UNIVERSITY OF GHANA

REGIONAL INSTITUTE FOR POPULATION STUDIES

WOMEN'S EDUCATIONAL ATTAINMENT AND HEALTH-SEEKING BEHAVIOUR FOR CHILDHOOD ILLNESSES IN GHANA

BY

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THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MA IN POPULATION STUDIES DEGREE

OCTOBER, 2020

ACCEPTANCE

Accepted by the College of Social Science, University of Ghana, Legon in partial fulfillment of the requirement of the Master of Arts Degree (Population Studies).

28TH OCTOBER 2020

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DATE

DECLARATION

I AWURA ADWOA ANTWIWAA AMOFA, hereby declare that this thesis submission is my own research work and apart from references of other people's work that has been duly acknowledge, it includes no materials of previously published work by another person elsewhere.

28TH OCTOBER 2020

AWURA ADWOA ANTWIWAA AMOFA
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DATE

DEDICATION

This work is dedicated to God Almighty; You are my glory, the one who holds my head high. I dedicate this work also to Uncle Geyhart Tekpor and Mr. Kwesi Gyimah-Asante. Until we meet again!

ACKNOWLEDGEMENT

I thank God Almighty for His grace and provision made available for me and making this journey possible. To my mum Barbara Adisenu-Doe, the strongest woman I know. Thank you for your motherly support.

I am truly grateful to my supervisor, Prof. S.O. Kwankye for his suggestions, patience and guidance in ensuring the completion of this dissertation. God richly bless you! To all the teaching and non-teaching staff of RIPS, am thankful for the knowledge and encouragement offered me especially Dr. Pearl Kyei.

To all RIPS PhD students especially Charles Agyei-Asabere, Martin Wiredu Agyekum, Isaac Yeboah and David Atombire Adumbire for their support and assistance during the time of my studies at RIPS. And to all my colleagues of the 2019/2020 MA cohort, I am delighted to have you as friends.

I will always remember the contributions of my brothers especially Andrew Nii Aryee Aryeetey and my loved ones from Kaneshie Presbyterian Church and Kaneshie Polyclinic for their prayers and support. I am eternally grateful.

ABSTRACT

Childhood illnesses are among the main health problems globally and predominantly in Asian and African subcontinents. About 6.0 million under-five children died in 2018 worldwide, which could be prevented with simple and inexpensive interventions. Educating women empowers them by increasing their autonomy. Women with greater power are able to influence health care decisions for their children compared to women with less education. Mothers' ability to act appropriately and promptly to illness symptoms will reduce childhood morbidity and mortality. Assessing the health-seeking behaviour of mothers and identifying specific factors influencing health-seeking are essential to advance strategies and interventions for child survival strategies in the country.

The study examines the relationship between mothers' education and health-seeking behaviour during childhood morbidities in Ghana, using the 2014 Ghana Demographic and Health Survey (GDHS) data. A sample of 638 and 1,189 children with diarrhoea and fever/cough symptoms were used in the study. Univariate, bivariate and multivariate statistical tools were used to analyse the data.

Findings reveal that 30.1% and 25.8% of mothers sought no treatment, while 47.1% and 52.8% sought medical treatment and 22.8% and 21.4% sought non-medical treatment for children exhibiting diarrhoea and fever/cough symptoms respectively. In the multivariate analysis, mothers with no education were significantly more likely to seek non-medical treatment compared to mothers with secondary/higher education. Results also show that mother's age, ethnicity, religion, region, place of residence, wealth index, working status and age of child were significant predictors for health-seeking behaviour for childhood illnesses in Ghana. Less educated mothers are more likely to use other forms of treatments such as pharmacy, drug peddlers and traditional practitioners instead of visits to medical facilities when children show fever/cough symptoms. The study suggests that improving the educational status of women will improve better health-seeking practices as mothers will seek appropriate treatment to increase the chances of child survival during ill-health.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Health-seeking behaviour is defined as "any action undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy" (Olenja, 2003 p. 61). The health-seeking behaviour is preceded by a decision-making process influenced by individual socio-demographic and economic characteristics and/or household behaviours, community norms, expectations, and provider-related characteristics (Niraula, 1994; Bedford and Sharkey, 2014; Kolola et al., 2016). Thus, the nature of health-seeking is not homogenous but an interplay of socio-cultural, economic, and provider factors leading to a final choice of care-seeking options.

Childhood illnesses are among the main health problems globally and predominantly in Asian and African subcontinents (WHO, 2016). About 6.0 million under-five children died in 2018 worldwide, which could be prevented with simple and inexpensive interventions (UNICEF, 2019). The type of health care provider that is sought also differs according to the type of illness. With a single mild symptom such as fever, home remedies or folk prescriptions are used (Shaikh and Hatcher, 2005). Whiles with a more prolonged period of illness with multiple symptoms, allopathic medicine is more likely to be utilized (de Silva et al., 2001; Kolola et al., 2016). Similarly, medical pluralism is prevalent in developing countries and is often based on trial and error, perceived effectiveness, the uncertainty of illness causation, and the expectation of rapid results (D'Souza, 1999; Shaikh and Hatcher, 2005; Abdulraheem, and Parakoyi, 2009).

Globally, women's educational attainment has improved over the years, and studies suggest that it plays an essential role in the health outcomes of women and children (Glewwe, 1999; Shapiro and Tenikue, 2017; Dimbuene et al., 2018; Frempong-Ainguah et al., 2018). In their study, Caldwell and McDonald (1982) found that educated women had self-confidence and are open to practise new behaviours. High educational attainment for females has been shown to reduce fertility through (i) delaying age at first marriage and first birth (ii) increasing interest in the quality of children relative to quantity and (iii) increasing knowledge and use of modern contraceptive methods (Martin, 1995).

One pathway through which education impacts health is through the increase of health knowledge (LeVine et al., 1994; Glewwe, 1999). In-school lessons are taught on hygiene and nutrition, and health behaviours such as washing hands before meals are encouraged. Literacy and numeracy skills acquired in school is another mechanism that aid mothers absorb health information well such as in diagnosing and treating child health problems (Glewwe, 1999; Som, 2014). There are several studies done in many developing countries on health that show the impact of mothers' education on child survival as mothers use prenatal and child health services such as vaccination for children (Das Gupta, 1990; Hobcraft, 1993; Buor, 2003).

Another advantage the educated woman has is financial independence and autonomy (Hill, and King, 1995; Acharya et al., 2010; Bour, 2004). In a study of women's participation in primary health care programmes in Ghana, Livingstone (1994) asserts that finances are one of the most crucial factors in health care utilization by women in developing countries. The educated woman is more likely to get a job that carries good pay. Education hence gives the woman the economic empowerment to make health-seeking behaviours related decisions freely (Bour, 2004). It is a tool to demolish the barrier to the use of health care services.

In Ghana, health-seeking behaviour of mothers for common childhood illnesses may be different across the regions, especially because of differences in socio-economic factors. Assessing the health-seeking behaviour of mothers and identifying specific factors influencing health-seeking are essential to advance strategies and interventions for child survival strategies in the country. The study seeks to examine, using secondary data, the extent to which women's educational attainment impacts health-seeking behaviour among children under-five years in Ghana. In addition, the study also seeks to identify relevant socio-economic factors that predict treatment-seeking by women for common childhood illnesses.

1.2 Statement of the Problem

Education worldwide has been thought to provide knowledge about the causes of ill health and promote a change in an individual's behaviour towards health care (MacKian, 2003). The type of symptoms experienced for the illness and the number of days of illness are significant determinants of health-seeking behaviour and choice of care provider (Shaikh and Hatcher 2005). How women reach health care decisions can have a profound effect on morbidity and mortality in the family and is, therefore, worthy of continued study. According to the WHO, child mortality and morbidity could be reduced by 20% if there is appropriate health-seeking behaviour (UNICEF, 2014).

Progress towards attaining Millennium Development Goal 4: reducing under-five mortality by two-thirds between 1990 and 2015 was not achieved in Ghana. Furthermore, according to Kayode et al. (2016), Ghana was below the targeted rate, particularly with respect to neonatal mortality. In Ghana, the under-five mortality in 2018 was 47.9 per 1000 live births (UNICEF, 2019) which is still high.

Attainment of the Sustainable Development Goal 3, which is "Ensure healthy lives and promote wellbeing for all ages" cannot be achieved without the adoption of positive health behaviour and, most importantly, for women as they are primarily responsible for the welfare of the family. "The benefits of improving healthcare-seeking behaviour are tremendous, particularly in settings where social services and public health resources are limited" (Wado, 2013 p. 1).

In Ghana, recent studies on health-seeking behaviour for common childhood diseases have been done using small samples, resulting in little information on the variability of health-seeking behaviour of mothers across the country. Also, with improvement in educational opportunities for women, it is assumed that highly educated women are better able to understand the symptoms that require treatment for childhood illnesses. However, it is not known whether the increase in educational attainment of women in Ghana has an influence on their health-seeking behaviour for their children during illness episodes. It is to bridge such a research gap and discover a strategy for sustainable development for children's health that it is considered necessary and timely to examine the relationship between mothers' education and health-seeking behaviour during childhood morbidities in Ghana, using the 2014 Ghana Demographic and Health Survey (GDHS) data.

1.3 Research Questions

The research seeks to answer the following questions:

i. Do women vary in their health-seeking behaviour relative to illness symptoms for their under-five children?

ii. What is the association between a mother's educational level and health-seeking behaviour regarding their under-five children in Ghana?

iii. What other factors predict mothers' health-seeking behaviour for their under-five children?

1.4 Rationale

Given their natural role in reproduction and nurturing of children, the health status of children greatly depends on their mother's level of empowerment. Globally, access to formal education is one of the means to empowering women. Women with greater power through either education, wealth accumulation or social standing are able to influence health care decisions for their children (Das Gupta, 1990). A healthy child constitutes the nucleus of a healthy population which is an asset to the socio-economic development of every nation. This explains why various global bodies such as the UN, WHO and UNICEF often initiate various policies, programmes and agendas such as the International Conference on Population and Development (ICPD) and the Sustainable Development Goals (SDGs), among others, meant for improving the health, growth and development of women and children in most cases.

The topic is, therefore, very important and timely because of the increasing childhood morbidity and mortality in Asia and sub-Saharan Africa in particular. Mothers' ability to act appropriately and promptly to illness symptoms will reduce childhood morbidity and mortality (Sreeramareddy et al., 2006). Similarly, a proper understanding of health-seeking behaviour will improve treatment compliance, and enhance health promotion strategies. The study adds to the existing literature pertaining to the different dimensions of health-seeking behaviour of mothers during childhood illnesses in Ghana. Furthermore, results from this study will provide policy makers additional knowledge to help shape policy implementation such as the Integrated Management of Childhood Illness (IMCI) in reducing infant mortality rate in Ghana.

1.5 Objectives

The general objective of the study is to investigate the association between mothers' educational level and health-seeking behaviour with respect to childhood illnesses in Ghana for the purpose of strengthening education and empowerment of women for achieving the SDG Goal 3 aimed at ensuring healthy lives and wellbeing across all ages.

The specific objectives are to:

i. examine the variation in the health-seeking behaviour of women relative to illness symptoms for their under-five children.

ii. assess the relationship between mothers' education and health-seeking behaviour relative to illness symptoms for their under-five children in Ghana.

iii. identify and examine other factors that predict the health-seeking behaviour of mothers with respect to their under-five children.

1.6 Organization of the study

This research work is structured in seven chapters. The first chapter introduces the background of the study, the problem statement, research questions, study objectives and rationale. The second chapter reviews related literature on common childhood illnesses, health-seeking behaviour amongst mothers with respect to their children under-five years, theoretical and conceptual framework and the study's hypotheses. Chapter Three discusses the methodology used in the study and data limitations. Chapter Four captures the description of background characteristics of the respondents. Chapters Five and Six present the results and discussion of key findings of the bivariate and multivariate analyses respectively. The final chapter provides a summary of main

findings, conclusions and recommendations for further research and policy intervention in the management of childhood illness in Ghana.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter examines empirical studies related to childhood illnesses, women's education, and health-seeking behaviour of women when their under-five children are ill, and the theoretical framework used in the study. The reviewed literature and theoretical underpinning of the study also informed the conceptual framework and hypotheses that are presented.

2.2 The Burden of Childhood Illnesses and Mortality

Phenomenal progress in child survival has taken place in the past decades internationally, with millions of children having better chances of surviving today. Notwithstanding this development, about 5.3 million children under five years died in 2018 (UNICEF, 2019). This translates into about 14,000 children dying every day. According to Sreeramareddy et al. (2006), out of all childhood deaths in less developed countries, the leading causes are infectious diseases, specifically acute diarrhoea diseases (ADD) and acute respiratory infections (ARIs). In sub-Saharan Africa, the leading causes of childhood deaths are ARI, diarrhoea, and malaria (Fosu, 1994).

Globally, ARIs such as pneumonia and bronchiolitis constitute a significant source of morbidity and mortality and the leading cause of under-five mortality (Ujunwa and Ezeonu, 2014 and Tazinya et al., 2018). Nearly 1.3 million under-five children die from ARIs worldwide. One-third of the deaths are from low-income countries (Tazinya et al., 2018). In 2010, a study on hospital admission found that 12 million episodes of hospital admissions were the result of ARIs in young

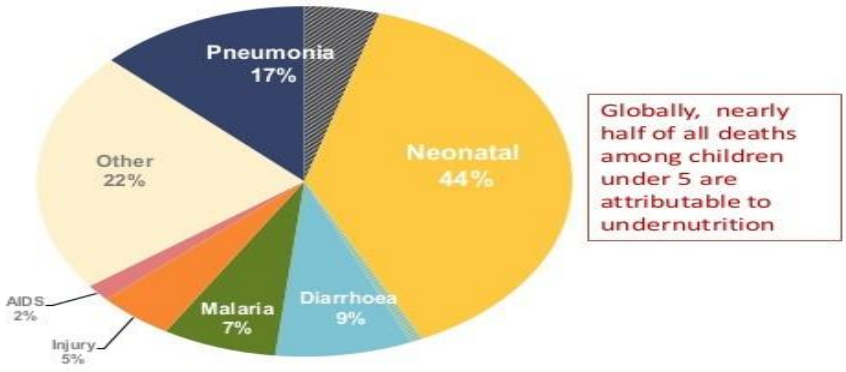
children with about 0.3 million deaths. Ninety-nine percent of deaths resulting from ARIs were reported in developing countries (Nair et al., 2013). From available health services statistics in developing countries, the extent of ARI morbidity is approximately the same as in developed countries. However, mortality from ARI, particularly in infants and young children, is 30 or more times higher than in developed countries (Leowski, 1986). Some predictors of ARIs in children include infection with HIV, passive smoking, exposure to wood smoke, and contact with a person having ARI (Ujunwa and Ezeonu, 2014).

