ENSIGN COLLEGE OF PUBLIC HEALTH, KPONG, EASTERN REGION, GHANA.

A STUDY ON THE HEALTH STATUS OF CHILDREN (0-36 MONTHS OLD) OF HEAD PORTERS IN MARKOLA MARKET, ACCRA

BY

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DECLARATION AND CERTIFICATION

I, Afua Owusu Marfo declare that this work is my original work and has not been published or submitted to any other institution of learning for any award. Where work and ideas or concepts have been taken or adapted from other authors, these have been properly cited and referenced.

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DEDICATION

I dedicate this work to my mother and husband for their financial support. I dedicate it also to my two children for putting up with me and staying with family and friends whiles I pursue this education.

Finally to all the hard working head porter mothers who work so hard and tirelessly to make a living for themselves and their children.

ACKNOWLEDGEMENT

I owe the successful completion of this work to the Almighty God. I am thankful to Dr Simon Sovoe, my supervisor for the assistance he gave me.

Finally, thanks to all the head porter mothers who dedicated their time for this study.

DEFINITION OF TERMS

Children: A young human being below the age of puberty or below the legal age of majority.

Confidence interval: An estimated interval within which the population parameter of interest is assumed to be found.

Head porter: A person who carries baggage and goods on the head from one destination to another destination.

Health status: Health status is an individual's relative level of wellness and illness, taking into accounts the presence of biological or physiological dysfunction, symptoms, and functional impairment.

Immunization: Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine.

Living condition: This refers to the circumstances of a person's life—shelter, food, clothing, safety, access to clean water and such.

Migration: It is the movement of a person or a group of people, to settle in another place, often across a political or administrative boundary

Morbidity: This refers to the unhealthy state of an individual,

Slum: It is a heavily populated urban informal settlement characterized by substandard housing and squalor

ABBREVIATIONS/ACRONYMS

AIHW	Australian Institute of Health and Wellness
CDC	Center for Disease and Control
CSO	Central Statistical Office
GHAFUP	Ghana Federation of the Urban Poor
GDHS	Ghana demographic and health survey
ISSR	Institute of Statistical, Social and Economic Research
MDG's	Millennium Development Goals
NDPC	National Development and Planning Commission
NHFS	National Health and Family Survey
NRC	National Research Council
UNDP	United Nation Development Programme
UN-HABITAT	United Nation Habitat
UNICEF	United Nation Children and Education Fund
USA	United State of America
WFP	World Food Programme
WHO	World Health Organization
ZDHS	Zambia Demographic and Health Survey

ABSTRACT

This is a cross sectional study that was done to assess the health status of children (0-36 months) in Markola market in Accra. The environment in which a child grows and plays in eventually has an effect on the health of the child. Most Head potters and their children at Makola usually sleep in the open space and live under poor and unsanitary conditions. This poses a major health risk to these children. This research therefore sought to look at morbidity, level of immunization and the general health status of these children using anthropometric measurements as well as determining the health seeking behavior of the mothers when the children fall ill.

At the end of the study 385 mothers were interviewed with regards to their perception of their children's health. 44%, 34% and 23% of the children had experienced malaria, diarrhea and prolonged cold respectively within the past one month prior to the study. Polio, Diphtheria and Tuberculosis immunization were recorded to have been completed among the children at 75.1%, 73.8% and 80.26% respectively. The age and the type of living area or household of the head porter were found to be significantly associated with health facility use with a p-value 0.02 and 0.001 at 0.05 significant levels respectively. Majority of the children were found to have adequate nutritional status.

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CHAPTER ONE

INTRODUCTION

1.0 Background

The state of health is an all-inclusive concept that is defined by more than the presence or absence of a disease. Life expectancy is usually used to measure or self-evaluate health status, and more generally includes factors of mental wellbeing, physical wellness and activeness (AIHW, 2012).

The initial years of a child's life shape the base for future health, welfare and development. Positive beginnings help children to attain their full potential, but a poor start catalyzes the probability of negative consequences. Data indicates that when children obtain preventive -child health care, early diagnosis, and effective treatment, they have further potential to participate in learning (Determining Child Health Status, 2015).

The World Health Organization (WHO, 2001), notes that sound development of the child is of prime importance as the health status of the population of children reflects the overall health of a nation, with future implications into adulthood. Physical, mental, and emotional health affect every aspect of life, such as employability, learning, and partaking in leisure activities.

