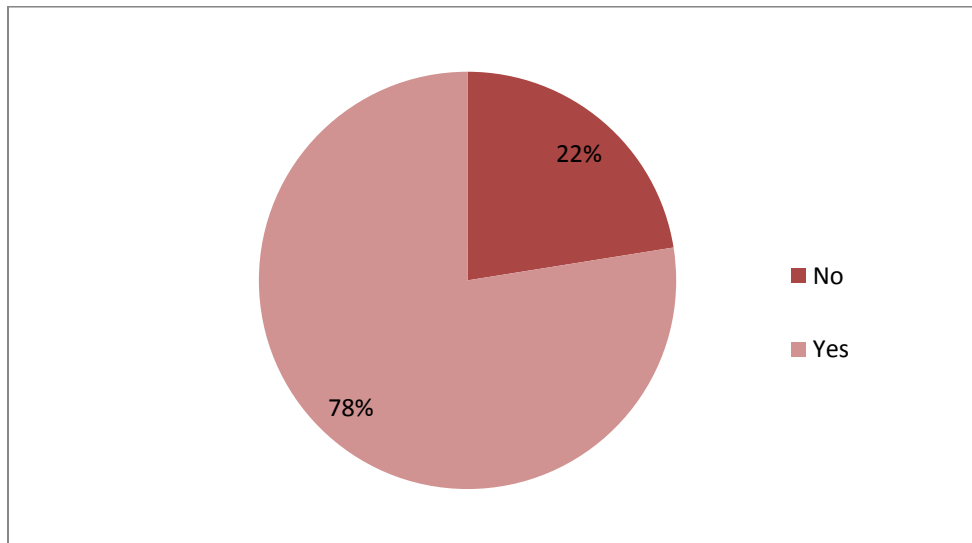
| Region | Number | Percent |
|---------------|--------|---------|
| Western | 208 | 9.1 |
| Central | 193 | 8.5 |
| Greater Accra | 237 | 10.4 |
| Volta | 256 | 11.2 |
| Eastern | 186 | 8.2 |
| Ashanti | 245 | 10.7 |
| Brong Ahafo | 350 | 15.3 |
| Northern | 354 | 15.5 |
| Upper East | 128 | 5.6 |
| Upper West | 125 | 5.5 |
| Total | 2282 | 100.0 |

Source: Computed from GDHS (2014) data

4.1.10 Employment Status

The results in Figure 4.5 indicate that 78% of the respondents are working while 22% are not indicating that a large majority of persons who had reported to have had an STI or symptoms of it are economically active.

Figure 4.5: Percentage distribution of Respondents Employment Status

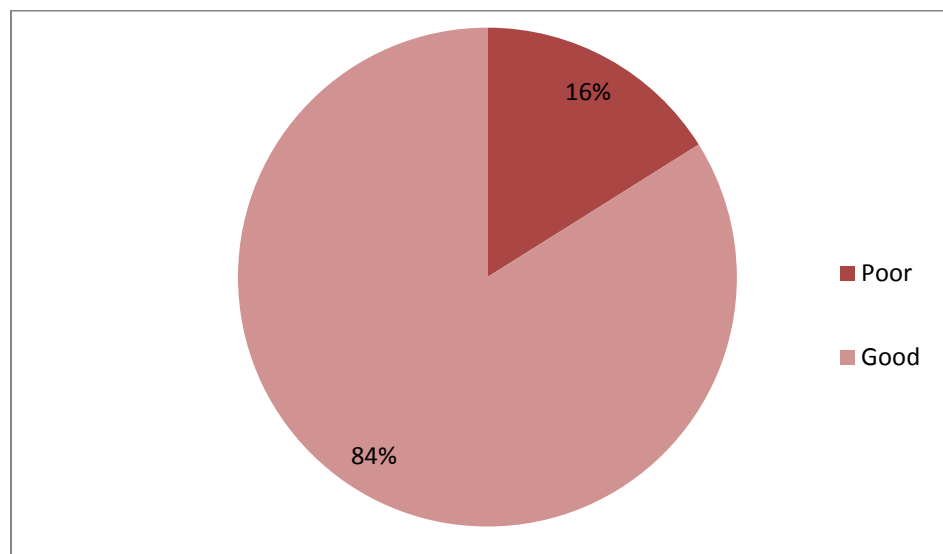


Source: Computed from GDHS (2014) data

4.1.11 Knowledge about the Disease (STIs)

Since sexually transmitted infections continue to pose a serious public health problem, an individual's knowledge about the disease will not only inform what preventive measures they take but also inform their health seeking behaviour. It is therefore important to assess respondents' understanding of sexually transmitted infections and how well they are able to identify symptoms when they occur. Figure 4.6 shows that the majority of people who responded positive to having had an STI or experienced STI symptoms (84%), have good knowledge about the disease while 16% have poor knowledge.

Figure 4.6: Percentage distribution of Respondents Knowledge about the Disease (STIs)

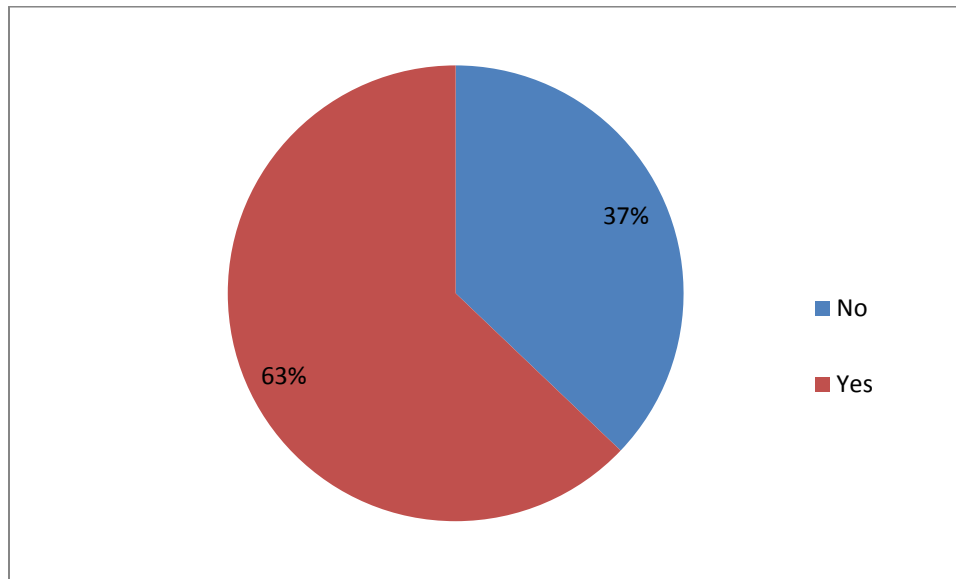


Source: Computed from GDHS (2014) data

4.1.12 Health Insurance

Health insurance not only makes health care delivery affordable but also improves accessibility to healthcare and quality medication. Due to the high cost of medical care in the country, insured individuals are protected against financial hardships that may result from health care expenses. Thus, insured persons who may have an STI or experience STI symptoms may with ease visit a health care facility as early as possible before the condition worsens and subsequently further spread of the infection to other people. Knowing the health insurance status of respondents will help in determining their health seeking behaviour. Figure 4.7 shows that majority of the respondents (63%) are covered by health insurance while the other 37% are not covered by any type of health insurance.