Diarrhoea is defined as "the passage of three or more liquid stools per day, it is usually a symptom of an infection in the intestinal tract caused by a variety of bacterial, viral and parasitic organisms" (WHO, 2017 p. 1). Diarrhoeal disease is the second leading cause of death in children under five years. The World Health Organization (WHO) estimates that about 525,000 children die from diarrhoea each year despite the availability of simple and effective treatment. According to Godana and Mengiste (2013), two million people die from diarrhoeal diseases in developing countries, with children under-five being the most affected. For these children, 90 percent of deaths are associated with unsafe drinking water, poor sanitation, and hygiene. In Ghana, the Ministry of Health shows that diarrhoeal diseases constitute 84,000 deaths annually, with 25 percent of the cases being children under the age of five (Osumanu, 2007). Despite this high number of deaths from these causes, there has been some progress. From 2000 to 2017, the annual number of diarrhoea deaths among children under-five has declined by 60 percent. A lot more lives could be saved through basic interventions; rotavirus vaccination, access to safe drinking water, proper hygiene and sanitation (WASH) practices like hand washing and the comprehensive use of oral rehydration salts (ORS) and zinc supplements during diarrhoea treatment (UNICEF, 2017)

Fever or “hot body” is a common symptom of malaria and other acute infections caused by bacteria, viruses, or parasites; it is one of the leading causes of death in infancy and childhood in many developing countries. Nations where malaria is endemic like Ghana treat fever with anti-malarial medication (Som, 2014). In 2018, the WHO reported the highest number of malaria cases to be in Africa (213 million or 93%), followed by South-East Asia with 3.4% and Eastern Mediterranean with 2.1%. Six sub-Saharan African countries make up more than half of all malaria cases worldwide: Nigeria (25%), the Democratic Republic of Congo (12%), Uganda (5%) and Cote d'Ivoire, Mozambique and Niger (4% each) (World Malaria Report, 2019). Nearly 405,000 malaria deaths occurred in 2018; children under age five were mostly affected, making up 67% of all malaria deaths (WHO, 2019). Malaria is a crucial cause of death among adults and children in Ghana and is responsible for most hospital attendance in the country. It is also the leading cause of workday loss due to illness in the country (GSS, 2009; Abdul-Aziz, Harris and Munyakazi, 2012). Much as malaria is preventable and curable, the disease remains a public health problem in Ghana, affecting all age groups, pregnant women and under-five children being the most at risk (GSS 2009).

Figure 2.1 shows the global distribution of causes of under-five mortality in 2012, with pneumonia, diarrhoea and malaria accounting for 17%, 9% and 7% child deaths respectively.

Fig 2.1: Global distribution of causes of under-five mortality, 2012



Source: UNICEF analysis based on IGME 2013, WHO and CHERG (2013)

2.3 Strategies for Reducing Childhood Morbidity and Mortality

2.3.1 Integrated Management of Childhood Illness (IMCI)

During the mid-1990s, the IMCI was developed by the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) to reduce under-five mortality due to diarrhoea, pneumonia, malaria, measles, and malnutrition (Arifeen et al., 2009). The IMCI programme was later expanded to include interventions to increase child survival at household, community and health facility levels, with three components: health worker training, health-systems improvement, and enhancing family and community health practices (Armstrong Schellenberg et al., 2004). Beyond enhancing health provider skills in managing childhood mortality, the IMCI seeks to improve mothers and or caregivers' health-seeking behaviour. Health professionals are trained to educate mothers about signs of illness and counsel them to seek prompt care, home care during illness and after recovery (Sreeramareddy et al., 2006).

Countries like India have adopted the Integrated Management of Childhood Illness Programme by including a neonatal element and renamed it the Integrated Management of Neonatal and

Childhood Illness (IMNIC) (Shewade, Bharti and Shewade, 2012). Its goal is to improve early recognition and treatment-seeking for sick neonates and children (Mazumder et al., 2004). Findings from studies on the effects of IMNCI show a positive impact on child health indicators. For example, a study done in Bangladesh found that after introducing IMCI interventions such as improved facility care and community activities, care-seeking behaviour for sick children at medical facilities has improved (Arifeen et al., 2009). Following the implementation of the Integrated Management of Neonatal and Childhood Illness Programme in India, treatment-seeking and exclusive breastfeeding practices have improved, in addition to a decline in hospital admissions reporting on morbidities such as diarrhoea and pneumonia during infancy (Mazumder et al., 2004). In Tanzania, facility-based IMNCI programmes implemented in two district facilities were able to reduce under-five mortality by 13 percent (Armstrong Schellenberg et al., 2004). Mukunya et al. (2014) also make a case that inadequate knowledge on community-integrated management of childhood illnesses (C-IMCI) of caretakers was associated with wasting and stunting among children in Northern Uganda.

2.3.2 Expanded Programme on Immunization (EPI)

One strategy to prevent diseases, especially among children, is immunization. The World Health Organization's Expanded Programme on Immunization (EPI) aims to significantly reduce childhood mortality through immunization against the six killer diseases endemic in developing countries: diphtheria-pertussis-tetanus (DPT), poliomyelitis, tuberculosis, and measles. Ada (2007) asserts that the emergence of vaccines has reduced the number of deaths due to infectious diseases. It is an essential health service for children, reducing under-five deaths by 70% (Mashal et al., 2007). Timely vaccination of children is a proven method for saving lives from vaccine-preventable diseases. This will help achieve some targets of Sustainable Development Goal 3,

aiming to ensure healthy lives and promote well-being for all. According to UNICEF (n.d.), the EPI in Ghana has helped reduce infant mortality, with a significant fall in morbidity due to vaccine-preventable diseases such as measles and poliomyelitis. Ghana in 2011 was certified as having attained elimination status for maternal and neonatal tetanus.

2.4. Women's Educational Attainment and Child Health and Mortality

Among the various factors that are assumed to be determinants of child morbidity and mortality, one of the single biggest factors seems to be the educational attainment of mothers. For many individuals, high educational attainment is an important social goal. The Millennium Development Goal (MDG) 2, which advocates universal primary education, and the Sustainable Development Goal 4, which focuses on quality education, are several indicators that demonstrate the vital role of education in national growth and development. Education is a significant component of policy spending in almost all countries, across the three realms of the Human Development Index (education, life expectancy, and per capita income). There has also been a growing understanding within the development community about how education plays a crucial role in economic growth.

The above assertion is not a shocking revelation as education of the human resource has been touted to have trickle-down effects on all the other sectors of an economy. Apart from the general inherent value of education and the significant role it plays in economic development, there is a causal correlation between education and a variety of health consequences, with findings in many studies in public health, on the link between educational attainment and child health showing strong associations between the educational attainment of mothers and the health and mortality rates of their children.

As put forward by Mark Fischetti, a writer who oversees Scientific American's print and online coverage of energy, environment, and sustainability, higher educational attainment of women enhances their knowledge on health and diseases and facilitates better use of health care services such as prenatal care, immunization and basic hygiene which are critical in improving health outcomes for under-five children (Fischetti, 2011).

Through their education and resultant literacy, women stand a better chance of making the best decisions for their children in terms of their education, life choices, and, most importantly, the health of the children. Educated women are more likely to be working women and hence, are likely to have the economic stability to support their families, including the children.

Caldwell's (1979) paper on Nigeria highlighted the importance of mother's education for child survival. In his paper, he referred to many studies that found vast variations in child survivorship by educational attainment of mothers but indicated that few works have tried to explain this fact. Caldwell (1979) suggests three explanations on how maternal education might boost child survival: first, educated mothers move from traditional or 'fatalistic' acceptance of ill-health and take advantage of other medicinal or curative child care practices; educated mothers are effective in manipulating the modern world, including seeking prompt and appropriate health care during illness; and a shift in family decision making, allowing the educated woman to participate and make contributions on family issues.

In a 2010 report to examine the relationship between child mortality and educational levels of women, the researchers, after collecting data from 915 censuses and surveys, concluded that the rise in the education of women had and would have significant public health ramifications over the next few decades, leading to more substantial declines over total fertility, and that more educated women are more likely to use health services and effective preventive interventions,

and the increasing educational achievement of women in all areas of sub-Saharan Africa, except for the Sahel, is likely to contribute to greater acceptance of new maternal, newborn and child approaches, interventions and health-seeking behaviours (Gakidou et al., 2010).

Similar to this research is one conducted and published by Buor (2003) where he looked into the education of mothers and childhood health and mortality in Ghana and found that there was a clear inverse association between the education of mothers and childhood mortality. This high child mortality associated with women with little or no education may be the product of high child morbidity and the lack of health knowledge on the part of the mother to prevent it or treat it. Thus, the higher the attainment of education of women, the lower the mortality levels were. According to him, children of women with higher education face lower mortality at all levels of childhood mortality, with the exceptions being neonatal mortality and infant mortality in which the primary-educated mother's children outnumbered those without schooling (Buor, 2003).

2.5 Pathways Women's Education Influences Health-seeking Behaviour

The health status and health-seeking behaviour of women have a significant impact on both the women and their respective children. Many studies have been done about the health-seeking behaviour of women, and this results from the fact that women are the primary caregivers at home for children (Bour, 2003). Biomedical care plays a critical role in reducing maternal and child deaths, and the utilization of maternal and child health services must increase to improve mother and child survival (Greenaway et al., 2012).

Health knowledge is well represented in the published works as a possible medium through which formal education is correlated with greater use of modern care services (Fosu, 1994; LeVine & Rowe, 2009). Schooling exposes women to diseases causation, hygiene, nutrition, and health care

practices such as hand washing (Greenaway et al., 2012). The exposure to schooling enhances the mother's knowledge on the importance of modern health care (Fosu,1994). In Rowe et al.'s (2005) study, they found that the health knowledge of mothers is closely related with a number of healthy behaviours, such as the use of preventive facilities including antenatal care, taking iron tablets during pregnancy, and consequently, enhancing child-seeking behaviour, even after birth. Schooling also enhances human capital through literacy and problem-solving skills (Ross & Mirowsky, 1999). Higher education teaches people to think logically and rationally, see many sides of an issue, and analyze and solve problems. This is commonly referred to as the 'information-transfer hypothesis' (Baker et al., 2011). Literate mothers can read and understand printed health materials and interact better with health professionals (LeVine et al., 2004). This means that educated mothers are in a better position to appreciate the importance of health and how to address the challenges associated with poor health and, therefore, can seek appropriate health or treatment whenever it becomes necessary compared to their non-literate counterparts.

Findings from studies in Ghana and Botswana show that maternal education had a strong correlation with health services utilization. These countries also had quite high adult female literacy. It was also found that educated mothers effectively communicate with health workers (Fosu, 1994). Thomas (1999: p. 172) concludes that "Women with better comprehension skills may be better able to access and assimilate information in the community. They may thus be better informed than their peers and, therefore, better able to use community services effectively".

Studies further hypothesize that formal schooling's content influences women's belief about disease causation and cure and promotes the use of modern health care services (Elo, 1992; Obermeyer, 1993). Hill et al. (2003) identified strong health beliefs in traditional medicine as hindrances in maternal ability to recognize illness symptoms and health-seeking for childhood

illness in Ghana. Most developing countries have "two or more well-defined systems of medicine and health care" (Igun, 1979), leading to pluralistic health treatment (D'Souza, 2003). Caldwell and McDonald (1982) claim that women with higher education were exposed to health knowledge and more inclined to adopt modern medicine for childcare.

In these modern times, however, the use of such indigenous health-seeking behaviours seems to transcend superstitious beliefs, but may be economically tied or driven, as some women with no formal education, most of them without employment and may be engaging in some menial jobs are unable to adopt better health-seeking practices for their children and themselves as it may require the expending of funds. Education, thus, empowers women through access to better income and participation in family decision-making (Bour, 2003). The greatest impediment to the use of healthcare is income or lack of money (Elo, 1992; Adulraheem and Parakoyi, 2009). Women with income can freely afford medical care for their children. Similarly, in most developing countries, women who are educated do demonstrate some autonomy and have greater decision-making power at the household level and increases the likelihood of seeking prompt care for childhood illnesses (Ojanuja and Gilbert, 1992; Thind and Andersen 2003). All the above benefits of education increase women's value for good health and their demand for modern healthcare services (Fosu 1994).

2.5.1 Mother's Education and Health-seeking Behaviour

Previous studies in developing countries show that maternal education and health-seeking behaviour have a positive relationship (Sreeramareddy et al., 2006; Adulraheem and Parakoyi, 2009). A study carried out by Fosu (1994) using the 1988/89 Demographic and Health Surveys found maternal education had significant effects with health services utilization in Ghana and Botswana. Children of mothers in Ghana with no education were 42% less likely to be taken to a

medical facility while children of mothers with primary education were 58% less likely to be taken to a medical facility compared with children whose mothers had secondary or higher education. Education enhances the mother's access to better job opportunity with higher wages making her self-reliant. In rural Nigeria, Adulraheem and Parakoyi, (2009), found low utilization of health care associated with mothers with less education although several public and private orthodox facilities were available. This could be explained by the high illiteracy and non-belief in orthodox healthcare.

Despite claims that the mother's educational attainment positively influences health-seeking behaviour, results from Sir Lanka found no significant association between mother's education and care-seeking for children experiencing common childhood illness (de Silva et al., 2001). This is buttressed by findings from Pillai et al. (2003) which found a negative relationship between mother's education and health-seeking behaviour. The reason for this is that educated mothers wait for illness symptoms to worsen before attending medical facilities, knowing they were financially capable.

A large body of literature relates mother's education to child nutrition, immunization, morbidity, health-seeking behaviour, and survival. According to Vikram and Vanneman (2020), the influence of maternal education on the various child health outcomes may vary since "not all of the determinants may be under a mother's control, especially for indicators that are multifactorial in origin" (Vikram and Vanneman, 2020, p. 58). The paper reports that maternal education influences child health services such as prenatal care and immunization, as these are under the control of the mother. However, for child health outcomes such as stunting, morbidities, and survival, other factors interact. Other predictors that influence child health outcomes include environmental

factors, contagion, and health care supply. Thus, mother's education cannot adequately protect the children from these interaction factors.

2.5.2 Health-seeking Behaviour for mothers and their children

Many women die due to maternal causes which includes postpartum haemorrhage, obstructed labour, hypertensive disorders, and unsafe abortions (Rueda-Clausen et al., 2011). Women are at further risk of morbidity and mortality due to low maternal health-seeking behaviour (Akeju et al., 2016; Kifle et al., 2017). In urban Nigeria "women commonly utilize several obstetric health care providers in complement during pregnancy: traditional birth attendants, faith-based providers, and orthodox practitioners (nurses, midwives, community health workers, doctors, specialists)" (Akeju et al., 2016 p.73).

Different factors have been found to be associated with the health-seeking behaviours of mothers. Majority of determinants categorized as demographic and socio-economic factors such as maternal age, educational level, occupation, religion, marital status, women's autonomy, family size, household income, other factors associated are patriarchal culture, health service accessibility, cultural norms and beliefs (Abosse. et al., 2010; Akeju et al., 2016; Kifle et al., 2017). There are similar determinants of health-seeking behaviour of mothers for themselves and their children, for instance mothers age, education, religion, income, place of residence and marital status (Adulraheem and Parakoyi, 2009; Diaz et al., 2013; Kolola et al., 2016).