Children's health is shaped by the mix of many influences involving intricate processes. These influences are environmental, behavioral, and biological (National Research council, 2004)

The biological influences include genetic manifestations, prenatal, as well as biological constraints and possibilities. Behavioral influences include the child's attitudes, emotions, behaviors, beliefs, and cognitive abilities (Harris et al, 2010). Environmental influences include lead and air pollution, infectious agents; and social factors such as family and community socioeconomic resources, loving

interactions with care providers, culture, peer relationships, and racism; as well as the availability and quality of services (National Research council, 2004).

A publication by WHO states that more than three million children under five die each year from environment-related causes and conditions, which is 30 percent of the ten million global child deaths. In unindustrialized countries primarily, environmental risk factors for children are one of the main contributors to childhood deaths, illnesses and disability due to prenatal infections, poisonings, physical injuries, as well as respiratory, insect-borne and diarrhoeal diseases. Damaged environments are related to the malnutrition and poverty incidences that lead to childhood illnesses and deaths. The environment is thus a very important factor in the health and well-being of children and their mothers (WHO, 2017).

For most of the 20th century, urban areas were associated with improved child health and lower mortality than rural areas (Garenne, 2010; Leon, 2008). Families in cities have access to greater education and economic values, including the benefits of Chadwick's hygienic revolution in safe water and sanitation, safe childbirth and perinatal care, access to vaccinations and antibiotics (Harpham, 2009).

However, due to variations in development in cities, slums have emerged to fill these differences (Garenne, 2010; Fotso, 2008). Slums are the product of rapid and unplanned growth of urban areas predominantly over the last 50 years. They provided cheap housing in cities that promised secure food, water and public services as offshoot of economic boom in cities that attract migrants from deprived rural communities (UN-HABITAT, 2003).

In addition to inadequate urban planning and overwhelmed or negligent political systems, ill-equipped transitioning economies and demographic forces have also catalyzed the connection between slums and urban growth (UN-HABITAT, 2003).

Slums communities range from thousands to millions of residents, which the UN operationally defines as having at least one of five characteristics: insecure residential status, poor structural quality of housing, overcrowding and inadequate access to safe water, sanitation and other infrastructure. As part of the UN legal and physical definition, life-threatening levels of poverty as well as excessive substandard living conditions characterize slum life, which pose social shortcomings to children and their families as access to playgrounds or recreational facilities, schools, basic healthcare, and significant municipal services, such as policing, public and transportation are limited (UN-HABITAT, 2003).

Slum communities are usually affected by social problems like drug trafficking and abuse, alcoholism, fragmented families, low educational status, economic and sexual exploitation, to the extent that they are often alienated from the protection of community support, tradition and extended family systems. They also encounter high informal employment and unemployment, poor and dangerous working conditions, threats of violence, evictions and natural disasters (Frys et al, 2002; Gracey, 2002). The early life experiences of social determinants may immediately or cumulatively affect child and adolescent health in various ways, which may have effects on future adult health and well-being (Marmont, 2005).

In Ghana, the name 'Kayayo' is the popular local word for a fee-charging female head porter or head load carrier. It is derived from the Ghanaian Ga dialect. Most 'kayayei' which is the plural of 'Kayayo' are young females who migrate from the Northern Ghana and other rural areas to the cities of Accra and Kumasi especially, as well as to Tema, Takoradi, and some other regional capitals. (Ahivin, 2012)

This unabating phenomenon of young females who move to the urban areas either forced or self-choice do so out of many factors such as unemployment, forced marriage, dislike for rural livelihoods like farming, family disintegrations, peer pressure, lack of education and poverty (Berg, 2007).

The head porters are often transitory, living in poor conditions, without basic nutrition and sanitation and earning marginal income. Sometimes they are taken into private homes to perform domestic tasks, with better income and living conditions (Sabutey, 2014)

The media in Ghana have been publishing stories on the livelihoods of these kayayei or women head porters. The *Daily Guide* newspaper, described how these young women on a daily basis sleep with their babies at night on the open pavements of the main Tema Lorry Station in Accra as well as the attendant health hazards that these living conditions pose to the kayayei (Daily Guide, 2006).

The next better form of accommodation perceived by the head porters are the slum dwellings. Living in to slum areas pose serious health threats for them as "Slums areas of a city are high risk areas for various disease transmissions. Maternal and child heath indicators among slum dwellers show that their health status is two to three times worse than those in the other urban area" (Rao et al, 2007).