Figure 4.7: Percentage distribution of Respondents by Health Insurance

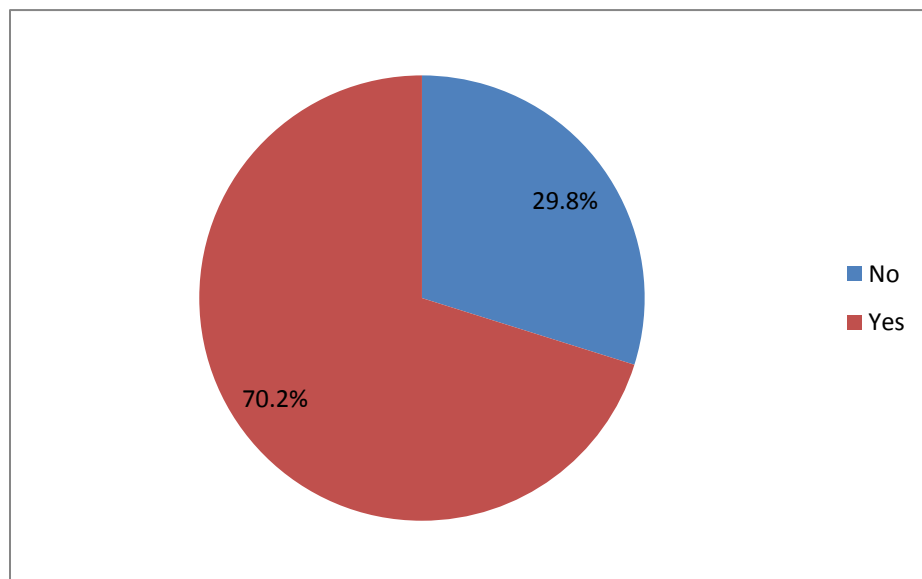


Source: Computed from GDHS (2014) data

4.1.13 Health Seeking behaviour of respondents

Health seeking behaviour in this study refers to the action or inaction (with respect to health care treatment) taken by respondents who had experienced STI symptoms or had an STI in the last 12 months preceding the survey. Figure 4.8 shows that 29.8% reported that they did not seek health care or treatment for an STI or symptoms they experienced while the majority (70.2%) did. This indicates that, three out of every ten persons who responded to having had an STI or experienced an STI symptom, did not seek health care or treatment.

Figure 4.8: Percentage distribution of Respondents by their Health Seeking Behaviour



Source: Computed from GDHS (2014) data

4.2 Relationship between Respondents' Background Characteristics and Health Seeking Behaviour

This section uses cross tabulations to examine the relationship between each independent and intermediate variable and the dependent variable (health seeking behaviour). Using the chi-square test of independence, an alpha value less than 0.05 indicates that there is an association between an independent or intermediate variable selected and health seeking behaviour. An alpha value greater than or equal to 0.05 however indicates that no association exists between an independent or intermediate variable and health seeking behaviour.

Table 4.6 Crosstabulation Showing the Relationship Between Demographic Variables and Health Seeking Behaviour

| Variables | Sought STI treatment | Total |
|-----------------------|-----------------------------|-----------------|
| | Yes (%) | |
| Age Categories | | |
| 15-19 | 58.3 | 290 |
| 20-24 | 74.6 | 556 |
| 25-29 | 75.3 | 470 |
| 30-34 | 66.7 | 345 |
| 35-39 | 74.7 | 297 |
| 40-44 | 65.4 | 211 |
| 45-49 | 64.6 | 113 |
| $X^2= 39.813$ | df = 6 | p-value <0.001 |
| Sex | | |
| Male | 70.1 | 308 |
| Female | 70.2 | 1974 |
| $X^2= 0.000$ | df = 1 | p-value = 0.991 |
| Marital Status | | |
| Never Married | 70.8 | 774 |
| Married | 70.0 | 1295 |
| Ever Married | 68.5 | 213 |
| $X^2= 0.427$ | df = 2 | p-value = 0.808 |

Source: Computed from GDHS (2014) data

4.2.1 Age of respondents and Health Seeking Behaviour

Table 4.6 shows that the association between age and health seeking behaviour is found to be statistically significant (p -value <0.001). Teenagers had the least proportion of respondents who sought STI treatment. Out of the 290 respondents aged 15-19 years, only 58.3% sought treatment. The group of individuals 25-29 years, had the highest proportion (75.3%), followed by those aged 35-39 years (74.7%) and those aged 20-24 years (74.6%). Nearly 67% aged 30-34 sought STI treatment. The last two age groups (40-44 and 45-49) also had 65.4% and 64.6% of their respondents seeking treatment respectively.

These findings confirm knowledge revealed by Mani et. al., (2013) where they indicated in their study that age was associated with the utilization of health care systems and in comparison to younger ages, a higher proportion of women aged 26 to 35 years sought health treatment for symptoms of Reproductive Tract Infections (RTI) including STIs. They indicated that the reason for this was that 26-35year olds were more likely to seek care for antenatal, postnatal and child care services and so were in a better position to seek treatment for an RTI/STI. Again, a study by Zyaambo et. al., (2012) revealed that urban dwellers aged 30-39 years were two times more likely to seek health care than those 15-19 years. It may be concluded that, as a person gets older, he or she not only becomes more knowledgeable in matters pertaining to his or her sexual and reproductive health but also through experiences are able to make better sexual and reproductive health care decisions which include their health seeking behaviour.

4.2.2 Sex and Health Seeking Behaviour

Some studies have shown that women are more likely to have STIs than men. According to Sloan et al., (2000) STI prevalence is higher among women than men especially in developing countries. Also, Ihaji et al., (2014) in their study established a statistically significant association between

sex and health seeking behaviour and stated that women employ the use of healthcare facilities more than men do. Contradictory evidence from this study indicates that there is no significant association between sex and health seeking behaviour. From Table 4.6, 70.1% of the male respondents sought treatment for an STI infection likewise 70.2% female respondents. With a p-value greater than 0.05 (p-value = 0.991), the chi-square test shows that there is no significant association between sex and health seeking behaviour.

4.2.3 Marital Status and Health Seeking Behaviour

The result from Table 4.6 shows that there is no association between marital status and health seeking behaviour (p-value =0.808). This means that marital status does not have any significant relationship with health seeking behaviour. This however contradicts findings by Adaramaja & Tijani (2014); they found that marital status is significantly associated with health seeking behaviour. It should be noted however that their reference to health seeking behaviour was general and not specific to STIs.