A number of studies have found that the educational status of mothers has significant influence on the health-seeking behaviour of mothers for themselves and their children (Sreeramareddy et al., 2006; Abosse et al., 2010; Abubakar et al., 2013; Kifle et al., 2017). Notable benefits of educating women is its influence on women's autonomy and income. Education is known to enhance

women's autonomy in healthcare decision-making; increasing their knowledge about health issues for themselves and children. Women's autonomy is considered essential in deciding when and where to seek treatment. (Osamor and Grady 2016). Financial constraint is another barrier to proper healthcare and mothers who are educated are more likely to participate in income-generating activities to afford healthcare services. Women who are financial empowered can independently access resources and make prompt decisions concerning health issues for themselves and their children Bour, 2004; Acharya et al., 2010).

2.5.3 Fathers influence on Health-seeking Behaviour

Mothers have historically been seen as responsible for healthcare decisions for their children (Funk, et al., 2020), however, multiple studies in sub–Saharan Africa attest that fathers are the main decisions makers and financial providers in health-seeking for children (Okoko et al., 2006; Abubakara at al., 2013; Ellis et al.,2013; Funk, et al., 2020). For instance, Abubarkar et al. (2013) in Kenya found that fathers were the ultimate decision makers on when and where to seek treatment for the sick child. Funk et al. (2020) also reports the various roles fathers play during children illness episode (i) arranging resources to seek care (ii) (co)- deciding where to seek care (iii) accompanying the child to the health facility.

Plantin et al., (2011) conducted a study to examine how European men's involvement in pregnancy and childbirth can be related to positive health outcomes for the men, their partners and children. The study revealed that several research supported the idea that men contribute to better health outcomes for themselves, their partners and children. For example, Findings reveal that men who become fathers and are involved during pregnancy show better physical and physical and psychological health. Dudgeon & Inhorn, (2004) reports that maternal and infant mortality is reduced as fathers participate in maternal and child health programs (with respect to pregnancy

and birth), by offering better preparation in case of obstetric emergencies. In conclusion, Plantin et al., (2011) discloses that men are exclude from maternal health services and suggest that a broader and more multi-disciplinary scope is required to involve men in maternal and child healthcare services, as their involvement has positive influences on the entire family.

2.6 Different Treatment Sources for Childhood Illness

Health-seeking is a complex process strongly influenced by socio-economic status health beliefs and there are several types of barriers to appropriate healthcare (Niraula, 1994; Hill et al., 2003; Bedford and Sharkey, 2014). Barriers to health care include visits to traditional healers, financial constraint, perceiving the illness as not serious and the expectation that illness would recover soon (Kolola et al., 2016). The importance of appropriate health-seeking is recognized in programmes such as IMCI which focus on teaching caregivers to recognize symptoms.

In many sub-Saharan Africa settings, home management and spiritual/ traditional healers are common health care sources before health facility treatment (Charles et al., 2008; Bedford and Sharkey, 2014). Health seeking for children with diarrhoea, pneumonia and fever symptoms in Serria Leone found that some children were given traditional treatments at home due to preference and the lack of alternatives (Diaz et al., 2013). In rural Ghana, mother's illness classification was found to be a significant barrier to care-seeking. Some local illnesses such as asram were categorized as 'not-for-hospital' because they have unclear biomedical equivalents (Hill et al., 2003). And due to traditional beliefs mothers are more likely to use traditional medicine to treat childhood illness. According to Hill et al.(2003) the use of local terminology is more likley increase appropirate health seeking among mothers.

Recent studies show that many more children are taken to medical health facilities during childhood illness (de Silva et al., 2001; Diaz et al., 2013; Kolola et al., 2016). In Sri Lanka, health-seeking behaviour at medical health care services was found as a possible explanation for low childhood mortality (de Silva et al., 2001). Results from the study show that 65% of children with illness episodes were taken to medical facilities for care and treatment. A study done in rural Guatemala reports that "modern medical care plays a major role in the treatment of infectious illness among children, with visits to pharmacists, doctors and the staff at government health facilities occurring much more frequently than visits to curers and other traditional practitioners" (Goldman and Heuveline, 2000: p.145). The reason for this trend could be the increase of formal education among mothers and the avaliablity of modern healthcare facilities in developing countries leading to exposure to new information and change in behaviour (Caldwell, 1979).

Studies also report that some mothers do not seek treatment for children who experience childhood illnesses (Goldman and Heuveline, 2000; Thind, R. Andersen 2003; Kolola et al. 2016). Thind and Cruz (2003) found that maternal education, sex of child, asset index and place of residence influence the non-use of health care services. Contrastingly, findings from Sri Lanka show that socio- economic status of the mother nor child characteristics have any significant relationship with health seeking behaviour of mothers for their sick children. However, health seeking is responsive to perceived symptoms and severity of the illness, mothers do not seek treatment because they perceive that the illness was not serious (de Silva et al., 2001). Kolola et al. (2016) report similar findings that perceived severity of the illness was associated with an increased odds of health seeking behaviour for childhood illnesses

2.7 Factors Associated with Health-seeking Behaviour for the Child

The factors associated with health-seeking behaviour include mother's age, religion, household wealth, place of residence, child characteristics and illness symptoms. These factors are discussed below.

2.7.1 Mother's Age

Age influences mothers' decisions to seek treatment outside the home. Taffa and Chepngeno (2005) found age of mother to be significant to health-seeking behaviour after ages 35 years. Older mothers were less likely to seek treatment compared to mothers aged 20 -34 years. Again, older mothers (40 years and older) tend to seek less medical care for their children than younger women. This case may result from previous child-rearing customs and practices which emphasize the role of alternative therapies (Adulraheem and Parakoyi, 2009; Taffa and Chepngeno 2005).

In his study Fosu (1994), suggest that children of younger women are more likely to visit medical facilities than children of older women since modern medicine have become more available for younger women. For example, young mothers (under 20 years) in Uganda were 61% more likely to seek medical treatment compare to older mothers (35 years and above). It is assumed that exposure to formal education provides younger mothers knowledge on modern health care facilities, and enhance better interaction with health professionals influencing their choose of health care during ill-health as oppose to older mothers.

2.7.2 Religion

Some studies have shown no significant relation between religion and care-seeking for sick under-five children (Thind and Cruz, 2003; Pillai et al., 2003; Diaz et al., 2013). Even though no

association was found, Muslim or Hindu mothers in India had a lower probability of seeking medical care compared to Christian mothers (Pillai et al., 2003). Similar findings were found in Sierra leone, Muslim mothers were more likely not to seek treatment from medical health facilities for under-five children compared to other religious groups (Diaz et al., 2013).

However, significant associations between religion and health care utilization were found in Zimbabwe and Ghana (Fosu, 1994). In Ghana being a Christian had a positive relationship with health care use, while in Zimbabwe, Christian mothers had a negative relationship the use of health services.

2.7.3 Household Wealth

Financial access has been cited as a major barrier to healthcare (Elo, 1992; Hill et al., 2003). For instance, Adulraheem and Parakoyi (2009) found household income and maternal participation in income generating activity as a predictor for health-seeking behaviour by mothers. Their study revealed that even after the child visited the hospital, lack of funds prevented the child from receiving the appropriate prescribed drugs. Ching's (1995) study in the Philippines reported that larger household size was correlated with less use for private medical facilities. His findings postulated that the family members' income per capita is reduced due to the larger family size. Again, households with high economic status was found to seek less care, especially for mild sickness (Pillai et al., 2003). This is plausible as richer families may only visit the health centers when illness symptoms continue to persist.

On the other hand, some studies found no association between household wealth and health-seeking behaviour. In Ethiopia, caregivers tend to seek care for under-five children only when illness symptoms worsened irrespective of their monthly income (Kolola et al., 2016). Again,

maternal participation in income- generating activity was not significantly associated with more health care seeking for child illnesses (Taffa and Chepngeno (2005).

2.7.4 Type of Place of Residence

Studies shown that, children of mothers living in rural areas are less likely to use allopathic medicine during childhood illnesses than those residing in urban areas. Thind and Anderson (2003) reported a significant effect of place of residence and care-seeking behaviour of mothers. Their results show that children of mothers living in rural areas were less likely to use medical services than those living in urban areas. This can be attributed to the differences in socio-economic factors such as lack of health centers or infrastructure like roads in rural dwellings acting as barriers to healthcare use for women. Although type of place of residence was fairly significant, Pillai et al., (2003) found that families in rural areas seek care from alternative providers than families in urban areas because they have to travel long distances to access medical care. However, after adjusting for other variables type of place of residence showed no significant association with health care seeking behavior (Kolola et al., 2016). This could be as a result of many health post available in both rural and urban areas.

2.7.5 Child Characteristics

Healthcare decisions for boys and girls have been found to be different due to gender bias. Pillai et al. (2003) reported from Kerala state (India) that gender was associated with the decision to seek care and the choice of allopathic over alternative medical systems. Similar findings in Nepal show that more males were reported to be ill and subsequently sought treatment for at allopathic facilities compared to females (Pokhrel et al. 2005). According to Adulraheem and Parakoyi (2009), they found that child age and sex were significantly associated with healthcare behaviour of the mother.

Although not statistically significant, mother's healthcare seeking behaviour for male children was a little higher compared to females. And for child's age, healthcare-seeking behaviour was found highest at age 0–12 months and gradually declines for older age groups for both sexes. Taffa and Chepngeno (2005) also found that compared to children less than one year, mothers sought less treatment for children aged 1 and 2 years old. Pillai et al., (2003) also found families of younger children (less than 6 months) more likely not seek treatment. They explained that young children have frequent illness which also resolve on their own.

On the contrary, Sreeramareddy et al. (2006) reported no correlation between the sex of the child and the mother's health-seeking behaviour. Generally, younger children are vulnerable to severe consequences of ARI and diarrhoea compared to older children because of their level of immunity. Mothers in rural Sir Lanka suggested that younger children who are ill should seek treatment promptly, on the account that they are incapable of expressing their illness (de Silva et al., 2001).

2.7.6 Illness Symptoms and/or Perceived Severity

The health-seeking behaviour of mothers is driven by symptomology. Perceived symptoms and perceived severity are the proximate determinants of health services utilization (Thind and Andersen 2003). Healthcare was strongly associated with particular illness symptoms; for example, mothers tend to respond quickly to diarrhoeal diseases than cough (Adulraheem and Parakoyi, 2009). A study by Sreeramareddy et al. (2006) revealed that children with one illness symptom had a lower probability to be taken for hospital care because many of these symptoms resolve on their own with time. Goldman and Heuveline (2000) also found that families are much more likely to seek biomedical health care when a child experiences fever and gastrointestinal symptoms, such as vomiting or diarrhoea relative to respiratory and other symptoms. A possible

reason for this could be that mothers find frequent episode of cough symptoms as normal illness which will pass with time.

On the other hand, Thind and Andersen (2003) found no significant relationship between illness symptoms and the use or non-use of healthcare services. From their findings predisposing and enabling factors were the driving force for the utilization of healthcare services in Dominican Republic rather than illness symptoms. In Ghana, Hill et al., (2003) argues that poor recognition of illness symptoms is important barrier to health-seeking behaviour, as 60% of childhood illness episodes were never taken to medical facilities. Their study recognizes the IMCI to provide caregivers the education to identify illness symptoms and seek early treatment.

2.8 Gaps in Literature

Existing literature on the relationship between mother's educational attainment and health-seeking behaviour for childhood illness has showed varied results. Many studies have found a significant relation between maternal education and health-seeking behaviour while others found no significant effect. Additionally, evidence from literature has identified maternal child characteristics, socio-cultural and economic factors predicting health-seeking behaviour for childhood illnesses. Much work has been done on health-seeking behaviour globally and in sub-Saharan Africa. In spite of that, there are very few studies that have examined maternal education and health-seeking behaviour for under-five children in Ghana. Women's educational attainment has improved over the years and has been found as the greatest predictor for health-seeking behaviour for child health outcomes. The study therefore seeks to examine how mother's education influences health-seeking behaviour for under-fives in Ghana, to contribute to the global discourse.

2.9 Theoretical Framework

This research is established on the Andersen and Newman's (1973) Health Utilization Model. The Model describes the determinants of health services utilization by categorizing them into three components as predisposing factors, enabling factors and need factors. These three factors demonstrate individual and societal determinants in the utilization of health care services.

The predisposing component includes (i) demographic variables such as age, sex and marital status; (ii) social structure variables include characteristics such as education, race, occupation, family size, ethnicity and religion; (iii) health beliefs are attitudes, values, and knowledge that diseases, wellbeing and health systems influence health care utilization.

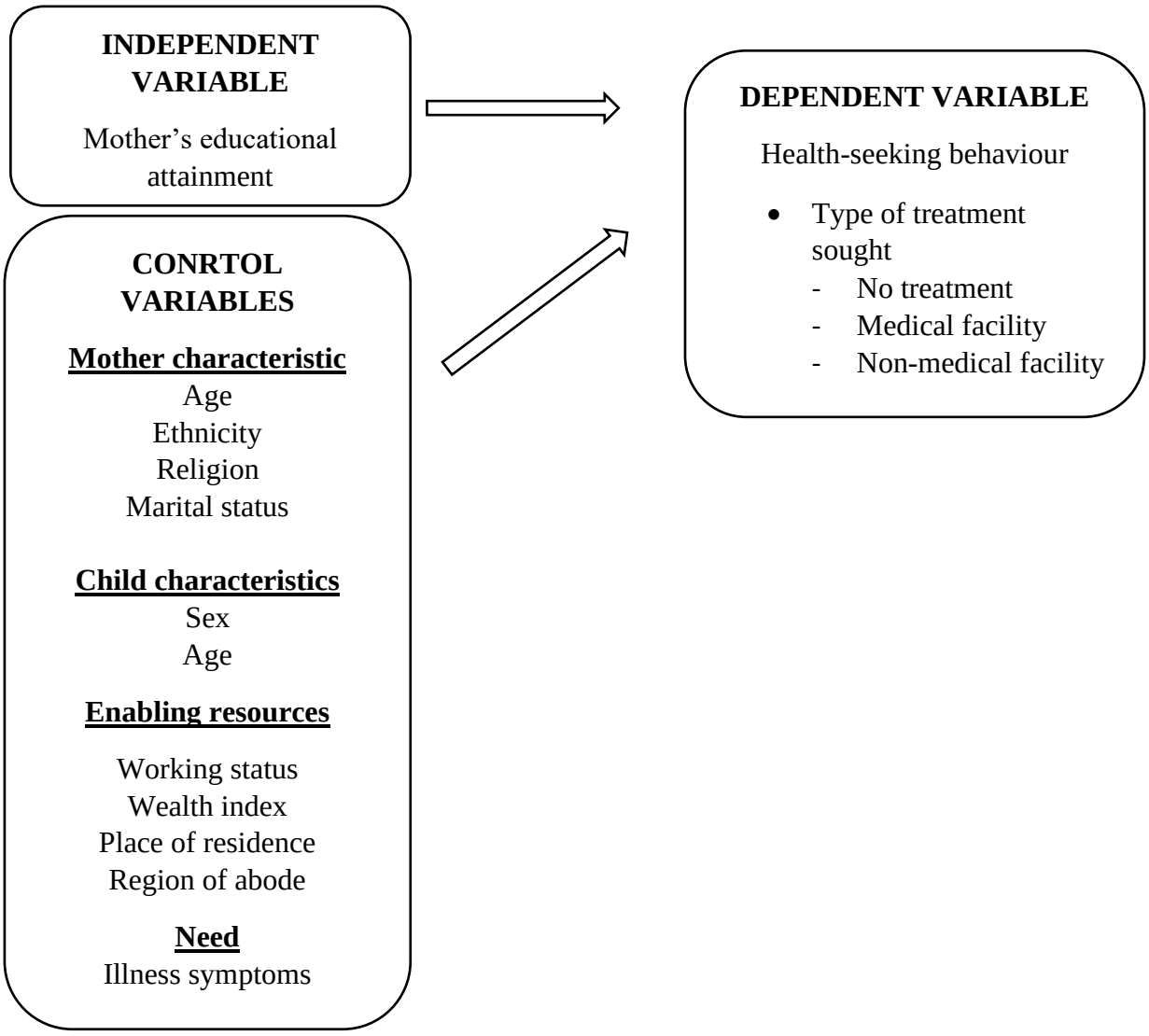
The enabling component suggests that some resources must exist for health care utilization to occur. These include family, income, health insurance, cost and availability of health care while the need component considers perceived ill-health as the most proximate cause of health care utilization. It consists of the illness symptoms exhibited.