1.1 Problem Statement.

The population of kayayei in Accra continues to increase and most of them are migrants without proper homes in Accra, mostly lacking personal hygiene, live in poor conditions and abject poverty. The conditions they live in, together with their children render them at high risk of illness and other health complications (Opare, 2003).

Many kayayei are encouraged by their families in Northern Ghana to move down south to the cities due to lack of employment opportunities in the northern part of the country (Opare, 2003). Because of lack

of education, these women tend to work in the informal sector when they reach the metropolis, where they earn little money and have little or no time to care for neither themselves nor their children. The insanitary environments they live pose a health risk. They earn so little that they are not able to provide the necessary care for their children when illness strikes (Yeboah and Appiah, 2009)

Despite that, a lot of effort has been made by successive government to discourage head portage, these young women still move from their homes in the northern region to find solace on the streets of big cities (Opare, 2003).

Furthermore, observing the health status of infants and children makes it possible to evaluate the effect of health programs as well as identify areas of health need within the child population. As the health care needs of children change over time, obtaining current data is important for health professionals, policy makers and program planners. Effective health policies and programs are important for establishing healthy habits and the mitigation of risk factors for disease (Child health USA, 2011).

1.2 Rational of the Study.

Living conditions of head porters (*kayayei*) is a challenge. Most of them live in slums, on the streets or in people's shops. These conditions pose health risk to the head porters and their children.

Knowing the vulnerability of children to diseases, it is prudent to assess the health of children of kayayei who are living within such environment

1.3 Hypothesis

1. Null hypothesis: There is no association between diseases children get and the environment they live in. Alternate hypothesis: There is an association between diseases children get and the environment they live in.

2. Null hypothesis: There is no association between the number of times a child gets sick and the environment the child lives in.

   Alternative hypothesis: There is an association between the number of times a child gets sick and the environment the child lives in.

3. Null hypothesis: There is no association between anthropometric measurement of the child and the environment they live.

   Null hypothesis: There is an association between anthropometric measurement of the child and the environment they live.

1.4 Research Question

1. What is the health status in children of head porters?
2. What are some of the diseases that affect these children?
3. What is their level or history of immunization?
4. What determines the mother to seek healthcare for her child?
5. What has the anthropometric measurement of these children got to say about their health?

1.5 General objectives

The research seek to assess the health status of children (0-36 months old) of head porters in Markola market

1.6 Specific Objectives

The specific objectives are:

- To determine common morbidity among the children of head porters
- To determine the level of immunization of the children of head porters

- To determine the health status using anthropometric measurement
- To investigate health seeking behaviours of head porter mothers for their children

1.7 Profile of the Study Area.

Makola is a renowned shopping district in the centre of Accra, the capital of Ghana. The market is dominated by women who sell goods varying from fresh food, imported goods, local jewelry, shoes and many more. The loosely defined borders of Makola Market enclose what might be seen as Accra's most dynamic commercial hub.

Markola Market was constructed in Accra in 1924 and stood at the heart of the urban Ghanaian life (African urbanism, 2011). The market is the main wholesale and retail marketplace in Accra, the epicenter of trade in the country and one of the nation's most important social and cultural institutions. Markola Market, also known as 31st December market, is located next to the Kwame Nkrumah memorial park over the High Street, and bounded by Kinbu, Thorpe Road (which becomes Kojo Thompson Avenue to the North), and Pagan Road.

Due to the busy nature of Markola market, it attracts a lot of young ladies from the northern part of Ghana, who believe in coming down to seek greener pastures. Markola was selected because it hosts most of these head porters. Other areas include Agbobloshie and Malata. The kayayei are often seen in groups waiting for customers so it makes it easier to reach a larger group of them. Also, Markola comparably with other markets is busier and larger.

1.8 Conceptual Framework

The concept of health has since 1948 been defined by the World Health Organization (WHO) as "Health is a state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity."

This definition was arrived at after several evolutions of the health concept, particularly in the last century. At the turn of the 20th century, when infectious diseases posed the greatest threat to health, health was viewed as the absence of disease or injury. The new International Classification of Functioning, Disability, and Health focus not only on impairments of body parts and systems, but also on individual participation in daily activities and on the interaction between disorders and environments that alter functioning (Chatterji et al., 2002).