Table 4.7 Crosstabulation Showing the Relationship Between Socio-Economic Variables and Health Seeking Behaviour

| Variables | Sought STI treatment | Number |
|---------------------------|----------------------|----------------|
| | Yes (%) | |
| Place of Residence | | |
| Urban | 76.0 | 1192 |
| Rural | 63.8 | 1090 |
| $X^2= 40.777$ | df = 1 | p-value <0.001 |

Table 4.7 continued

| Ethnicity | | |
|--------------------------|--------|----------------|
| Akan | 74.8 | 900 |
| Ga Dangme | 76.2 | 126 |
| Ewe | 72.3 | 346 |
| Mole Dagbani | 69.2 | 467 |
| Gurma | 40.8 | 211 |
| Other | 74.6 | 232 |
| $X^2 = 101.575$ | df = 5 | p-value <0.001 |
| Educational Level | | |
| No education | 49.9 | 481 |
| Primary | 65.7 | 385 |
| Secondary | 77.4 | 1294 |
| Higher | 86.9 | 122 |
| $X^2 = 146.977$ | df = 3 | p-value <0.001 |
| Religion | | |
| Catholic | 76.7 | 313 |
| Protestant | 74.8 | 258 |
| Pentecostal/Charismatic | 70.7 | 849 |
| Other Christian | 77.1 | 288 |
| Islam | 65.9 | 428 |
| Traditional/Spiritualist | 34.6 | 81 |
| No Religion | 55.4 | 65 |
| $X^2 = 75.229$ | df = 6 | p-value <0.001 |

| Wealth Quintile | | |
|--------------------------|--------|-----------------|
| Poorest | 53.0 | 536 |
| Poorer | 65.5 | 409 |
| Middle | 74.8 | 516 |
| Richer | 79.6 | 457 |
| Richest | 82.1 | 364 |
| $X^2= 129.655$ | df = 4 | p-value <0.001 |
| Region | | |
| Western | 72.1 | 208 |
| Central | 66.8 | 193 |
| Greater Accra | 81.9 | 237 |
| Volta | 71.1 | 256 |
| Eastern | 78.0 | 186 |
| Ashanti | 78.8 | 245 |
| Brong Ahafo | 67.4 | 350 |
| Northern | 52.8 | 354 |
| Upper East | 86.7 | 128 |
| Upper West | 59.2 | 125 |
| $X^2= 107.069$ | df = 9 | p-value <0.001 |
| Employment Status | | |
| Not Working | 68.8 | 513 |
| Working | 70.5 | 1769 |
| $X^2= 0.573$ | df = 1 | p-value = 0.449 |

Source: Computed from GDHS (2014) data

4.2.4 Place of Residence and Health Seeking Behaviour

Empirical evidence shows that urban dwellers are more privileged with regards to access to health care facilities than people in rural areas (Marrone et al., 2014) and as such are more likely to access health care facilities. In rural areas, there is a high incidence of STIs/RTIs because of the lack of awareness and health facilities (Singh et al., 2015). This assertion is also evident in this study. Table 4.7 shows that 76% of all respondents in urban areas sought STI treatment as compared to 63.8% in rural areas. The chi-square test shows that there is a significant association between place of residence and health seeking behaviour (p-value <0.001).

4.2.5 Ethnicity and Health Seeking Behaviour

The relationship between ethnicity and health seeking behaviour is presented in Table 4.7 as follows; the highest proportion of respondents who sought STI treatment were the Ga-Adangbes (76.2%). This may be attributed to the fact that they (Ga-Adangbes) are mostly found in the region which hosts the country's capital and the Greater Accra Region has more health facilities than in any other region of the country. The Akans follow with 76.2%, then the Ewes with 72.3%. The Gurma however had the least proportion (40.8%). The chi square test of association shows that a significant association between ethnicity and health seeking behaviour (p-value <0.001).

4.2.6 Education and Health Seeking Behaviour

The importance of education is acknowledged globally and empirical evidence shows that better educated individuals are not only healthier but are at a lower risk of mortality. Ravi & Kulasekaran, (2014) stated that educated women are more capable of seeking the right sources of treatment, using health care facilities more efficiently and thus, are able to make good investments in their

health. Less educated individuals on the other hand often have poorer access to and lower quality of medical care (Goldman and Smith, 2002). Thus, education has a positive impact on health care utilization. Table 4.7 shows that education is positively associated with health seeking behaviour; as educational status increases, so is there an improvement in respondents' health seeking behaviour. Respondents with higher education had the highest proportion (86.9%) whilst those with no education had the least proportion (49.9%) who sought STI treatment. Almost 66% of the respondents with primary education and 77.4% with secondary education sought treatment. A chi square test of association shows that there is a significant association between education and health seeking behaviour (p-value <0.001). These findings are consistent with findings from Ihaji et al., (2014) where they found that education was statistically significant with health seeking behaviour and better educated respondents were reported to have had a higher score on health seeking behaviour than the less educated respondents.

4.2.7 Religion and Health Seeking Behaviour

Table 4.7 shows that only 34.6% of the respondents who profess to being traditionalist/spiritualists sought health care treatment when they had an STI. This may be due to the fact that because the belief is that STIs are as a result of supernatural causes rather than acquired through sexual intercourse, they tend to engage the services of traditional healers rather than visit a health care facility (Zachariah et al., 2002). It is important to note that the survey (GDHS 2014) did not include traditional healers as an option for healthcare service. Those with no religious affiliation follow with 55.4%, then those who profess Islam (65.9%). Other Christians had the highest proportion (77.1%) and this is followed closely by Catholic, Protestant and Pentecostal/Charismatic with 76.7%, 74.8% and 70.7% respectively. The chi square test of association shows that there is a significant association between religion and health seeking behaviour (p-value <0.001).

4.2.8 Wealth Quintile and Health Seeking Behaviour

Studies have shown that individuals with a lower economic status are not only more likely to have STI/STI symptoms but are also less likely to seek health care for a number of reasons including not being able to afford costs involved (Adanu et al., 2008; Ravi & Nair, 2011; Ravi & Kulasekaran, 2014). This study confirms these findings as Table 4.7 shows that the proportion of respondents who sought treatment for an STI infection increases with higher wealth status. About 82% in the richest wealth group sought treatment as compared to 53% in the poorest wealth group. The chi square test of association shows that there is a significant association between wealth quintile and health seeking behaviour (p-value <0.001).

4.2.9 Region of Residence and Health Seeking Behaviour

Results from the Table 4.7 show regional variations in health care service utilization. The relationship between region of residence is statistically significant giving us a p-value <0.001. In all ten regions, majority of respondents (70.2%) sought STI treatment but the proportions vary. The Northern Region had the least proportion (52.8%) followed by another region located in the northern parts of the country (the Upper West Region) with 59.2%. Interestingly, the third region located in the northern part; Upper East Region, had the highest proportion (86.7%) of those of sought STI treatment. This may be as a result of the Navrongo Research Centre. The Navrongo Research Centre (NHRC) which is located in the Kassena-Nankana District of the Upper East Region, focuses on the major causes of illness in the northern parts of the country with the aim of improving the health status of the people who are reside there. The Greater Accra Region follows with 81.9% and this may be due to the fact that the Greater Accra Region has more health facilities than in any other region of the country. Thus, it may be concluded that access to and availability of health care facilities in the various regions may account for these variations.