2.10 Conceptual Framework

This study seeks to identify whether mother's educational attainment influences health seeking behaviour for childhood illness in Ghana. Adapting the Andersen and Newman's (1973) Health Utilization Model, the study separates mother's educational level as the independent variable and other predisposing, enabling and need factors as control variables in this study. Reviewing existing literature and using the Health Utilization Model, the variables in Figure 2.2 have been identified as having a direct or indirect impact on the type of care sought for illness.

Due to data limitation, some variables in the Andersen and Newman's (1973) framework were not used in this study. Variables such as beliefs about health systems, knowledge about diseases, and cost and availability of health care could not be investigated using the GDHS data because no questions on them were asked in the survey.

Fig 2.2: Conceptual framework showing the relationship between women's educational attainment and health-seeking behaviour for childhood morbidity.



Source: Adapted from Andersen and Newman's (1973) Health Utilization Model

2.11 Hypotheses

The following are the proposed hypotheses based on the theorical framework and literature review:

i. Health seeking behaviour of mothers for children who experience diarrhoea symptoms differs by educational level.

ii. Health seeking behaviour of mothers for children who experience fever/cough symptoms differs by educational level.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the research design and methodology used in the study. It begins with the background information of the study area, source of data, sample design and selection, categorization of variables, method of analysis, and limitations associated with the data.

3.2 Study Area

Ghana is a developing country located on the West African coast, bordered by three French-speaking countries: Togo on the east, Burkina Faso to the north, and Côte d'Ivoire on the west. In 2014, Ghana's population was approximately 27 million (GSS, 2013). The country was subdivided into ten administrative regions with 216 districts at the time the survey was conducted.

Fig 3.1 Map of Ghana showing administrative regions

Source: GSS et al., (2015)

3.3 Source of Data

The primary source of data for this study is the 2014 Ghana Demographic and Health Survey (GDHS) conducted by the Ghana Statistical Service in collaboration with the Ghana Health Service (GHS) and National Public Health Reference Laboratory (NPHRL) of the GHS, with funding from USAID and other development partners. The GDHS is a nationally representative survey that gathered data on demographic, socioeconomic, and health information on men and women in their reproductive ages and children under the age of five years. The primary objective of the survey was to collect, analyse, and disseminate information on socioeconomic characteristics, educational attainment, maternal and child health, nutrition, family planning, child mortality, women's empowerment indicators and knowledge and behaviour related to HIV and AIDS, and sexually transmitted infections (STIs).

3.4 Sample size and Design

The sampling frame used in the 2014 GDHS was from the 2010 Ghana Population and Housing Census and excluded nomadic and institutional populations such as persons in hotels, barracks, and prisons. Participants were selected using a two-stage sampling technique. The first stage involved the selection of enumeration areas with a total number of 427. Cluster sampling technique was employed to select 216 urban areas and 211 rural areas for the survey. The second stage involved a systematic sampling of 30 households from each enumeration area. The total sample size was 12,831 households. Men aged 15-59 years and women in their reproductive ages 15 – 49 years were eligible for the survey.

The 2014 GDHS consisted of three sets of questionnaires: the household, women's and men's questionnaires. The questionnaires were initially produced in English and later translated into Akan, Ga, Ewe and Dagbani. A total number of 4,388 males and 9,396 females responded to the questionnaires. The survey had a total number of 5,884 under-five children but for this study, only children who had diarrhoea, fever and/or cough two weeks preceding the survey were included in the analysis.

3.5 Variables and their Measurements

This section provides a description of the variables used in the study and how they were measured.

3.5.1 Dependent Variable

The outcome variables in this study, which is ‘type of treatment sought’ was gleaned from the question "Where did you seek advice or treatment?" The sources of treatment were categorized as ‘No treatment’, ‘Medical health facility’ (including government hospital/clinic, private

hospital/clinic, health post/CHPS, mobile clinic and field worker), and 'Non-medical health facility' (Pharmacy, chemical/drug store, traditional practitioner, provision shop/market and drug peddler).

3.5.2 Independent Variable

Mother's educational attainment was measured using the level of education, and the question asked in the study was "What is the highest level of school you attended?" The responses were categorized as 'No education', 'Primary', 'Secondary and Higher'. However, in this study, educational attainment is recategorized as 'No education', 'Primary', 'Secondary/Higher'. Due to the small number of cases Secondary and Higher was merged into one.

3.5.3 Control Variables

To better understand the association between a mother's educational attainment and the health-seeking behaviour, other demographic and socioeconomic variables were included to explain the relationship between the dependent and the independent variables. Mother's personal characteristics such as age, ethnicity, religion, marital status, occupation, wealth index, type of place of residence, the region of residence, and child characteristics such as age and sex of the child were included as part of the control variables in the model.

Table 3.1 below shows the measurement of the control variables used in the study. For this study, some variables were re-categorized. Religion was re-grouped into Christian, Islam, Other. Catholic, Anglican, Methodist, Presbyterian, Pentecostal/Charismatic and Other Christian were put under one category as Christians. People belonging to the category 'Traditional or Spiritualist' and 'no religion' were added to the "other" category. From literature, there is no significant difference among the various Christian denomination groups however studies have found

significant differences when Christian groups are categorized as one (Fosu, 1994 and Diaz et al., 2013). Ethnicity was re-categorized into Akan, Ga/Dangme, Ewe, Mole Dagbani, Gurma, and others. Mande, Guan, Grusi, and other ethnic groups were merged to form 'other' because their individual sample sizes were small compared to the other listed ethnic groups. Mothers' marital status was recodified into never married, currently married, and formerly 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 currently married category, and those who were either widowed, divorced, no longer living together, or separated make up the formerly married category. Working status was also re-categorized into 'Working' and 'Not Working'; those who responded as 'don't know' were added to the 'Not Working' group because there was a higher possibility that they were unemployed than employed. The other variables used in this study were left as they were measured in the GDHS data set.

Table 3.1: Measurement of control variables

Variables	Measurement
Mother's age	Mother's age is categorized as 15-24, 25-34 and 35-49
Ethnicity	Akan, Ewe, Ga/Dangme, Mole Dagbani, Others (Guan, /Grussi/Gurma/Mande others)
Religion	Christian, Islam, Other
Marital status	Never married, Currently married and Formerly married
Working status	Working or Not working
Wealth index	Wealth index categorized as Poorest, Poorer, Middle, Richer and Richest
Type of place of residence	Urban or Rural
Region	Region of residence are categorized into the ten regions in Ghana: Western, Central, Greater Accra, Volta, Eastern, Ashanti, Brong Ahafo, Northern, Upper West, and Upper East Regions
Child age	Age in years categorized as 0, 1, 2, 3 and 4
Child sex	Male or Female
Illness symptoms	Diarrhoea and Fever/Cough

Source: Author's Construct, August 2020

3.6 Method of Analysis

The descriptive and inferential analysis used in the study was carry out using the statistical analysis software package IBM SPSS Statistics (Version 23). The univariate stage showed the proportions of respondents with the various characteristics. The descriptive statistics showed the frequencies and percentages of each variable in tables and graphs.

The bivariate analysis was conducted to evaluate the factors associated with the outcome variable (health-seeking behaviour). The independent variable (mother's educational level), demographic and socio-economic characteristics of respondents were cross-tabulated against the dependent variable. At a 0.05 significant level, the strength of the associations between the independent variables and dependent variable was tested using the chi square test together with its corresponding degrees of freedom.

In the multivariate analysis, relationships between the dependent variable and independent variables were examined simultaneously. Multinomial logistic regression analysis was employed in determining the extent to which the main independent and control variables (demographic, socio-economic characteristics) influenced the health-seeking behaviour among children with common childhood morbidity. Because the dependent variable has three categories a multinominal logistic regression was used.

3.7 Limitations

The study was not without limitations. Health beliefs and health services-related factors could not be examined using the GDHS data as questions on them were not asked. Lack of data on mother's health-seeking behaviour for herself when sick did not allow for a comparison between health-seeking behaviour when she is directly affected and when the child is the one taken ill. This

resulted from the use of secondary data where the researcher is unable to introduce new variables or measures which originally were not part of the data. The use of primary data could lend itself to the collection of data as would be most appropriate in the form that would inform intended analysis in response to the research questions. This is a challenge generally presented when using secondary data sources for such studies that may require variables and their definitions/measurements which the available dataset may not contain.

CHAPTER FOUR

BACKGROUND CHARACTERISTICS OF RESPONDENTS

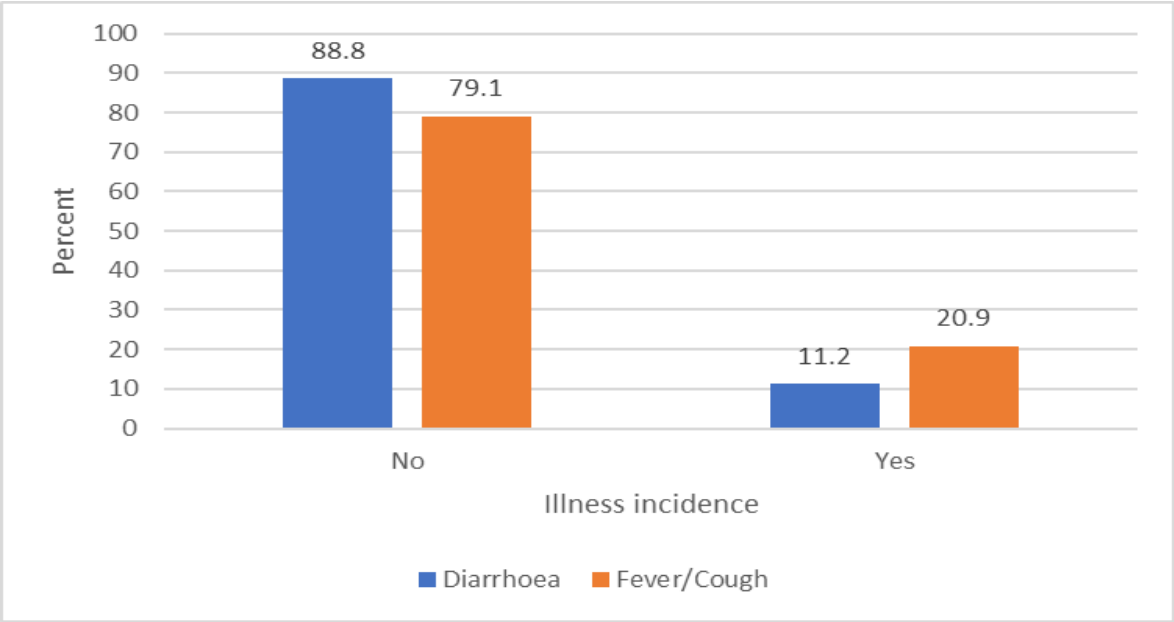
4.1 Introduction

Chapter four reports on the univariate analysis of all the variables employed in this study. The background characteristics of mothers and children are described using charts and tables, providing information on the percent distribution of respondents by the various categories of the variables.

4.2 Incidence of illness symptoms

Figure 4.1 shows the percentage distribution of under-five children that were reported with illness symptoms. Mothers reported that 88.8% and 79.1% of children did not exhibit diarrhoea and fever/cough symptoms respectively. On the other hand, 11.2% and 20.1% of the children were reported to have exhibited diarrhoea and fever/cough symptoms respectively two weeks prior to the interview. Similar findings were found in Nepal, Sierra Leone and Ethiopia, where more children experience fever symptoms compared to diarrhoea (Sreeramareddy et al., 2006; Diaz et al.,2013; Kolola et al., 2016)

Fig 4.1: Percentage distribution of under-five children by illness symptoms

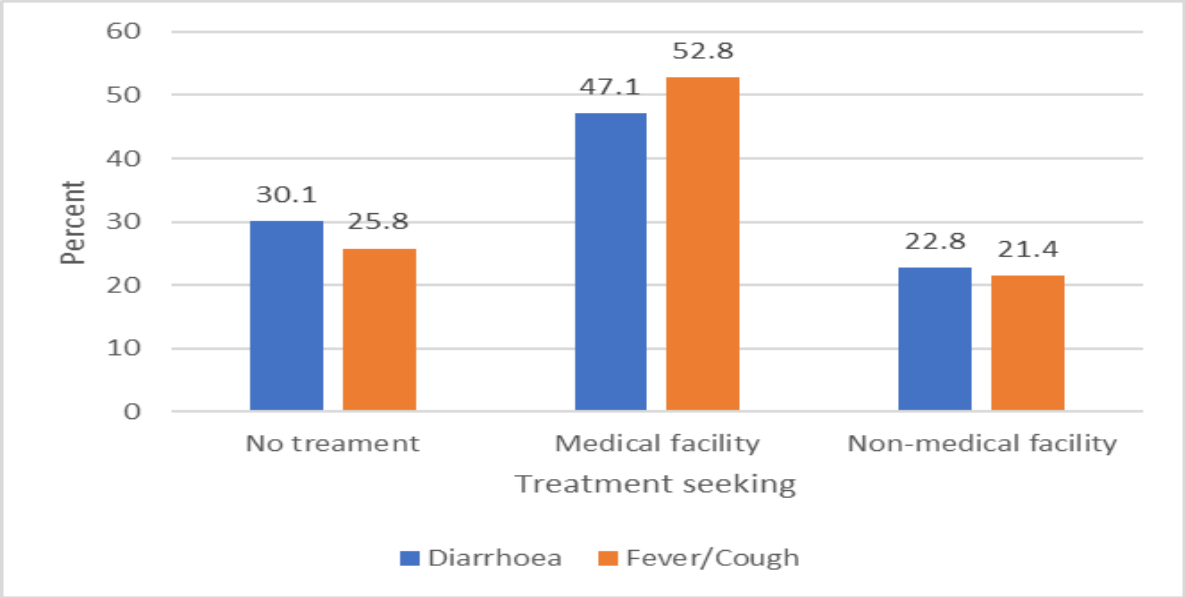


Source: Generated from 2014, GDHS.