The changing patterns of morbidity and mortality, routine treatment of infectious diseases, and the increased prevalence of chronic conditions have led to the use of health promotion and disease prevention methods, which encouraged exercise and dietary lifestyles, as well as exposure to multiple effects over longer time frames (NRC, 2004).

As multiple influences on health was more understood over time, recognition grew that health is more than the absence of disease and that it is a positive capacity and a prerequisite for a range of human accomplishment (Breslow, 1999).

Children's health revolves around dynamic multiple and interacting influences. In this conceptual framework, the various influences are regarded as interacting within the broader context of policy and services. The relative importance of individual influences varies over time as children move into new developmental stages and the influences interact; the pattern of health that emerges also varies. Each turn incorporates the previous elements, including the child's former health, and casts them in new light; all determine the child's present and future health (NRC, 2004).

Health is viewed as having three distinct but related domains: health conditions, a domain that deals with disorders or illnesses of body systems; functioning, which focuses on the manifestations of individual health in daily life; and health potential, which captures the development of health assets that indicate positive aspects—competence, capacity, and developmental potential (NRC,2004).

Health conditions refer to alterations in health status reflected as disease, injuries, or impairments or as pathophysiological manifestations of disorder (signs and symptoms). They may be acute and self-limited, acute but likely to recur, or chronic; they may be anatomical, physiological, or psychosocial. They include a wide range of specific as well as nonspecific conditions and syndromes (NRC, 2004).

The functioning domain reflects the direct and indirect effects of one or more health conditions. It includes all aspects of physical, psychological, cognitive, and social functioning as they express themselves in children's daily activities and behavior. Alterations in functioning have been used to measure the significance of injuries and the effects of acute and chronic health conditions (Manuel et al, 2002). They provide a common measure for assessing the health of children across conditions (Stein et al., 1987; Stein and Jessop, 1990).

Social functioning includes measures of social integration and social connection, including the ability to make and keep friends and to play a supportive or instrumental role in the lives of others. It also refers to limitations imposed on children in usual activities and relationships such as the ability to engage in ordinary play, attend school and participate in school-related activities (Saarni, 2011).

The level of compensatory mechanisms and treatments available (e.g., durable medical equipment, implants, medications) also changes the expression of the condition in terms of the child's functioning (NRC, 2004).

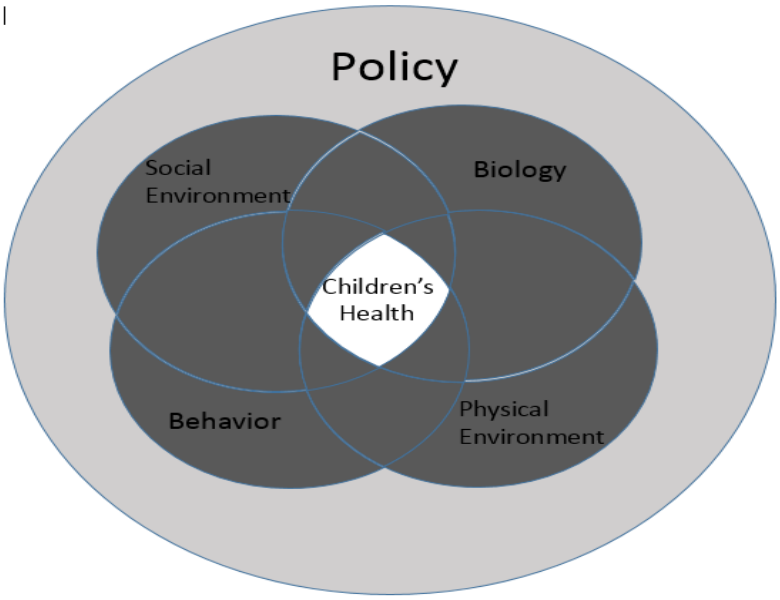
Health potential includes health assets that have capacity to respond to psychological, physical, and social challenges; and risk states that increase vulnerability to other aspects of poor health. Among

these are constructive developmental assets and health dimensions that show ability to create positive relationships, regulate emotional and cognitive states, and respond to multiple challenges, including exposures to disease and psychological and physical stress, among others (Cohen, 2004).

Other characteristics that add to a child's ability to deal with and bounce back from adversity include curiosity, responsiveness, reflection, imagination, self-efficacy, problem-solving ability, self-sufficiency, optimism, and disease resistance and recovery (Starfield et al., 1993).