4.2.10 Employment Status and Health Seeking Behaviour

Some studies reveal that there is a statistically significant association between employment status and health seeking behaviour where employed individuals are more likely than the unemployed to seek care for an STI infection (Go et al., 2002; Bhanderi & Kannan, 2010). Findings from this study however reveal otherwise. From Table 4.7, it can be seen that 68.8% of respondents who are not working sought STI treatment likewise 70.5% of those who are working. A chi-square test also shows that there is no significant association between employment status and health seeking behaviour; the p-value is greater than 0.05 (p-value =0.449).

Table 4.8 Crosstabulation Showing the Relationship Between Knowledge about STIs, Health Insurance and Health Seeking Behaviour

| Variables | Sought STI treatment | Number |
|-----------------------------|----------------------|-----------------|
| | Yes (%) | |
| Knowledge about STIs | | |
| Poor | 49.6 | 367 |
| Good | 74.1 | 1915 |
| $X^2= 88.354$ | df = 1 | p-value < 0.001 |
| Health Insurance | | |
| No | 64.8 | 847 |
| Yes | 73.3 | 1435 |
| $X^2= 18.350$ | df = 1 | p-value < 0.001 |

Source: Computed from GDHS (2014) data

4.2.11 Knowledge about STIs and Health Seeking Behaviour

Sexually transmitted infections are known as behaviour-based diseases and the lack of knowledge and awareness leave a large section of the population at risk of contracting the infection. It is therefore important that individuals acquire the right knowledge about the disease in order not only to prevent being infected but also seek proper and timely health care when infected. From Table 4.8, it can be seen that 49.6% of those who had relatively poor knowledge about the disease (STIs) sought treatment for it as compared to 74.1% of those who had good knowledge. A significant association ($p\text{-value} < 0.0001$) was found between knowledge about STIs and health seeking behaviour.

4.2.12 Health Insurance and Health Seeking Behaviour

Affordable health insurance not only encourages timely use of healthcare services but also provides financial protection against unexpected out-of-pocket healthcare expenditure (Woldemichael & Shimeles, 2015). In Ghana, the National Health Insurance Scheme (NHIS) covers 95% of diseases prevalent in the country including STIs. This explains why in this study; 64.8% of respondents who did not have health insurance sought treatment as against 73.3% of those who had health insurance. A chi-square test shows a significant association ($p\text{-value} < 0.0001$) was found between health insurance coverage and health seeking behaviour.

CHAPTER FIVE

DETERMINANTS OF HEALTH SEEKING BEHAVIOUR IN GHANA

5.0 Introduction

This chapter focuses on the demographic and socio-economic factors that are associated with health seeking behaviour. It presents findings from the binary logistic regression analyses performed in order to determine the extent of influence of the demographic, socio-economic and intermediate variables on health seeking behaviour. Binary logistic regression analyses were used because the dependent variable is dichotomous, that is whether a person sought care or treatment for an STI or not. 'Yes' responses were coded as 1 and 'No' responses were coded as 0.

Four models were developed; the first model (Model 1) examined the influence of demographic variables on health seeking behaviour. Model 2 examined the influence of socio-economic variables on health seeking behaviour. Model 3 examined the influence of health insurance and knowledge about STIs on health seeking behaviour. The last model; model 4 examined the influence of all the demographic, socio-economic and intermediate variables together on health seeking behaviour.

A reference category (RC) was selected from each of the categorical variables and the odds ratios of all the categories that form a particular variable was then compared with the reference category (RC) of that same variable. The findings represented in the odds ratios show the magnitude of the effect of each category on health seeking behaviour. An odds ratio equal to one indicates the absence of a relationship, odds ratios greater than one indicate a greater likelihood and odds ratios less than one indicate a lesser likelihood of seeking STI treatment in comparison with the reference

category. The analyses were conducted at 95% significance level where a p-value <0.05 indicate that the variable is statistically significant.

In the regression analysis, the demographic variables; age, sex, marital status and the socio-economic variables; employment status, educational level, religion, place of residence, region, wealth quintile and marital status; were used as the independent variables. Knowledge about STIs and health insurance were used as intermediate variables.

5.1 Model 1: The Influence of Demographic Variables on Health Seeking Behaviour

The first model examines the influence of demographic variables (age, sex and marital status) on health seeking behaviour. The findings from Model 1 (Table 5.1) show that the model is statistically significant (p-value = 0.000) and the variables used in the model explain 2.6 per cent of the variation in health seeking behaviour. The model also correctly predicts 70.2% of the responses.

Results in Table 5.1 again show that there is a significant association between age and health seeking behaviour. Using respondents aged 15-19 years as the reference category, older age groups were more likely to seek STI treatment. Sex and marital status are both not significantly associated with health seeking behaviour.

Table 5.1 A Binary Logistic Regression Model of Demographic Variables and Health Seeking Behaviour

| Indicator | OR | 95% CI | P- Value |
|---------------------------|------------|---------------|-----------------|
| Age | | | |
| 15-19 (RC) | 1.00 | | |
| 20-24 | 2.28 | [1.66, 3.11] | 0.000 |
| 25-29 | 2.54 | [1.79, 3.61] | 0.000 |
| 30-34 | 1.74 | [1.19, 2.54] | 0.004 |
| 35-39 | 2.61 | [1.73, 3.93] | 0.000 |
| 40-44 | 1.68 | [1.09, 2.58] | 0.018 |
| 45-49 | 1.63 | [0.99, 2.70] | 0.058 |
| Sex | | | |
| Female (RC) | 1.00 | | |
| Male | 0.96 | [0.73, 1.25] | 0.734 |
| Marital Status | | | |
| Never Married (RC) | 1.00 | | |
| Married | 0.79 | [0.61, 1.02] | 0.075 |
| Ever Married | 0.74 | [0.51, 1.07] | 0.108 |
| Correct % Prediction | 70.2 | | |
| Nagelkerke R ² | 2.6% | | |
| Model Chi square (df) | 42.759 (9) | | |
| Constant | 1.443 | | |

(RC)= Reference Category; OR= Odds Ratio; Significant at α (p-value) <0.05

Source: Computed from GDHS (2014) data

5.2 Model 2: The Influence of Socio-economic Variables on Health Seeking Behaviour

The second model examines the influence of socio-economic variables on health seeking behaviour. A Nagelkerke R^2 value shows that 16.5% of the variation in health seeking behaviour is explained by the socio-economic variables in the model. The table also shows that the overall model is statistically significant (p -value = 0.000) and correctly predicts 73% of the responses.

Findings from the table show that there is a significant association between region of residence and health seeking behaviour. In comparison to the reference category (Western Region), respondents in Greater Accra, Volta, Eastern, Ashanti, Brong Ahafo, Northern and Upper East regions were more likely to seek STI treatment. However, respondents in Central Region were 0.78 times less likely (OR = 0.78) to seek STI treatment likewise respondents in the Upper West Region (OR = 0.64) as compared to respondents in the Western Region.