4.3 Health-seeking Behaviour of Mothers

Out of 638 children that had diarrhoea, it was reported that 30.1% of their mothers did not seek treatment, 47.1% sought treatment at medical facility and 22.8% sought treatment at non-medical facility. Mothers also reported that 25.8% of them with children having fever/cough symptoms did not seek treatment, 52.8% sought treatment at medical facility while 21.4% sought treatment from non-medical facilities (Figure 4.2). The results show that majority of mothers (69.9% for diarrhoea and 74.2% for fever/cough) sought treatment than no treatment during childhood illness.

Fig 4.2: Percent of mothers of under-five children by health condition of children and treatment-seeking status

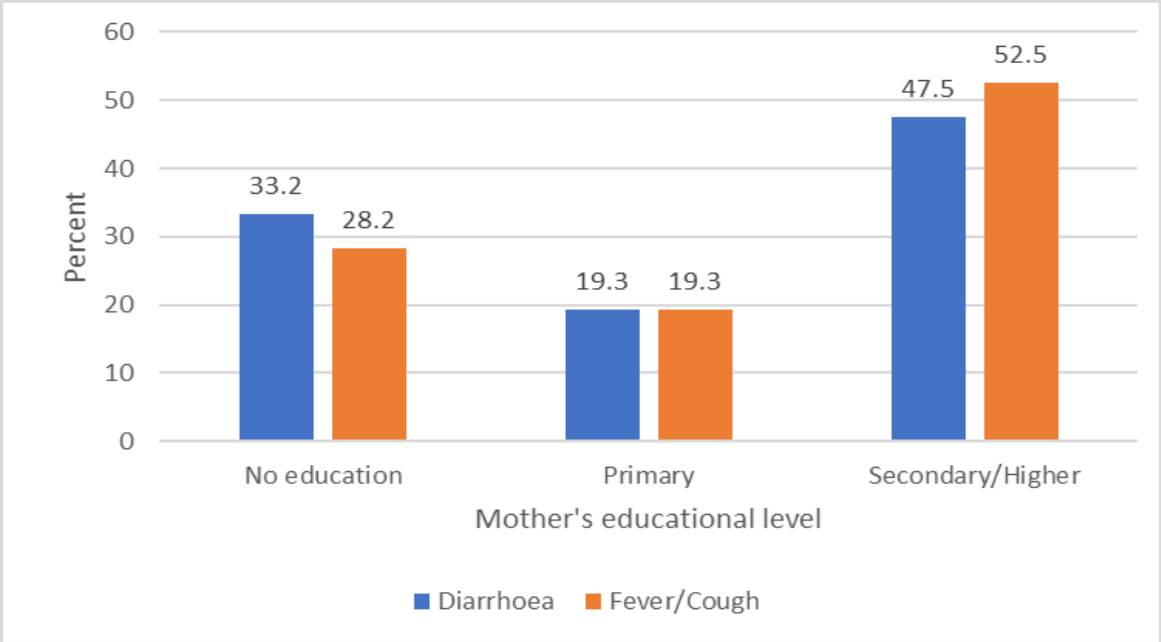


Source: Generated from 2014, GDHS.

4.4 Mothers' Educational Attainment

The analysis presented in Figure 4.3 reveals that a relatively higher proportion of mothers have attained secondary/higher education. For children who experienced diarrhoea symptoms, 47.5% of their mothers had secondary/higher education while 19.3% and 33.2% had primary and no education respectively. About 53% of mothers of under-five children with fever/cough symptoms had secondary/higher education, 19.3% attained primary education and 28.2% had no education. The educational level of the mother most likely predicts her knowledge on basic hygiene practices and care for their children (Glewwe, 1999).

Fig 4.3: Percent of mothers of under-five children by level of education and health condition of children



Source: Generated from 2014, GDHS.

4.5 Mother's Age

Table 4.1 shows the percentage distribution of mothers by age. The modal age group of mothers was 25-34 with 47.5% and 51.7% of them reported to have children with diarrhoea and fever/cough symptoms respectively. The least proportion of mothers were in the age group 15-24. The age distribution shows that a big proportion of mothers interviewed are under age 35, indicating that the country has a youthful age structure.

Table 4.1: Percentage distribution of mothers by age and symptom exhibited among children

	Diarrhoea		Fever/Cough	
Mother's ages	**Frequency**	**Percent**	**Frequency**	**Percent**
15-24	152	23.9	231	19.5
25-34	303	47.5	614	51.7
35-49	183	28.6	343	28.9
Total	**638**	**100.0**	**1189**	**100.0**

Source: Generated from 2014, GDHS.

4.6 Marital Status

From Table 4.2, mothers with children exhibiting diarrhoea and fever/cough symptoms (82.5% and 83.4% respectively) were currently in union followed by 10.6% and 8.9% for never in union and 6.9% and 7.85% for formerly married. The results, therefore, show that a huge proportion of the women were in union. This is expected, as in Africa, we have universal marriage where almost every woman is expected to marry in her life-time (Thomas Hakansson, 1985).

Table 4.2: Percentage distribution of mothers by marital status and symptom exhibited among children

	Diarrhoea		Fever/Cough	
Marital status	**Frequency**	**Percent**	**Frequency**	**Percent**
Never in union	68	10.6	106	8.9
Currently in union	526	82.5	991	83.4
Formerly union	44	6.9	92	7.8
Total	**638**	**100.0**	**1189**	**100.0**

Source: Generated from 2014, GDHS.

4.7 Ethnicity

Based on homogeneity in geographical proximity, traditional lineage systems and other cultural practices, ethnicity is categorised into four groups. From Table 4.3, close to half of mothers were from the Akan ethnic group (comprising of Asante, Akyem, Akuapem and others), which is the largest ethnic group in Ghana (GSS, 2014) constituting 45.0% for diarrhoea and 44.6% for fever/cough symptom, followed by Mole Dagbani and Other. The least represented ethnic group was Ga/Dangme with 6.1% and 8.2% for mothers with under-five children with diarrhoea and fever/cough respectively.

Table 4.3: Percent of mothers by ethnicity and symptom exhibited among children

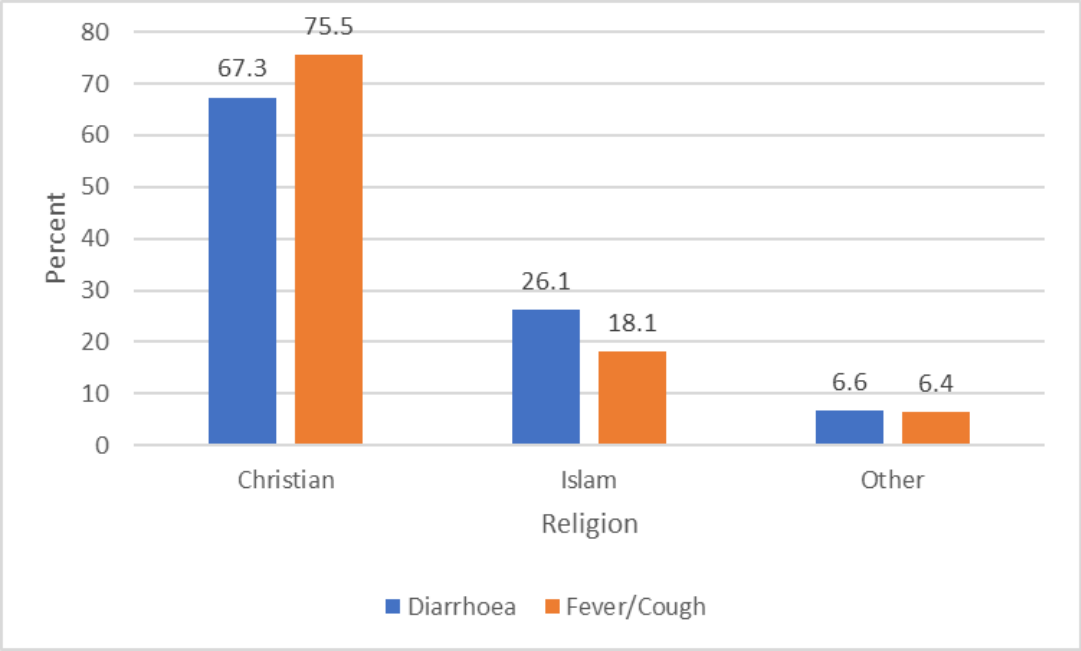
	Diarrhoea		Fever/Cough	
Ethnicity	**Frequency**	**Percent**	**Frequency**	**Percent**
Akan	287	45.0	530	44.6
Ga/Dangme	39	6.1	97	8.2
Ewe	55	8.6	164	13.8
Mole Dagbani	147	23.0	226	19.0
Other	110	17.3	172	14.5
Total	**638**	**100.0**	**1189**	**100.0**

Source: Generated from 2014, GDHS.

4.8 Religion

Religion is an important factor of human behaviour in the Ghanaian society, influencing individuals' beliefs and ways of life. Majority of mothers of children with diarrhoea and fever/cough symptoms (67.3% and 75.5% respectively) identified themselves as Christians followed by mothers belonging to Islam. The smallest proportions of mothers indicated their belonging to the Other Religion (Figure 4.4). It is evident that Christianity is the largest religion in Ghana.

Fig 4.4: Percent of mothers of under-five children by religion and health condition of children



Source: Generated from 2014, GDHS.

4.9 Region

From table 4.4, the Ashanti Region had the highest proportion of mothers with children experiencing illness symptoms (22.1% for diarrhoea and 20.6% for cough) while the Upper West Region had the lowest proportion (3.4% for diarrhoea and cough each). The Ashanti Region at the time was the largest region in the country, and, therefore, this is to be expected.

Table 4.4: Percent of mothers of under-five children by region of abode and health condition of children

	Diarrhoea		Fever/Cough	
Region	**Frequency**	**Percent**	**Frequency**	**Percent**
Western	38	5.9	82	6.9
Central	51	8.0	112	9.4
Greater Accra	63	9.9	185	15.6
Volta	29	4.5	82	6.9
Eastern	80	12.5	151	12.7
Ashanti	141	22.1	245	20.6
Brong Ahafo	82	12.8	91	7.6
Northern	107	16.8	157	13.2
Upper East	26	4.1	43	3.6
Upper West	22	3.4	41	3.4
Total	**638**	**100.0**	**1189**	**100.0**

Source: Generated from 2014, GDHS.

4.10 Type of Place of Residence

Place of residence in this study is categorized as urban or rural area. In Ghana, an urban area refers to a settlement with a population of 5000 or more whereas a settlement with less than 5000 people is defined as a rural area. From Table 4.5, more than half of mothers with children who experience diarrhoea (59.9%) and fever/cough symptoms (55.6%) were rural dwellers. This shows that a greater number of sick children live in rural areas.

Table 4.5: Percentage distribution of mother's place of residence and symptom exhibited among children

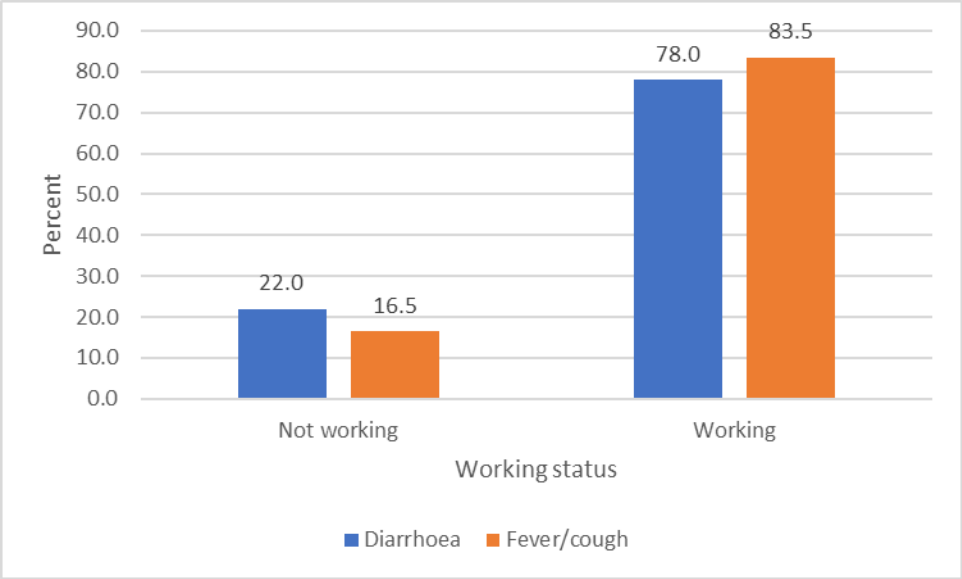
	Diarrhoea		Fever/Cough	
Place of residence	**Frequency**	**Percent**	**Frequency**	**Percent**
Urban	256	40.1	527	44.4
Rural	382	59.9	662	55.6
Total	**638**	**100.0**	**1189**	**100.0**

Source: Generated from 2014, GDHS

4.11 Working Status

Figure 4.5 shows that a large majority of mothers with children experiencing diarrhoea (78.0%) and fever/cough symptoms (83.5%) were working at the time of the survey. About one-third of mothers were not working. Working mothers are more likely to have access to funds to seek health care when their under-five children are sick (Bour, 2004).

Fig 4.5: Percentage distribution of mother's working status by symptom exhibited among children



Source: Generated from 2014, GDHS.

4.12 Wealth Index

From Table 4.6, the highest wealth index (richest) had the least proportion (10.8%) of mothers with under-five children exhibiting diarrhoea symptoms while the lowest wealth index (poorest) had the highest proportion (26.4%) of mothers with children with these symptoms.

For children who experienced fever/cough symptoms, mothers in the poorer wealth index had the highest proportion (22.4%) while mothers in the richer and richest wealth index had the least proportion of 17.3% each.

Table 4.6: Percentage distribution of mothers by wealth index and symptom exhibited among children

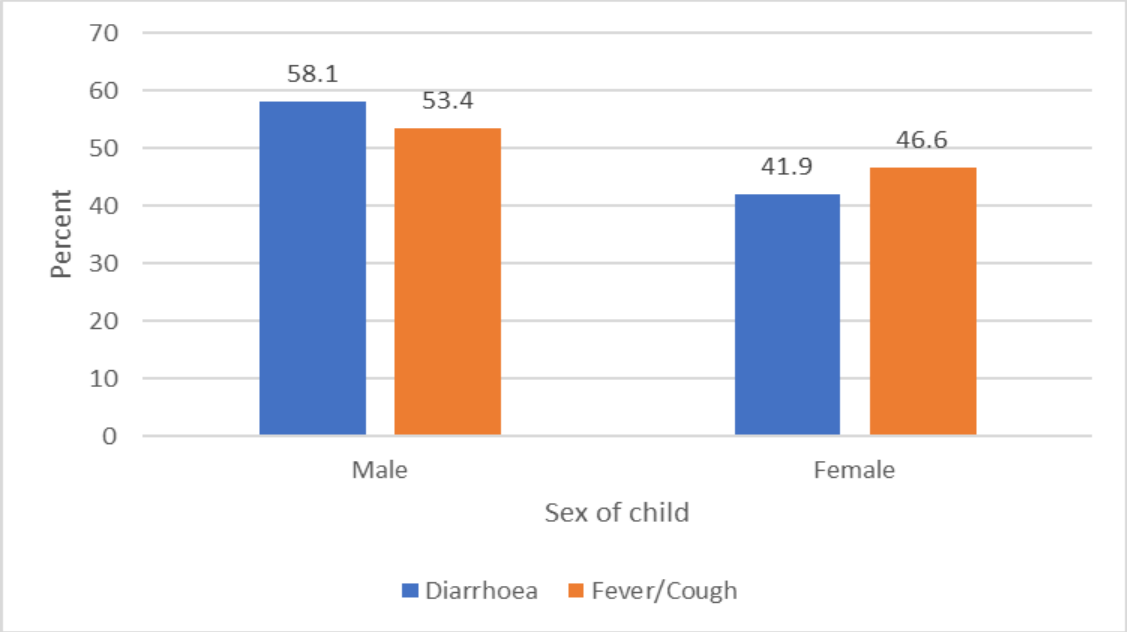
	Diarrhoea		Fever/Cough	
Wealth index	**Frequency**	**Percent**	**Frequency**	**Percent**
Poorest	168	26.4	267	22.4
Poorer	164	25.7	257	21.6
Middle	134	20.9	254	21.4
Richer	104	16.3	205	17.3
Richest	69	10.8	206	17.3
Total	**638**	**100.0**	**1189**	**100.0**

Source: Generated from 2014, GDHS.