Again, a significant association exists between religion and health seeking behaviour. Apart from the traditionalists who were 0.76 times less likely to seek STI treatment (OR = 0.76) than those who had no religious affiliation, all the other religious groups (Catholic, Protestant, Pentecostal/Charismatic, Other Christian and Islam) were more likely to seek STI treatment than those with no religious affiliation.

With respect to ethnicity, there was a significant association with health seeking behaviour. Ga Dangme, Ewe and Gurma were less likely to seek STI treatment than Akans were. Mole Dagbani had an odds of 1.38 implying that they were 1.38 times more likely to seek STI treatment than Akan likewise those who formed 'other' ethnic group (OR = 1.28).

Wealth quintile was also found to be significantly associated with health seeking behaviour. It can be seen from the Table 5.2 that, the higher a person's wealth status, the greater the odds of seeking STI treatment. Respondents in the poorer wealth group had an odds of 1.44, implying that they were 1.44 times more likely to seek STI treatment than those in the poorest wealth group. Those in the richest wealth group had the greatest likelihood (OR = 2.94) of seeking treatment.

Educational level which was also found to be significantly associated with health seeking behaviour follows the same pattern as results show for wealth quintile; that is better educated respondents were more likely to seek STI treatment. Results show that respondents with higher education had the greatest likelihood (OR = 3.58) of seeking treatment for an STI infection.

The last variable that was found to be statistically significant in this model (Model 2) is employment status. Respondents who were working had a greater likelihood (OR = 1.43) of seeking STI treatment than those who were not working.

With respect to place of residence, no significant difference was observed between rural and urban residence.

Table 5.2 A Binary Logistic Regression Model of Socio-economic Variables and Health Seeking Behaviour

| Indicator | OR | 95% CI | P- Value |
|--------------------------|-----------|---------------|-----------------|
| Region | | | |
| Western (RC) | 1.00 | | |
| Central | 0.78 | [0.50, 1.21] | 0.258 |
| Greater Accra | 1.84 | [1.10, 3.07] | 0.020 |
| Volta | 1.68 | [0.97, 2.91] | 0.064 |
| Eastern | 1.56 | [0.95, 2.55] | 0.081 |
| Ashanti | 1.27 | [0.81, 1.99] | 0.301 |
| Brong Ahafo | 1.17 | [0.78, 1.77] | 0.454 |
| Northern | 1.18 | [0.72, 1.94] | 0.510 |
| Upper East | 3.53 | [1.78, 7.00] | 0.000 |
| Upper West | 0.64 | [0.37, 1.13] | 0.122 |
| Religion | | | |
| No Religion (RC) | 1.00 | | |
| Catholic | 2.00 | [1.09, 3.68] | 0.025 |
| Protestants | 1.33 | [0.72, 2.48] | 0.366 |
| Pentecostal/Charismatic | 1.25 | [0.72, 2.19] | 0.430 |
| Other Christian | 1.73 | [0.94, 3.19] | 0.078 |
| Islam | 1.23 | [0.67, 2.25] | 0.515 |
| Traditional/Spiritualist | 0.76 | [0.37, 1.80] | 0.465 |
| Ethnicity | | | |
| Akan (RC) | 1.00 | | |
| Ga Dangme | 0.75 | [0.45, 1.24] | 0.262 |
| Ewe | 0.74 | [0.48, 1.14] | 0.166 |

Table 5.2 continued

| | | | |
|---------------------------|--------------|--------------|-------|
| Mole Dagbani | 1.38 | [0.94, 2.03] | 0.106 |
| Gurma | 0.60 | [0.38, 0.96] | 0.033 |
| Other | 1.28 | [0.85, 1.94] | 0.242 |
| Wealth Quintile | | | |
| Poorest (RC) | 1.00 | | |
| Poorer | 1.44 | [1.05, 1.97] | 0.023 |
| Middle | 2.19 | [1.54, 3.11] | 0.000 |
| Richer | 2.71 | [1.79, 4.10] | 0.000 |
| Richest | 2.94 | [1.80, 4.80] | 0.000 |
| Educational Level | | | |
| No education (RC) | 1.00 | | |
| Primary | 1.54 | [1.13, 2.10] | 0.006 |
| Secondary | 2.24 | [1.70, 2.96] | 0.000 |
| Higher | 3.58 | [1.95, 6.58] | 0.000 |
| Employment Status | | | |
| Not Working (RC) | 1.00 | | |
| Working | 1.43 | [1.13, 1.80] | 0.002 |
| Place of Residence | | | |
| Urban (RC) | 1.00 | | |
| Rural | 1.29 | [0.99, 1.69] | 0.061 |
| Correct % Prediction | 73.0 | | |
| Nagelkerke R ² | 16.5% | | |
| Model Chi square (df) | 281.957 (29) | | |
| Constant | 0.302 | | |

(RC)= Reference Category; OR= Odds Ratio; Significant at α (p-value) <0.05

Source: Computed from GDHS (2014) data

5.3 Model 3: The Influence of Health Insurance and Knowledge about STIs on Health Seeking Behaviour

The third model (Model 3) examines the influence of health insurance and knowledge about STIs (intermediate variables) on health seeking behaviour. The results showed that, 5.8% of the variations in health seeking behaviour is explained by these intermediate variables. The overall model is statistically significant (p -value = 0.000) and correctly predicts 71.1% of the responses.

Results from Table 5.3 show that health insurance is significantly associated with health seeking behaviour. Respondents who had health insurance were 1.42 times more likely to seek STI treatment (OR = 1.42) than those who did not have health insurance.

Knowledge about STIs is also significantly associated with health seeking behaviour. Respondents who had poor knowledge about STIs were 0.35 times less likely (OR = 0.35) to seek STI treatment than those with good knowledge.

Table 5.3 A Binary Logistic Regression Model Showing the Relationship between Health Insurance, Knowledge about STIs and Health Seeking Behaviour

| Indicator | OR | 95% CI | P- Value |
|-----------------------------|------|--------------|----------|
| Health Insurance | | | |
| No (RC) | 1.00 | | |
| Yes | 1.42 | [1.18, 1.72] | 0.000 |
| Knowledge about STIs | | | |
| Good (RC) | 1.00 | | |
| Poor | 0.35 | [0.28, 0.44] | 0.000 |

Table 5.3 continued

| | |
|---------------------------|------------|
| Correct % Prediction | 71.1 |
| Nagelkerke R ² | 5.8% |
| Model Chi square (df) | 95.940 (2) |
| Constant | 2.294 |

(RC)= Reference Category; OR= Odds Ratio; Significant at α (p-value) <0.05

Source: Computed from GDHS (2014) data

5.4 Model 4: The Influence of Demographic, Socio-economic and Intermediate Variables on Health Seeking Behaviour

In Model 4, the demographic, socio-economic and intermediate variables were all put together to examine how these variables influence health seeking behaviour. The results in Table 5.4 showed that, 21.1% of the variations in health seeking behaviour is explained by the variables in the model. The overall model is statistically significant (p-value = 0.000) and correctly predicts 74.2% of the responses. Model (4) as presented in Table 5.4 indicate that eight out of the selected twelve variables had significant relationship with health seeking behaviour. These include; age, region, religion, ethnicity, wealth quintile, educational level, health insurance and knowledge about STIs.

As observed in Model 1, there is a significant association between age and health seeking behaviour. Using respondents aged 15-19 years as the reference category, older age groups were more likely to seek STI treatment and respondents aged 35-39 years had the greatest likelihood (OR = 2.26).

Region of residence is also significantly associated with health seeking behaviour. Respondents from Central, Northern and Upper West regions were less likely than respondents from Western Region to seek STI treatment; with respondents from Upper West Region having the least likelihood of seeking treatment (OR = 0.50). All the other regions were however more likely to seek STI treatment.

With respect to religion, the model in Table 5.4 shows that there is a significant association with health seeking behaviour. In comparison to those with no religious affiliation, Catholics had the greatest likelihood of seeking STI treatment (OR = 2.05) whereas the traditionalists had the least likelihood of seeking treatment (OR= 0.82).

Just as in Model 2, ethnicity is significantly associated with health seeking behaviour in this model (Model 4). Mole Dagbani and 'other' ethnic group were 1.53 times and 1.40 times more likely to seek STI treatment respectively (OR = 1.53 and OR = 1.40) than Akan. The other ethnic groups (Ga Dangme, Ewe and Gurma) had odds less than 1, implying that respondents were less likely to seek STI treatment than the reference category (Akan).

Wealth quintile was also found to be significantly associated with health seeking behaviour. Just as in Model 2, the wealthier a respondent the greater the odds of seeking STI treatment. Respondents in the poorer wealth group had an odds ratio of 1.36 indicating that they were 1.36 times more likely than those in the poorest wealth group to seek treatment. However, results in Table 5.4 show that respondents in the richer and richest wealth groups had the same odds ratio (2.22), indicating that both groups had the greatest likelihood of seeking treatment.

Educational level was found to be significantly associated with health seeking behaviour. Respondents with primary education had odds ratio of 1.70 implying that they were 1.70 times

more likely to seek treatment than those with no education; likewise, those with secondary education (OR = 2.37). Respondents with higher education had the greatest likelihood of seeking treatment (OR = 3.18). Results show that better educated individuals were more likely to seek STI treatment.

Results from Table 5.4 again show that health insurance is significantly associated with health seeking behaviour. Respondents who had health insurance were 1.44 times more likely to seek treatment (OR = 1.44) than those who did not have health insurance.

Lastly, just as in Model 3, knowledge about STIs is significantly associated with health seeking behaviour. Respondents who had poor knowledge about STIs were 0.48 times less likely (OR = 0.48) to seek STI treatment than those who had good knowledge.

Sex, marital status, place of residence and employment status were not significantly associated with health seeking behaviour in this model (Model 4).

Table 5.4 A Binary Logistic Regression Model showing the Relationship between Demographic, Socio-economic, Intermediate Variables and Health Seeking Behaviour

| Indicator | OR | 95% CI | P- Value |
|-----------------------|-----------|---------------|-----------------|
| Age | | | |
| 15-19 (RC) | 1.00 | | |
| 20-24 | 1.98 | [1.41, 2.80] | 0.000 |
| 25-29 | 1.89 | [1.27, 2.81] | 0.002 |
| 30-34 | 1.32 | [0.86, 2.04] | 0.203 |
| 35-39 | 2.26 | [1.41, 3.60] | 0.001 |
| 40-44 | 1.49 | [0.91, 2.42] | 0.110 |
| 45-49 | 1.61 | [0.90, 2.87] | 0.109 |
| Sex | | | |
| Female (RC) | 1.00 | | |
| Male | 1.10 | [0.80, 1.50] | 0.567 |
| Marital Status | | | |
| Never Married (RC) | 1.00 | | |
| Married | 1.29 | [0.96, 1.73] | 0.088 |
| Ever Married | 0.87 | [0.58, 1.30] | 0.484 |
| Region | | | |
| Western (RC) | 1.00 | | |
| Central | 0.81 | [0.52, 1.29] | 0.379 |
| Greater Accra | 1.90 | [1.12, 3.23] | 0.017 |
| Volta | 1.35 | [0.77, 2.37] | 0.303 |
| Eastern | 1.53 | [0.92, 2.54] | 0.103 |
| Ashanti | 1.31 | [0.82, 2.09] | 0.254 |
| Brong Ahafo | 1.01 | [0.66, 1.55] | 0.952 |

Table 5.4 continued

| | | | |
|--------------------------|------|--------------|-------|
| Northern | 0.94 | [0.56, 1.57] | 0.813 |
| Upper East | 2.88 | [1.42, 5.82] | 0.003 |
| Upper West | 0.50 | [0.28, 0.89] | 0.019 |
| Religion | | | |
| No Religion (RC) | 1.00 | | |
| Catholic | 2.05 | [1.09, 3.84] | 0.026 |
| Protestant | 1.37 | [0.72, 2.61] | 0.340 |
| Pentecostal/Charismatic | 1.35 | [0.76, 2.42] | 0.306 |
| Other Christian | 1.90 | [1.01, 3.57] | 0.047 |
| Islam | 1.20 | [0.64, 2.25] | 0.575 |
| Traditional/Spiritualist | 0.82 | [0.39, 1.75] | 0.611 |
| Ethnicity | | | |
| Akan (RC) | 1.00 | | |
| Ga Dangme | 0.75 | [0.45, 1.26] | 0.279 |
| Ewe | 0.79 | [0.51, 1.24] | 0.303 |
| Mole Dagbani | 1.53 | [1.03, 2.27] | 0.038 |
| Gurma | 0.67 | [0.42, 1.08] | 0.102 |
| Other | 1.40 | [0.91, 2.14] | 0.124 |
| Wealth Quintile | | | |
| Poorest (RC) | 1.00 | | |
| Poorer | 1.36 | [0.96, 1.89] | 0.061 |
| Middle | 2.01 | [1.40, 2.89] | 0.000 |
| Richer | 2.22 | [1.45, 3.41] | 0.000 |
| Richest | 2.22 | [1.34, 3.68] | 0.002 |

| Educational Level | | | | |
|----------------------------------|------|--------------|--|-------|
| No education (RC) | 1.00 | | | |
| Primary | 1.70 | [1.23, 2.36] | | 0.001 |
| Secondary | 2.37 | [1.74, 3.22] | | 0.000 |
| Higher | 3.18 | [1.69, 5.99] | | 0.000 |
| Employment Status | | | | |
| Not Working (RC) | 1.00 | | | |
| Working | 1.15 | [0.88, 1.49] | | 0.306 |
| Place of Residence | | | | |
| Urban (RC) | 1.00 | | | |
| Rural | 1.24 | [0.94, 1.63] | | 0.127 |
| Health Insurance Coverage | | | | |
| No (RC) | 1.00 | | | |
| Yes | 1.44 | [1.16, 1.78] | | 0.001 |
| Knowledge about STIs | | | | |
| Good (RC) | 1.00 | | | |
| Poor | 0.48 | [0.37, 0.62] | | 0.000 |

| | |
|---------------------------|--------------|
| Correct % Prediction | 74.2 |
| Nagelkerke R ² | 21.1% |
| Model Chi square (df) | 366.792 (40) |
| Constant | 0.191 |

(RC)= Reference Category; OR= Odds Ratio; Significant at α (p-value) <0.05

Source: Computed from GDHS (2014) data

5.5 Discussion

This section highlights key findings of the study. Analyses on some demographic and socio-economic as well as other intermediate variables were done in order to determine what factors influence or determine the health seeking behaviour of persons with STIs.