4.13 Sex of child

The results as shown in Figure 4.6 indicate that a higher proportion of male children experienced both diarrhoea and fever/cough symptoms compared to females. This could result from behavioural differences by sex at childhood ages with male children more exposed to risks of infection as they are more likely than females to roam about picking unhygienic items outside the home without supervision by parents or care-givers (van Lunzen, and Altfeld, 2014).

Fig 4.6: Percentage distribution of under-five children by sex and symptom exhibited among children



Source: Generated from 2014, GDHS.

4.14 Age of the Child

The age of a child is an important predictor in the study of health-seeking behaviour among under-five children (Taffa and Chepngeno 2005). Table 4.4 presents the ages of children in years; majority of children are between the ages of 1 and 2.

Table 4.7: Percentage distribution of children under five years by single age and symptom exhibited among children

	Diarrhoea		Fever/Cough	
Age	**Frequency**	**Percent**	**Frequency**	**Percent**
0	120	18.8	206	17.4
1	187	29.3	289	24.3
2	176	27.6	274	23
3	77	12.1	234	19.6
4	78	12.3	186	15.7
Total	**638**	**100.0**	**1189**	**100.0**

Source: Generated from 2014, GDHS.

4.15 Conclusions

From the analysis presented above, 30.1% and 25.8% of children who experienced diarrhoea and fever/cough symptoms sought no treatment, while 47.1% and 52.8% sought medical treatment and 22.8% and 21.4% sought non-medical treatment. A relatively high proportion of mothers of sick under-five children had attain secondary/higher education. The modal age group of mothers was 25-34 years, a big proportion of mothers were currently in union. A greater number of sick children live in rural Ghana and more than half of sick under-five children were males.

CHAPTER FIVE

MOTHER'S EDUCATIONAL ATTAINMENT AND HEALTH-SEEKING BEHAVIOUR

5.1 Introduction

Chapter five examines the association between background characteristics and health-seeking behaviour among the respondents using cross tabulations with special focus on women's educational attainment. Using the chi-square test, an alpha value of 0.05 was set to show the association between a women's educational attainment alongside other control variables and health-seeking behaviour. Consequently, an alpha value less than 0.05 indicates a statistically significant association between the independent variables and health-seeking behaviour while an alpha value greater than or equal to 0.05 indicates no association. The chapter presents two models of bivariate analysis. This arises from the differences in illness symptoms experienced by under-five children (i.e., diarrhoea and fever/cough).

5.2: Mother's Educational and Health-seeking Behaviour

Results from Table 5.1 reveal no statistically significant association between mother's education and health-seeking behaviour for both diarrhoea and fever/cough symptoms, suggesting that health-seeking behaviour of the mother does not vary significantly with her educational attainment. For diarrhoea symptoms, a higher proportion of mothers with no education sought medical treatment (52.7%) compared to no treatment (42.2%) and non-medical facility (45.1%). However, for fever/cough symptoms, mothers with secondary/higher education had the highest proportion seeking medical treatment (54.0%). Similar findings are reported in Kerala-India and Jeldu

District-Ethiopia mothers' educational status was not found to significantly influence health-seeking behaviour for childhood illness (Pillai et al., 2003; Kolola et al., 2016).

Table 5.1: Percent of mothers by educational level, health-seeking behaviour and symptom of health condition of child

Mother's education	Health-seeking behaviour diarrhoea (%)				Health-seeking behaviour fever/cough (%)			
	No treatment	Medical	Non-medical	Total	No treatment	Medical	Non-medical	Total
No education	27.0	52.7	20.3	212	22.5	53.3	24.2	336
Primary	30.8	42.2	27.0	123	27.3	48.7	24.0	229
Secondary/ Higher	31.9	45.1	22.9	303	27.0	54.0	19.0	624
X^2= 4.677	df= 4	p=0.322			X^2=6.658	df= 4	p=0.155	

Source: Generated from 2014, GDHS.

5.3: Mother's Age and Health-seeking Behaviour

Mother's age was found to have no statistically significant association with health-seeking behaviour for children with diarrhoea symptoms. A higher proportion of mothers in the various age groups, however, reported to have sought treatment for their children with diarrhoea symptoms (Table 5.2). For instance, 51.1% of mothers age 25-34 sought treatment at medical facility whiles

22.7% sought treatment at non-medical facility. In contrast, mother's age was found to be significantly associated with treatment-seeking behaviour for fever/cough episodes. Majority of mother's aged 34 and below (46.9% and 57.9%) sought medical treatment for their children with fever/cough symptoms. Findings support studies that mother's age influences her decisions to seek treatment. Taffa and Chepngeno (2005) found that mothers aged 20-34 years were more likely to seek biomedical treatment for sick children compared to older mothers 35 years and above.

Table 5.2: Percent of mothers by age, health-seeking behaviour and symptom of health condition of child

	Health-seeking behaviour diarrhoea (%)				Health-seeking behaviour fever/cough (%)			
Mother's age	No treatment	Medical facility	Non-medical facility	Total	No treatment	Medical facility	Non-medical facility	Total
15-24	32.8	47.0	20.3	152	30.0	46.9	23.1	231
25-34	26.2	51.1	22.7	303	23.1	57.9	19.0	614
35-49	34.3	40.4	25.3	183	27.7	47.6	24.7	343
X^2=6.765	df= 4	p=0.149			X^2=13.852	df= 4	p= 0.008	

Source: Generated from 2014, GDHS.

5.4: Marital Status and Health-seeking Behaviour

From Table 5.3, marital status was not statistically significant with health-seeking behaviour. About half (48.9%) of currently married mothers sought treatment at medical facility for diarrhoea symptoms followed by never married mothers (39.9%). For fever/cough symptoms, a higher proportion of never married mothers (52.9%) and currently married mothers (53.2%) sought treatment at medical facility compared to formerly married mothers.

Table 5.3: Percent of mothers by marital status, health-seeking behaviour and symptom of health condition of child

	Health-seeking behaviour diarrhoea (%)				Health-seeking behaviour fever/cough (%)			
Marital Status	**No treatment**	**Medical facility**	**Non-medical facility**	**Total**	**No treatment**	**Medical facility**	**Non-medical facility**	**Total**
Never in union	38.0	39.9	22.1	68	32.5	52.9	14.6	106
Currently married	28.8	48.9	22.4	526	25.0	53.2	21.7	991
Formerly married	34.1	36.5	29.4	44	26.1	47.5	26.4	92
X^2=5.202	df=4	p=0.267			X^2= 5.948	df= 4	p= 0.203	

Source: Generated from 2014, GDHS.

5.5: Ethnicity and Health-seeking behaviour

Bivariate analysis showed no significant effects of ethnicity on health-seeking behaviour for diarrhoea symptoms. However, ethnicity had a significant association with health-seeking behaviour for fever/cough symptoms. Mothers of Mole Dagbani had the highest proportion of mothers seeking treatment at a medical facility. In contrast, Ga/Dangme mothers had the highest proportion that sought no treatment while Ewe mothers reported the highest proportion seeking non-medical treatment for children who exhibited fever/cough symptoms. Taffa and Chepngeno (2005) also reported that maternal ethnicity positively influences health-seeking for childhood illnesses.

Table 5.4: Percent of mothers by ethnicity, health-seeking behaviour and symptom of health condition of child

	Health-seeking behaviour diarrhoea (%)				Health-seeking behaviour fever/cough (%)			
Ethnicity	No treatment	Medical facility	Non-medical facility	Total	No treatment	Medical facility	Non-medical facility	Total
Akan	30.2	43.5	26.3	287	26.0	51.1	22.9	530
Ga/Dangme	28.8	43.0	28.2	39	41.5	45.1	13.4	97
Ewe	31.8	45.5	22.7	55	27.1	47.6	25.3	164
Mole Dagbani	30.0	51.6	18.5	147	15.3	61.7	23.0	226
Other	29.6	52.6	17.9	110	28.9	55.5	15.6	172
X^2= 6.965	df=8	p=0.540			X^2=32.352	df= 8	p= 0.000	

Source: Generated from 2014, GDHS.

5.6: Religion and Health-seeking behaviour

The results depicted in Table 5.5 confirm that religion has a statistically significant association with health-seeking behaviour relative to diarrhoea and fever/cough symptoms. This supports findings by Fosu (1994) that religion had significant effects on health care use. Results in Ghana from Fosu (1994) found that Christian mothers were more likely to seek treatment at health facility compared to other religions. In this study, mothers belonging to the Islam religion had the highest proportion seeking medical facility compared to mothers belonging to Christian and Other religion for both childhood illness symptoms.

Table 5.5: Percent of mothers by religion, health-seeking behaviour and symptom of health condition of child

	Health-seeking behaviour diarrhoea (%)				Health-seeking behaviour fever/cough (%)			
Religion	**No treatment**	**Medical**	**Non-medical**	**Total**	**No treatment**	**Medical**	**Non-medical**	**Total**
Christian	30.2	47.3	22.5	430	27.1	52.2	20.8	898
Islam	25.1	52.8	22.1	167	18.1	58.3	23.6	215
Other	48.9	21.7	29.4	42	32.4	44.2	23.4	76
X^2= 14.522 df= 4 p= 0.006					X^2= 9.956 df= 4 p= 0.041			

Source: Generated from 2014, GDHS.

5.7 Region and Health-seeking Behaviour

According to Table 5.5, there are regional variations in health-seeking behaviour. Region of abode of mothers was found to be highly statistically significant in association with health-seeking behaviour for both illness symptoms. For diarrhoea symptoms, mothers in the Volta Region reported the highest percentage (36.9%) seeking no treatment; mothers residing in Western Region had the highest proportion (75.9%) seeking medical treatment while Ashanti Region had the highest proportion (33.9%) seeking non-medical facility treatment for their children having diarrhoea. For fever/cough illness, Upper West Region had the lowest proportion (5.2%) seeking treatment from non-medical facility and the highest (68.8%) at medical facility. No treatment was

highest (32.5%) among mothers of Greater Accra Region. This is surprising as the Greater Accra Region has more health facilities compared to other regions of the country.

Table 5.6: Percent of mothers by region, health-seeking behaviour and symptom of health condition of child

Region	Health-seeking behaviour diarrhoea (%)				Health-seeking behaviour fever/cough (%)			
	No treatment	Medical facility	Non-medical facility	Total	No treatment	Medical facility	Non-medical facility	Total
Western	20.1	75.9	4.0	38	16.7	67.6	15.7	82
Central	19.4	50.4	30.1	51	22.7	65.1	12.2	112
Greater Accra	33.4	39.0	27.6	63	32.5	43.5	24.0	185
Volta	36.9	41.7	21.3	29	23.6	52.1	24.3	82
Eastern	33.7	44.8	21.5	80	32.3	48.6	19.1	151
Ashanti	32.8	33.3	33.9	141	27.8	44.4	27.8	245
Brong Ahafo	32.1	49.6	18.2	82	20.9	61.7	17.4	91
Northern	29.0	52.3	18.7	107	19.8	50.9	29.3	157
Upper East	23.1	59.6	17.3	26	24.2	68.3	7.6	43
Upper West	28.7	66.7	4.6	22	26.0	68.8	5.2	41
X^2= 41.637 df= 18 p= 0.001					X^2= 56.969 df= 18 p= 0.000			

Source: Generated from 2014, GDHS.

5.8: Type of Place of Residence and Health-seeking Behaviour

The chi-square test indicates that association between type of place of residence and health-seeking behavior for each illness symptom is not statistically significant. Comparing to mothers in urban areas, a higher proportion of mothers in rural areas sought treatment for diarrhoea (51.0%) and fever/cough (53.6%) symptoms at a medical facility. It is also observed that a higher number of mothers in both rural and urban areas sought no treatment for diarrhoea symptoms compared to fever/cough symptoms.

Table 5.7: Percent of mothers by place of residence, health-seeking behaviour and symptom of health condition of child

	Health-seeking behaviour diarrhoea (%)				Health-seeking behaviour fever/cough (%)			
Place of residence	**No treatment**	**Medical facility**	**Non-medical facility**	**Total**	**No treatment**	**Medical facility**	**Non-medical facility**	**Total**
Urban	34.2	41.2	24.6	256	25.9	51.7	22.4	527
Rural	27.4	51.0	21.6	382	25.7	53.6	20.7	662
X^2= 5.728	df= 2	p=0.057			X^2= 0.580	df= 2	p= 0.748	

Source: Generated from 2014, GDHS.

5.9: Working Status and Health-seeking Behaviour

Mothers who are engaged in economic activity are most likely to afford healthcare services. Adulraheem and Parakoyi (2009) found that mother's working status was a predictor for care-seeking for her child. However, from Table 5.8, no significant association was found in the relationship between working status of mothers and their health-seeking behaviour. The results from the analysis reveal that for both symptoms, a higher proportion of working mothers sought medical treatment compared to non-working mothers.

Table 5.8: Percent of mothers by working status, health-seeking behaviour and symptom of health condition of child

	Health-seeking behaviour diarrhoea (%)				Health-seeking behaviour fever/cough (%)			
Working status	**No treatment**	**Medical facility**	**Non-medical facility**	**Total**	**No treatment**	**Medical facility**	**Non-medical facility**	**Total**
Not working	35.5	39.8	24.7	140	30.7	46.7	22.6	196
Working	28.6	49.1	22.3	498	24.8	54.0	21.2	993
X^2=4.084	df= 2	p=0.130			X^2= 3.831	df= 2	p= 0.147	

Source: Generated from 2014, GDHS.

5.10: Wealth Index and Health-seeking Behaviour

Wealth index is found to be highly significant statistically in its association with health-seeking behaviour of mothers relative to their children with diarrhoea but not for fever/cough symptoms (Table 5.9). The results are generally congruent with literature that show the importance of household wealth in determining the use of health care. For example, mothers from the richest wealth index had the highest proportion seeking medical treatment (58.1%) for fever/cough symptoms while poorest mothers had the least proportion (47.6%) for the same purpose. In contrast, however, for children who experienced diarrhoea, the use of medical facility was highest among poorest mothers and no treatment is seen to be highest for richest mothers. This, however, supports findings from Pillai et al., (2003), who suggest that richer families are less likely to seek medical care but only visit medical facilities if symptoms persist for a longer period.