The results of the study show that a person's age influences their health seeking behaviour. From both the first and fourth models, age appears to be significantly associated with health seeking behaviour and as a result, the hypothesis which states that teenagers are less likely to seek STI treatment than older people was confirmed in this study. Persons above the ages of 19 years were more likely to seek STI treatment than teenagers were. This is because adolescents including teenagers lack knowledge about STIs (Prasad et. al, 2005; Joshi et. al., 2006) and they tend not to understand the repercussions of not seeking treatment. Lacking the finances to seek proper treatment and fear of parents' reaction are other barriers to seeking treatment among adolescents (Zachariah et al., 2002). Again, as a person gets older, he or she through previous experiences, will have better knowledge and will be better able to identify symptoms and thus seek timely treatment. There is therefore the need to educate adolescents and young adults especially on both STI preventive and proper health care seeking practices.

Region of residence was discovered also to influence health seeking behaviour. In both models (Model 2 and 4), Greater Accra Region was significantly associated with health seeking behaviour and came in next after the Upper East Region as having the greatest likelihood of seeking treatment. This may be due to the fact that Greater Accra Region has the highest number of health care facilities in the country and as such, there is easier access to health care services which may also attract from the other regions, persons who may experience STI symptoms. The Upper West Region was significantly associated with health seeking behaviour and had the least likelihood of

seeking treatment. The other regions on the other hand except the Central and Northern Regions were more likely to seek STI treatment.

Ethnicity was found to be statistically significant with health seeking behaviour and the Mole Dagbani had the greatest likelihood of seeking STI treatment than the Akans. With regards to religion, a significant association was also found with health seeking behaviour. The results of this study show that aside the traditionalists, respondents who belong to the other religious groups were more likely to seek treatment than those with no religious affiliation. This may be due to the fact that religion helps regulate behaviour and health habits. Pargament et. al., (1998) found a positive influence of religion on health behaviour.

The National Health Insurance Scheme (NHIS) which by law must be enrolled on by every Ghanaian, was implemented to bridge the gap between the rich and the poor in terms of accessing health care (Kuuire et al., 2015). It was made to serve the purpose of taking away the stress (especially for the poor) of high out-of-pocket payments. Several studies have shown that these modes of payment (health insurance and out-of-pocket payments) influence health seeking behaviour (Cisse, 2006; Okolo et al., 2011; Blanchet, 2012). Results from this study corroborate these findings as health insurance was significantly associated with health seeking behaviour and respondents who had health insurance had an increased likelihood of seeking STI treatment. Thus, the third hypothesis which states that individuals with health insurance are more likely to seek treatment for an STI infection was confirmed in this study.

The general consensus in the literature is that wealthier people exhibit better health outcomes whilst poorer people experience the worst health outcomes. Empirical evidence from some studies indicates that poorer people have poorer health due to the decreased access to healthcare facilities

caused by financial barriers (Habibullah & Afsar, 2013; Njuki et al., 2014). Results in this study reassert these findings; wealth was significantly associated with health seeking behaviour and respondents in the poorer wealth group had the least likelihood of seeking treatment while those in the richer and richest wealth groups had the greatest likelihood of seeking STI treatment in comparison with those from the poorest wealth group. From these findings, a question may be raised about why poorer individuals are still less likely to access healthcare in the country even though the National Health Insurance Scheme (NHIS) was implemented to bridge the gap between the poor and the rich in terms of medical expenses.

The multivariate analysis found that the relationship between education and health seeking behaviour was significant. It was realized that as individuals move up the academic ladder, the greater the odds of seeking treatment. Primary, secondary and higher levels of education were found to be significantly associated with health seeking behaviour. Those with higher education had the greatest likelihood of seeking treatment while those with primary education had the least likelihood of seeking treatment in comparison with those with no education. This finding corroborated with studies from some Sub-saharan African countries where it was discovered that education is an important determinant of health seeking behaviour and lower levels of education is associated with a decreased likelihood of seeking health care (Anselmi et al., 2015; Njuki et al., 2014; Zyaambo et al., 2012). Findings from this study have led to the confirmation of the fourth hypothesis which states that individuals with little or no education are less likely to seek STI treatment than individuals with relatively higher education.

Interestingly, there was no significant association between place of residence and health seeking behaviour. This leads to the rejection of the first hypothesis which states that rural dwellers are less likely to seek STI treatment than urban dwellers. This finding is unexpected since the general

consensus in the literature is that urban dwellers visit health care facilities more than rural dwellers do (Musoke et al., 2014; Zyaambo et al., 2012; van der Hoeven et al., 2012). A possible explanation for this may be because of improved access to health care facilities and services including the Community-Based Health Planning and Services (CHPS) compounds. CHPS was set up in the country with the primary aim of delivering essential community-based health services involving health planning and service delivery within communities in deprived sub-districts by bringing these health services closer to communities.

Also, employment status which was not significantly associated with health seeking behaviour at the bivariate level but was significantly associated with health seeking behaviour in Model 2, was again not significantly associated with it in Model 4. The presence of demographic and intermediate variables has accounted for why this is so. Thus, employment status does not determine a person's health seeking behaviour in Ghana.

With regards to knowledge about STIs, a significant association was found with health seeking behaviour. Knowledge of STI symptoms is one of the most important prerequisites for seeking prompt and proper treatment. Individuals with adequate knowledge about STIs are assumed to be better informed and thus empowered to take decisions with regards to their health. Results from this study show that respondents who had good knowledge about STIs had a greater likelihood of seeking treatment than those with poor knowledge.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary

This study sought to examine the socio-economic and demographic factors that influence the health seeking behaviour of persons with STIs in Ghana. It also sought to describe the demographic and socio-economic characteristics of these persons and establish associations between these characteristics and health seeking behaviour. The demographic and socio-economic characteristics examined were age, sex, marital status, educational level, wealth quintile, ethnicity, place of residence, region of residence, religion, employment status, knowledge about STIs and health insurance.

The following hypotheses were proposed based on Andersen and Newman's Health Utilization model and literature reviewed; rural dwellers are less likely to seek STI treatment than urban dwellers, adolescents are less likely to seek STI treatment than older people, individuals with health insurance are more likely to seek STI treatment than individuals who do not have health insurance and individuals with little or no education are less likely to seek STI treatment than individuals with higher education. These hypotheses were then tested in order to provide answers to questions this study sought to answer.

Data used was the Ghana Demographic and Health Survey (GDHS) 2014. The unit of analysis was persons aged 15-49 years who were reported to have had an STI in the last 12 months preceding the survey bringing the sample size to 308 males and 1974 females. The relationship between health seeking behaviour and the other background characteristics of this study was examined at three different levels. These are univariate, bivariate and multivariate levels of analyses.

At the univariate level, results were presented in frequencies using charts, graphs and tables. Of the 2282 respondents, 70.2% sought STI treatment while 45% were in their 20s. A majority (52.2%) resided in the urban areas, 6 out of every 10 respondents had attained secondary education, 63% were covered by health insurance and Akans had the highest representation with 39.4%.

At the bivariate level, chi-square test was used to examine the relationship between selected demographic and socio-economic variables. Testing at a 95% confidence level, results show that a significant association exists between age, place of residence, ethnicity, educational level, region of residence, religion, wealth quintile, knowledge about STIs, health insurance and health seeking behaviour. No significant association exists however between sex, marital status, employment status and health seeking behaviour.

The more knowledgeable a person was, the more he or she sought STI treatment. It was found that, 74.1% of those with good knowledge sought STI treatment as compared to 49.6% of those with poor knowledge. Having health insurance also improved a person's health seeking behaviour as 73.3% of those who had health insurance sought STI treatment as compared to 64.8% of those who did not have health insurance. It was again found that adolescents sought treatment the least as compared with the other age groups. It was observed that 76% and 63.8% of urban and rural dwellers sought STI treatment respectively. As educational level increased, so was there an improvement in health seeking behaviour. Respondents with higher education had the highest proportion (86.9%) whilst those with no education had the least proportion (49.9%).

In comparison to the other ethnic groups, Ga-Adangbes sought STI treatment the most (76.2%) and respondents in the Upper East Region had the highest proportion (86.7%) who sought STI treatment. In addition, traditionalists sought STI treatment the least (34.6%). Finally, an increment

in the proportions who sought STI treatment increased with higher levels in wealth status. About 82% of respondents who sought STI treatment were in the richest wealth group as compared to 53% in the poorest wealth group.

A binary logistic regression analysis was performed and four models were developed in order to determine what demographic and socio-economic variables influenced a person's health seeking behavior. Model 1 showed the relationship between selected demographic variables and health seeking behaviour. It was observed that the variables in the model which are age, sex and marital status explained 2.6% variations in health seeking behaviour and the model was significantly associated with health seeking behaviour. The results in Model 1 show that while all the age categories had greater odds of seeking STI treatment than those aged 15-19 years, sex and marital status were not significantly associated with health seeking behaviour.

Model 2 examined the relationship between selected socio-economic variables and health seeking behavior. The results from the binary logistic regression showed that the variables in the model explained 16.5% variation in health seeking behavior and education, ethnicity, religion, employment status, region of residence and wealth quintile were statistically significant at 95% confidence level with health seeking behavior. There was however no significant difference observed between urban and rural residence and health seeking behaviour.

The third model examines the influence of health insurance and knowledge about STIs on health seeking behavior. Health insurance and knowledge about STIs are both significantly associated with health seeking behavior at a 95% confidence level. It was observed that these two variables explained 5.8% variation in health seeking behaviour.

Model 4 comprised of all demographic, socio-economic and intermediate variables examining together, the influence they have on health seeking behaviour. The results from the binary logistic regression showed that age, education, ethnicity, religion, region of residence, wealth quintile, knowledge about STIs and health insurance were significantly associated with health seeking behaviour at 95% confidence level while sex, marital status, employment status and place of residence were not significantly associated with health seeking behaviour. It was also observed that, a 21.1% variation in health seeking behaviour is explained by these independent and intermediate variables while 78.9% is explained by other factors. Comparatively, the variables in model 4 explain the most variation than in the first three models.

These findings support the study's second, third and fourth hypotheses whereas the hypothesis which stated that rural dwellers are less likely to seek STI treatment than urban dwellers was rejected. These findings again suggest that factors like age, education, religion, ethnicity, region of residence, wealth, health insurance and knowledge about the disease interplay to determine a person's health seeking behaviour as suggested in Andersen & Newman's Health Utilization model.

6.2 Conclusion

A range of individual characteristics determine whether a person will seek treatment for their illness or not. These choices may however be influenced by some social and cultural factors. Thus, it was only prudent that this study sought to give a better understanding of what these factors were and how they influence health seeking behaviour, making reference to sexually transmitted infections.

Sexually transmitted infection (STIs) which continue to remain a significant public health problem especially in developing countries like Ghana, require multi-perspectival insights to increase treatment rates and help tackle current global trends. It is therefore important to improve understanding about STIs and the social and cultural factors that determine health seeking behavior.

This study has brought to the fore the fact that even though the majority of respondents sought STI treatment, teenagers, individuals with lower levels of education, poorer individuals, individuals without health insurance and individuals with poor knowledge about STIs had a lesser likelihood of seeking STI treatment. It has also contributed to literature in this area by identifying what socio-economic and demographic factors influence the health seeking behavior of persons with STIs in Ghana.

6.3 Recommendations

On the basis of the various findings, the study made the following recommendations:

Public health awareness programs on sexual and reproductive health should be organized especially for teenagers educating them on STI preventive care and proper health care seeking practices. These programs may be organized at schools and at the community level.

Existing health education programs should also emphasize on improving knowledge on the various types of STIs, causes, transmission modes, recognition of symptoms and knowledge of the seriousness of the disease and consequences of being infected such as the increased risk of HIV transmission to partners. Misconceptions about the causes and treatment of the disease should also be addressed. It is only through proper knowledge that individuals are able to make proper decisions about their health seeking behavior.

Every Ghanaian must be educated on the importance of having health insurance. By law, every Ghanaian must be enrolled on the National Health Insurance Scheme (NHIS), so Governmental Organizations such as the National Commission for Civic Education (NCCE) should intensify efforts to not only educate but also encourage people to have a national health insurance. Since accessing national health insurance still remains a major challenge especially in some parts of the country, efforts by Governmental organizations in making it more accessible should also be intensified.

A good number of traditionalists failed to seek STI treatment and so this study proposes that there be collaborations between stakeholders and religious leaders especially traditional leaders for the purpose of educating these religious leaders on STIs and proper health care seeking practices so that they may extend knowledge acquired to their followers.

Further research should be done on the different sources of STI treatment by including traditional healers as they are one of the major sources of treatment in rural parts of Sub-Saharan African countries.

In this study, only socio-economic and demographic determinants were included. Further studies in this area may extend on the Andersen and Newman (1973) model by incorporating moderating factors of health service utilization such as symptom recognition, access to and availability of health care facilities, time waiting among others.

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