Table 5.9: Percent of mothers by wealth index, health-seeking behaviour and symptom of health condition of child

Wealth index	Health-seeking behaviour diarrhoea (%)				Health-seeking behaviour fever/cough (%)			
	No treatment	Medical facility	Non-medical facility	Total	No treatment	Medical facility	Non-medical facility	Total
Poorest	27.8	53.2	19.0	168	28.8	47.6	23.6	267
Poorer	29.5	50.2	20.3	164	23.5	50.9	25.6	257
Middle	27.0	36.8	36.2	134	25.6	56.0	18.4	254
Richer	33.2	42.9	23.9	104	25.5	52.4	22.0	205
Richest	38.5	50.9	10.6	69	25.3	58.1	16.6	206
X^2=24.527	df= 8	p=0.002			X^2= 10.892	df= 8	p= 0.208	

Source: Generated from 2014, GDHS.5.11: Sex of Child and Health-seeking Behaviour

Table 5.10 shows the association between sex of child and health-seeking behaviour during childhood illnesses. There is no significant association between sex of the child and health-seeking behaviour of the mother. From the results, a higher proportion of female children were taken to medical facility compared to males. This supports findings in Western Nepal. Sreeramareddy et al. (2006), reported that between sex of child and health-seeking behaviour of the mother, there was no association.

Table 5.10: Percentage distribution of sex of child, health-seeking behaviour and symptom of health condition of child

Sex of child	Health-seeking behaviour diarrhoea (%)				Health-seeking behaviour fever/cough (%)			
	No treatment	Medical facility	Non-medical facility	Total	No treatment	Medical facility	Non-medical facility	Total
Male	28.9	46.4	24.7	371	27.7	51.3	21.0	634
Female	31.8	48.0	20.2	267	23.6	54.5	21.9	555
X^2= 1.964	df= 2	p=0.375			X^2= 2.631	df= 2	p= 0.268	

Source: Generated from 2014, GDHS.

5.12: Age of Child and Health-seeking Behaviour

The analysis show that age of child is statistically highly significant in its association with mother's health-seeking behaviour. The results in Table 5.11 agree with Adulraheem and Parakoyi (2009) that a child's age has a strong association with the mother's health-seeking behaviour. The results show that mothers of children of age one year had the highest proportion seeking treatment at medical facility for diarrhoea (59.0%) and fever/cough (58.0%) symptoms. The use of medical facility is, however, lowest for children of ages three and four years: 34.2% and 33.2% respectively for diarrhoea and 47.8% and 48.7% for fever/cough.

Table 5.11: Percentage distribution of age of child, health-seeking behaviour and symptom of health condition of child

Age of child in years	Health-seeking behaviour diarrhoea (%)				Health-seeking behaviour fever/cough (%)			
	No treatment	Medical facility	Non-medical facility	Total	No treatment	Medical facility	Non-medical facility	Total
0	39.1	44.6	16.4	120	26.6	54.9	18.4	206
1	22.9	59.0	18.1	187	19.5	58.0	22.4	289
2	27.6	47.9	24.5	176	21.7	52.5	25.8	274
3	29.7	34.2	36.1	77	35.4	47.9	16.8	234
4	39.5	33.2	27.4	78	28.5	48.7	22.7	186
X^2= 31.548	df= 8	p= .000			X^2= 25.156	df= 8	p= 0.001	

Source: Generated from 2014, GDHS.

5.13 Conclusions

The main independent variable which is mother's educational attainment was not statistically significant for both diarrhoea and fever/cough symptoms at the bivariate analysis level. This indicated that health-seeking behaviour does not vary with the educational level attainted by mothers.

Again, other background characteristics such as mother's age, ethnicity, religion, region of abode, wealth index and age of child were statistically significant predictors for health-seeking behaviour for childhood illnesses in Ghana.

CHAPTER SIX

RELATIONSHIP BETWEEN MOTHERS' BACKGROUND CHARACTERISTICS AND HEALTH-SEEKING BEHAVIOUR FOR UNDER-FIVE CHILDREN

6.1 Introduction

This chapter presents and discusses the multivariate analysis to assess the influence of background characteristics of mothers and children on health-seeking behaviour during childhood illnesses. This chapter has three sections. The first section examines background characteristics on health-seeking-behaviour for diarrhoea symptoms while the second examines background characteristics on health-seeking behaviour for fever/cough symptoms. The last section discusses key findings from the analysis.

The multinomial logistic regression model is used for a nominal categorical dependent variable with more than two categories. For this study, the dependent variable (health-seeking behaviour) has three categories as no treatment, medical facility treatment and non-medical facility treatment. For all the models, no treatment was the reference category for the dependent variable.

To interpret the model, the study uses the Odds Ratios obtained by taking the exponent of the beta estimate to understand the association between the variables. The reference category of each variable was labelled as RC in the analysis and was set at 1.0 for the comparison. An Odds Ratio greater than 1.0 represents a higher likelihood of experiencing the outcome compared to the reference category while an Odds ratio less than 1.0 means a less likelihood of experiencing the outcome compared to the reference category.

6.2 Influence of Background Characteristics on Health-seeking Behaviour for Diarrhoea

This section uses two models to predict the factors associated with health-seeking behaviour for children with diarrhoea symptoms. The first model examines the effect of mothers' education on their health-seeking behaviour. In the second model, mother's education (main independent variable) together with the other demographic and socio-economic variables are put into the regression model to assess their influence on health-seeking behaviour of the mother.

The results from table 6.1 presents the multinomial logistic regression revealing the effect of the background characteristics of respondents on health-seeking behaviour for diarrhoea symptoms of children. For model 1, the overall model level of significance was 0.310, which means the relationship is statistically not significant. The Nagelkerke R^2 (0.009) indicates only 0.9% of the variation in health-seeking behaviour is explained by mother's education. This suggests that other variables (demographic and socio-economic) can better explain the variations in the model. The results of model 1 show that there was no statistically significant relationship between mother's education and health-seeking behaviour ($p>0.05$).

In model 2, the Nagelkerke R^2 value (0.233) shows that 23.3% of the variation in health-seeking behaviour was explained by the independent variables. The model significance was high ($p=0.000$) compared to Model 1. Like in Model 1, maternal education was not found to be statistically significant in predicting health-seeking behaviour ($p>0.05$) in situations when children present diarrhoea symptoms.

Children of mothers aged 25-34 were more likely (1.84) to seek treatment at a medical facility than seek no treatment compared to their peers whose mothers are aged 35-49 years, the results depicted a statistical significance at $p<0.05$. Also, compared to mothers belonging to Other religion,

Christian and Muslim mothers were more likely to seek medical treatment than seek no treatment for their sick children of diarrhoea (OR=6.022 and 8.148 respectively). Children aged one year were significantly more likely to be taken to medical facility than seek no treatment compared to children aged four years.

With respect to non-medical facility, mother's education was not found to have a statistically significant relationship with health-seeking behaviour. Wealth index showed a high level of significant relationship with health-seeking behaviour. Mothers from poorest, poorer, middle and rich wealth groups were more likely to seek non-medical treatment than seek no treatment for their children with diarrhoea symptoms compared to mothers of richest wealth group. Findings show that as wealth index increase the odds of seeking non-medical treatment decreases, suggesting that poorer wealth households tend to use non-medical care for sick child. However, mothers from middle wealth index has the greatest likelihood in seeking non-medical treatment.

No statistically significant effect was found in respect of marital status, ethnicity, region, place of residence, working status and sex of child in relation to health-seeking behaviour of mother for children exhibiting diarrhoea symptoms in Ghana.

Table 6.1: Multinomial logistic regression model showing the association between health-seeking behaviour for diarrhoea and background characteristics of mothers

Health-seeking behaviour for diarrhoea						
Model 1						
	Medical facility vs No treatment			**Non-medical facility vs No treatment**		
Variable	Exp (β)	95% CL LB	UB	Exp (β)	95% CL LB	UB
Mother's education						
No education	1.378	0.913	2.08	1.046	0.634	1.727
Primary	0.968	0.591	1.585	1.22	0.698	2.133
Secondary/Higher (RC)	1.000	-	-	1.000	-	-
Nagelkerke R = 0.009 P-value = 0.310						
Model 2						
	Medical facility vs No treatment			**Non-medical facility vs No treatment**		
Variable	Exp (β)	95% CL LB	UB	Exp (β)	95% CL LB	UB
Mother's education						
No education	1.318	0.712	2.438	1.162	0.567	2.381
Primary	0.712	0.403	1.259	1.097	0.58	2.074
Secondary/Higher (RC)	1.000	-	-	1.000	-	-
Mother's age						
15-24	1.477	0.798	2.731	0.982	0.48	2.007
25-34	1.84*	1.143	2.963	1.33	0.769	2.3
35-49 (RC)	1.000	-	-	1.000	-	-
Marital Status						
Never in union	0.974	0.359	2.643	0.712	0.237	2.138
Currently married	1.589	0.71	3.554	1.094	0.465	2.572
Formerly married (RC)	1.000	-	-	1.000	-	-
Ethnicity						
Akan	0.974	0.473	2.004	1.598	0.661	3.861
Ga/Dangme	1.446	0.464	4.513	2.015	0.525	7.736
Ewe	1.197	0.454	3.152	1.458	0.449	4.733
Mole Dagbani	0.532	0.267	1.06	0.884	0.371	2.102
Other (RC)	1.000	-	-	1.000	-	-
Religion						
Christian	6.022*	2.257	16.064	1.131	0.446	2.868
Islam	8.148*	2.929	22.667	1.97	0.697	5.571
Other (RC)	1.000	-	-	1.000	-	-

Table 6.1 contd.

Variable	Medical facility vs No treatment			Non-medical facility vs No treatment		
	Exp (β)	95% CL		Exp (β)	95% CL	
		LB	UB		LB	UB
Region						
Western	1.961	0.462	8.333	1.235	0.071	21.559
Central	1.144	0.276	4.745	9.613	0.861	107.368
Greater Accra	0.554	0.138	2.229	7.167	0.645	79.631
Volta	0.583	0.122	2.78	3.037	0.239	38.572
Eastern	0.594	0.159	2.227	3.552	0.337	37.389
Ashanti	0.492	0.143	1.7	7.787	0.801	75.739
Brong Ahafo	0.711	0.207	2.444	3.023	0.303	30.151
Northern	0.947	0.297	3.017	4.034	0.433	37.586
Upper East	1.592	0.374	6.774	4.613	0.382	55.732
Upper West (RC)	1.000	-	-	1.000	-	-
Place of residence						
Urban	0.65	0.369	1.147	1.268	0.675	2.38
Rural (RC)	1.000	-	-	1.000	-	-
Working status						
Not working	0.611	0.369	1.012	1.09	0.607	1.957
Working (RC)	1.000	-	-	1.000	-	-
Wealth index						
Poorest	0.92	0.317	2.667	6.092*	1.595	23.277
Poorer	0.902	0.353	2.307	4.716*	1.404	15.836
Middle	0.825	0.356	1.913	7.198*	2.445	21.188
Richer	0.949	0.439	2.048	2.842*	1.016	7.95
Richest (RC)	1.000	-	-	1.000	-	-
Sex of child						
Male	1.18	0.793	1.755	1.272	0.795	2.035
Female (RC)	1.000	-	-	1.000	-	-
Age of child in years						
0	1.248	0.591	2.634	0.706	0.295	1.686
1	2.934*	1.445	5.958	1.367	0.612	3.055
2	2.063	1.033	4.119	1.453	0.678	3.115
3	1.359	0.587	3.148	2.088	0.876	4.978
4 (RC)	1.000	-	-	1.000	-	-
Nagelkerke R = 0.233 P-value = 0.000						

CI= Confidence Interval LB= Lower Bound UB= Upper Bound N= sample size

***P< 0.05 N=638

6.3 Influence of Background Characteristics on Health-seeking Behaviour for Fever/cough

This section also uses two models to assess how maternal education affects their health-seeking behaviour regarding their children with symptoms of fever/cough. Table 6.2 shows the results of the multivariate analysis for health-seeking behaviour regarding children with fever/cough symptoms. The Nagelkerke R^2 value of 0.006 reveals only 0.6% of the variation in health-seeking is explained in terms of mother's education. From Model 3, the mother's education was found to be significantly related to health-seeking for their children with fever/cough symptoms. The results show that children whose mothers had no education were more likely (OR=1.531) to seek treatment from non-medical facility than no treatment for their children who experience fever/cough symptoms compared to mothers with secondary/higher education. This suggest that mothers with no education are more likely to find non-medical treatment more effective than allopathic medicine probably due to lack of knowledge on disease causation and treatment.

Model 4 indicates a Nagelkerke R^2 value of 0.172, meaning that 17.2% of the variation in health-seeking behaviour is explained by the independent variables. From Model 4, there was no statistically significant relationship between mother's education and health-seeking behaviour when it comes to children with fever/cough symptoms. In contrast, a mother's ethnicity had statistically significant effects on health-seeking behaviour. Mole Dagbani mothers were 1.797 as likely to seek medical treatment than seek no treatment compared to mothers from 'other' ethnic groups. Another predictor of health-seeking behaviour was type of place of residence. Mothers who reside in urban areas were less likely (OR= 0.633) to seek medical treatment than seek no treatment compared to mothers dwelling in rural areas. Lastly, mothers without work were less likely to seek treatment from medical facility than seek no treatment for their children exhibiting fever/cough symptoms compared to working mothers.

Children whose mothers belong to the poorest, poorer and middle households were less likely to take their children with fever/cough symptoms to a medical facility for treatment than seek no treatment for them compared to mothers from the richest households. Children aged one year were 1.726 times as likely to seek medical treatment than seek no treatment for their children exhibiting fever/cough symptoms compared to mothers with children of age four years.

Table 6.2: Multinomial logistic regression model showing the association between health-seeking behaviour for fever/cough and background characteristics of mothers

Health-seeking behaviour for fever/cough						
Model 3						
	Medical facility vs No treatment			**Non-medical facility vs No treatment**		
	Exp (β)	95% CL		Exp (β)	95% CL	
Variable		LB	UB		LB	UB
Mother's education						
No education	1.183	0.854	1.639	1.531*	1.035	2.264
Primary	0.891	0.621	1.277	1.246	0.809	1.920
Secondary/Higher (RC)	1.000	-	-	1.000	-	-
Nagelkerke R = 0.006 P-value = 0.158						
Model 4						
	Medical facility vs No treatment			**Non-medical facility vs No treatment**		
	Exp (β)	95% CL		Exp (β)	95% CL	
Variable		LB	UB		LB	UB
Mother's education						
No education	0.964	0.608	1.529	1.269	0.727	2.213
Primary	0.984	0.646	1.499	1.22	0.74	2.011
Secondary/Higher (RC)	1.000	-	-	1.000	-	-
Mother's age						
15-24	0.877	0.548	1.403	1.077	0.628	1.848
25-34	1.348	0.955	1.903	0.967	0.64	1.462
35-49 (RC)	1.000	-	-	1.000	-	-
Marital Status						
Never in union	1.141	0.55	2.368	0.42	0.171	1.033
Currently married	0.967	0.555	1.685	0.705	0.375	1.325
Formerly married (RC)	1.000	-	-	1.000	-	-
Ethnicity						
Akan	0.87	0.499	1.516	2.166*	1.055	4.449
Ga/Dangme	0.61	0.297	1.253	0.706	0.267	1.868
Ewe	0.757	0.387	1.478	2.057	0.883	4.794
Mole Dagbani	1.979*	1.137	3.443	2.666*	1.287	5.52
Other (RC)	1.000	-	-	1.000	-	-
Religion						
Christian	1.265	0.692	2.314	1.064	0.526	2.151
Islam	1.525	0.754	3.081	1.277	0.54	3.019
Other (RC)	1.000	-	-	1.000	-	-

Table 6.2 contd.

Variable	Medical facility vs No treatment Exp (β)	95% CL LB	95% CL UB	Non-medical facility vs No treatment Exp (β)	95% CL LB	95% CL UB
Region						
Western	1.618	0.558	4.688	5.601	0.942	33.294
Central	1.139	0.408	3.18	2.754	0.466	16.273
Greater Accra	0.488	0.179	1.33	6.48*	1.173	35.79
Volta	1.298	0.433	3.887	6.364*	1.065	38.027
Eastern	0.804	0.302	2.136	4.31	0.79	23.514
Ashanti	0.591	0.23	1.516	6.158*	1.174	32.297
Brong Ahafo	1.429	0.53	3.852	5.001	0.894	27.968
Northern	1.155	0.485	2.748	8.808*	1.805	42.972
Upper East	1.381	0.483	3.949	1.764	0.248	12.555
Upper West (RC)	1.000	-	-	1.000	-	-
Type of Place of residence						
Urban	0.633*	0.414	0.968	1.28	0.776	2.112
Rural (RC)	1.000	-	-	1.000	-	-
Working status						
Not working	0.573*	0.38	0.863	0.854	0.524	1.392
Working (RC)	1.000	-	-	1.000	-	-
Wealth index						
Poorest	0.199*	0.094	0.422	1.373	0.565	3.333
Poorer	0.376*	0.192	0.739	1.887	0.836	4.259
Middle	0.487*	0.271	0.875	1.165	0.569	2.388
Richer	0.674	0.403	1.127	1.388	0.739	2.606
Richest (RC)	1.000	-	-	1.000	-	-
Sex of child						
Male	0.82	0.612	1.098	0.886	0.623	1.26
Female (RC)	1.000	-	-	1.000	-	-
Age of child in years						
0	1.146	0.694	1.891	0.845	0.455	1.567
1	1.726*	1.069	2.785	1.44	0.819	2.535
2	1.344	0.835	2.165	1.647	0.945	2.869
3	0.666	0.417	1.062	0.584	0.328	1.04
4(RC)	1.000	-	-	1.000	-	-
Nagelkerke R = 0.172 P-value = 0.000						

CI= Confidence Interval LB= Lower Bound UB= Upper Bound N= sample size

***P< 0.05 N=1,189

In terms of non-medical facility, mother's education was not significantly associated with health-seeking behaviour. On the other hand, mothers from Mole Dagbani and Akan ethnic groups are more likely to seek non-medical treatment than seek no treatment for their children with fever/cough compared to the 'other' ethnic group. Mothers residing in Greater Accra, Volta, Ashanti and Northern regions were more likely to seek non-medical treatment than seek no treatment for their under-five children who experienced fever/cough symptoms.

There was, however, no statistically significant relationship found between age of mother, marital status, religion and sex of child with health-seeking behaviour of mothers for children with fever/cough episodes.

6.4 Discussion of Results

This section presents the discussion of key findings while comparing them with similar studies on health-seeking behaviour for under-five children.

6.4.1 Determinants of Health-seeking Behaviour for Diarrhoea

The results from the multivariate analysis (Table 6.1) indicate that maternal education has no influence on health-seeking behaviour of mothers when it comes to their children with diarrhoea. This is similar to findings of de Silva et al. (2001) in Sir Lanka, Pillai et al., (2003) in India and Ustrup et al., 2014 in Malawi. This finding disproves the hypothesis that 'health seeking behaviour of mothers for children who experience diarrhoea symptoms differs by educational level'. Findings from the study also reveal that mothers who had no education are more likely to seek medical treatment for their children compared to mothers with secondary/higher education. This is however inconsistent with findings which suggest that mothers with lower education were more likely to

use less of medical health facilities during ill health (Sreeramareddy et al., 2006). Mother's age was found to have significant effects on health-seeking behaviour for children with diarrhoea. Mothers between the ages of 25-34 years were found to be more likely to seek treatment from medical facility than no treatment compared to older mothers (35-49 years). Older mothers unlike younger mothers seek alternative treatment primarily due to past experiences and customs in childbearing that rely more on traditional medicine (Bedford and Sharkey, 2014).

From Table 6.1, mother's religion is seen as a significant predictor for health-seeking behaviour. Similar findings were found by Fosu (1994) and Diaz et al. (2013). Findings from Table 6.1 show that Christian and Muslim mothers were more likely to seek medical treatment compared to mothers belonging to the other religion. Religion having significant effects on health-seeking behaviour is plausible because Christian and Muslim religion encourage and organise health talks and programs for their members, influencing a change in their behaviour towards the use of health care facilities during morbidities. However, health practices by mothers in Other religion are based on the belief in herbs and spiritual therapies for illness treatment.

Household wealth index has a positive relationship with health-seeking behaviour of mothers. The results showed that comparing to mothers in richest household, mothers in poorest, poorer, middle and rich households were more likely to seek treatment from non-medical facility. The study findings confirm that mothers from poor homes seek other forms of treatment from drug peddlers and traditional practitioners during ill health. These treatment sources are preferred due to its relatively low cost and proximity (Ustrup et al., 2014).

The age of child had significant association with the health-seeking behaviour of the mother. Children of age one year were more likely to be taken to medical facility compared to children aged four years. This is expected as mothers are quick to seek care for younger children as they are more likely to have severe consequence when treatment is delayed (De Silva et al., 2001).

6.4.2 Determinants of Health-seeking Behaviour for Fever/cough

For fever/cough symptoms, mother's education had significant effect on health-seeking behaviour. From Model 3, mothers with no education were more likely to seek non-medical treatment for sick children with fever/cough compared to mothers who had attained secondary or higher education. Pillai et al. (2003) found a similar pattern among mothers in Kerala, India. In their study, mothers with more education are less likely to seek alternative medicine for their sick children compared to mothers with less education. This is possible as less educated mothers are incline to belief that traditional treatments are more potent than hospital-based medicine (Bedford and Sharkey, 2014). The hypothesis that 'health seeking behaviour of mothers for children who experience fever/cough symptoms differs by educational level.' is confirmed in this study.

In terms of socio-cultural factors, ethnicity of the mother had some significant relationship with mothers' health-seeking behaviour (Model 4). Taffa and Chepngeno (2005) also found that ethnicity was positively associated with health-seeking behaviour. Mothers from the Mole Dagbani ethnic group are more likely to seek treatment from medical facility compared to mothers from the 'other' ethnic group. Additionally, Mole Dagbani and Akan mothers are more likely to seek non-medical treatment compared to the 'other' ethnic group. This means that mothers from the Mole Dagbani Akan ethnic groups have a good chance to seek treatment than no treatment for fever/cough symptoms.

Region, type of place of residence, wealth index and working status were the significant enabling factors with health-seeking behaviour regarding fever/cough symptoms among children. Mothers residing in urban areas are also less likely to seek medical treatment for fever/cough compared to rural mothers. This is quite interesting as urban areas have relatively more health care facilities compared to rural areas but healthcare services may not be available or affordable for all urban dwellers. In the same light, mothers residing in the Northern, Ashanti and Greater Accra regions were found to be more likely to seek non-medical treatment compared to mothers in Upper West Region. Results require further investigation.

Generally, literature shows that wealthier households are more likely to use health services compared to poorer households due to differences in the financial capability between rich and poorer households (Adulraheem and Parakoyi, 2009 and Fosu, 1994). The results show that poorer mothers will seek no treatment for their children with fever/cough symptoms compared to wealthier mothers. Mothers who do not seek treatment may not be well informed about the danger signs of illness and the availability of treatment (de Silva et al., 2001; Ustrup et al., 2014). They may also be hindered by financial cost for health care services. Along the same lines, mothers without work are less likely to seek medical treatment compared to working mothers.

Only age of child was significant in predicting health-seeking behaviour for fever/cough among the child characteristics used in the study. Similar for diarrhoea symptoms, mothers of children age one year are more likely to seek treatment at medical facilities compared to children aged four years. Other studies confirm that mothers seek better care for children below two years with fever/cough symptoms (Ustrup et al., 2014; Noordam et al., 2015; Adinan, et al., 2017).

6.4.3 Differences between Health-seeking Behaviour for diarrhoea and fever/cough symptoms

Results from this study show some differences in health-seeking behaviour of mothers for childhood illnesses. More children (20.1%) experience fever/cough symptoms compared to diarrhoea (11.2%), again mothers with children having fever/cough symptoms were more likely to seek care than children with diarrhoea symptoms (74.2% for fever/cough and 69.9% for diarrhoea). It is possible that mothers recognise how vulnerable under-fives are to fever/cough symptoms and they are more likely to seek care during illness episode (Ustrup et al., 2014). Evidence in literature supports this finding (Akinyemi et al., 2019). Finally, the study also reveals different determinants for diarrhoea and fever/cough symptoms with the exception of age of child.

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

This chapter presents the summary of the key findings from the analysis of mother's education and health-seeking behaviour during childhood illnesses. The chapter also presents relevant recommendations on health-seeking behaviour of mothers based on findings.

7.2 Summary of main findings

Analysis of the background characteristics showed that, children who exhibited diarrhoea symptoms had 30.1%, 47.1% and 22.8% of mothers seeking no treatment, medical facility treatment and non-medical facility treatment, respectively. Nearly half (47.5) of mothers had secondary/higher education, a higher proportion of them were in the age group 25-34 years, 82.5% were currently married and almost half were from the Akan ethnic group. For children who exhibited fever/cough symptoms, 25.8%, 52.8% and 21.4% of the mothers respectively, sought no treatment, sought medical facility and non-medical facility treatment. More than half of the mothers had attained secondary/higher education, and Christian mothers had the highest representation with 75.5%.

Objective one of the study sought to examine the variation in the health-seeking behaviour of women relative to illness symptoms for their under-five children. Health-seeking behaviour was assessed using three categories: no treatment, medical facility and non-medical facility. The results showed very little variation in mothers' health-seeking behaviour for children with diarrhoea and fever/cough symptoms. Majority of mothers sought treatment when children exhibited childhood

illness symptoms (69.9% for diarrhoea and 74.2% for fever/cough) and a higher proportion of mothers also preferred medical facility (47.1% and 52.8% respectively) compared to non-medical facility (22.8% and 21.4% respectively).

Objective two aimed to assess the relationship between the mother's education and health-seeking behaviour relative to illness symptoms for their under-five children. With respect to diarrhoea symptoms, the results from the bivariate and multivariate analyses showed no statistically significant relationship between mother's education and health-seeking behaviour. However, for fever/cough symptoms, mothers with no education were significantly more likely to seek non-medical facility treatment for sick children compared to mothers with secondary/higher education.

Objective three sought to identify and examine other factors that predict the health-seeking behaviour of mothers with respect to their under-five children. The results suggested that predictors of health-seeking behaviour for diarrhoea include mothers' age, religion, wealth index and age of child. Mothers of age group 25-34 were more likely to seek medical treatment for their children with diarrhoea symptoms juxtapose mothers aged 35-49 years. Comparing to mothers of Other religion, Christian and Muslim mothers were more likely to seek medical treatment for their wards. Children of mothers from poorest, poorer, middle and rich households were also more likely to use non-medical facility for diarrhoea symptoms compared to mothers from richest households. Lastly, children aged one year were more likely to be taken to a medical facility during ill health compared to children aged four years.

With reference to fever/cough symptoms, significant predictors were ethnicity, type of place of residence, region, wealth index, working status and age of child. The results showed that the Mole Dagbani mothers were more likely to seek some treatment than no treatment compared to mothers from the 'other' ethnic group. Mothers living in urban areas were also less likely to seek medical

care compared to mothers living in rural areas. Mothers from poorest, poorer and middle are less likely to seek medical treatment compared to mothers from richest household. Similarly, mothers without work were less likely to seek medical treatment compared to working mothers.

7.3 Conclusions

The purpose of this research was to determine relevant factors influencing health-seeking behaviors of mothers for childhood illnesses using the Andersen and Newman's (1973) Health Utilization Model as a theoretical framework. The findings of the study showed the different components that determine health-seeking behaviour of mothers. Predisposing factors such as mothers' education, age, ethnicity, religion and age of child were identified to influence health-seeking behaviour. Working status, place of residence, region of abode and wealth index were enabling factors affiliated with care seeking for childhood illness. The type of disease also influences the decision to seek treatment. The findings illustrate the relationship between predisposing, enabling and need factors in health-seeking behaviour of mothers. These factors help to explain the complex variation in predicting health-seeking behaviour of mothers for childhood illness.

There is very little difference between health-seeking behaviour of mothers relative to illness symptoms exhibited by under-five children Ghana. Mother's education was found not to be statistically significant in predicting health-seeking behaviour for diarrhoea symptoms but was found significant for fever/cough symptoms. Children whose mothers had no education were significantly more likely to seek non-medical treatment compared to mothers with secondary/higher education. Mothers age, ethnicity, religion, place of residence, region, wealth

index, working status and age of child were also found as significant predictors of health-seeking behaviour for under five children in Ghana.

7.4 Recommendations

Empirical findings from this study show that maternal education was a predictor for health-seeking for fever/cough symptoms among children. Less educated mothers are more likely to use other forms of treatments such as pharmacy, drug peddlers and traditional practitioners instead of visits to medical facilities for children exhibiting fever/cough symptoms. The study suggests that improving the educational status of women will improve better health-seeking practices as mothers will seek appropriate treatment from the right sources, including from health facilities where proper diagnosis could be done to increase the chances of child survival during ill health.

Another important finding was that mothers in urban areas, not working and poor were less likely to use medical facilities during children illness. This implies that improving the socioeconomic status of women through job creation will ensure they have funds to access health facilities when children are sick to reduce mortality rates. However, further research should be done to explore why urban mothers are not using medical facilities where there are relatively more health facilities.

Many mothers belonging to the other religion failed to seek medical treatment for their sick children. This study proposes that health planners should collaborate with other religious group leaders for the purpose of educating their members with health knowledge on health-seeking practices for children to ensure better health outcomes. Results from the study also showed that ethnicity significantly predict health-seeking behaviour. Based on this, there is the need for

further studies to explore the health-seeking behaviour of women among the various ethnic groups to identify potential cultural practices that influencing health-seeking.

Furthermore, although quite urbanized and with more health care facilities, mothers from Greater Accra, Volta, Ashanti and Northern regions seek treatment from non-medical facilities. Qualitative enquiry is need to examine why mother preferred alternative sources for childhood illnesses. Finally, since mothers are more likely to seek treatment for children aged one, health care professions need to emphasize the need for appropriate treatment for all ages as children under five are vulnerable to severe consequences to diseases.

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