Children's health revolves around the dynamic process of multiple and interacting influences. In the development of the new conceptual model, the various influences are presented as overlapping circles that interact within the broader context of policy and services. The relative importance of individual influences varies over time as children move into new developmental stages and the influences interact; the pattern of health that emerges also varies. The model illustrates that the effect of influences will vary based on both time and stage of development. Since development is an uneven process, with periods of rapid growth and periods of relative quiescence, it is not synonymous with time, nor is it the same from child to child, and the interaction of various influences changes with both time and developmental stage. As children age, the kaleidoscope turns and the patterns change, reflecting their changing health. At some ages, these turns are very rapid, reflecting substantial developmental change; at others, they are less so (though still more rapid than in adults). Each turn incorporates the previous elements, including the child's former health, and casts them in new light. All affect the child's present and future (National Research Council, 2004)

Figure 1.0 A chart showing children's health and its influences.



Source; National Research Council, 2004

1.9 Scope of the Study

Health status assessment is broad and encompasses numerous areas. However this study looks at some factors that affects the health or well being of the children of head porters considering the environment these children live in. the study investigate the common diseases these children get, assess the level of immunization, determine their health status with reference to their anthropometric measurement and also look at the health seeking behaviours of these mothers for their children. It is only limited to head porter mothers who have children between the ages of 0-36 months. The geographical scope involves areas within the Accra metropolitan assembly in the greater Accra region.

1.10 Organization of Thesis

This thesis is divided into six (6) chapters. Chapter one provides the introduction grouped under the following headings: Background to the study, justification and significance, Objectives of the study, Research questions, Research hypothesis, Scope of the study, and Organization of the study. Chapter two covers the review of related literature on the subject under the study. Chapter three outlines the methodology of the study, including the study design, sample size, data collection procedures and data analysis. Chapter four presents' results and analysis of the data gathered for the study. Discussions are provided in chapter five. Finally, the sixth chapter provides conclusions and recommendations

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews literature on the factors affecting the health status of children of female head porters, commencing from the meaning of health status of children, discussion on socio – cultural indicators that affect the development of the child, as well as investigation of the factors that affect the health of the child including common diseases, history of immunization, and access to health care.

2.1 Health Status of Children.

Children's health is the extent to which individual child or groups of children are able or enabled to develop and realize their potential, satisfy their needs, and develop the capacities that allow them to interact successfully with their biological, physical, and social environments (National Research Council and Institute of Medicine, 2004)**.**

Children's physiology and behavior differ in ways that require a different view of their health that is sensitive to rapid and unique developmental considerations, and that the manner in which they interact with their environments differ in many ways from adults. For example, the surface area of their skin and lungs is proportionately greater in comparison to their weight than at any other time of life. This makes children more vulnerable than adults to certain types of environmental exposures. Children's behavior also differs in significant ways from that of adults as they are by their nature very exploratory (National Research Council and Institute of Medicine, 2004).

2.2 Head Portage in Ghana

Traditionally, carrying goods on the head was important freight transportation in Ghana in the absence of modern transportation. Contributing to the history of head porting in Ghana, Kwankye (2012) indicates that the activity started before colonization. According to Agarwal et al. (1997), the carrying of goods on the head was historically the activity of women in Ghana. Rural women in Ghana and in other parts of Africa have been known to transport agricultural products for household consumption and/or for sale. This practice is still common in urban and rural areas in contemporary Ghana. Even with the introduction of modern transport methods and intermediaries in recent times, the head is still popular for porting especially in developing countries (Baah-Ennumh and Adom-Asamoah, 2012.)

The absence of vehicle transport modes practices between outlets and bus terminals in the central business district of Kumasi and Accra Metropolis fueled the phenomenon. Although the practice was well known, it had no economic policy backing since it was done largely for domestic purposes. The phenomenon evolved from its traditional sense and has become an economic activity that uses a portion of the economically active age group. The phenomenon evolved from its traditional sense when male migrants from the West African Sahel countries to Ghana, mainly from Mali, also took up head porting as a means of earning livelihood (Kwankye et al. 2007). The men who engaged in this essential market services were called "kaya." After the Aliens Compliance Order in 1969, which expelled all foreigners who did not have genuine residence permit and work in Ghana, the kaya business nearly died as those who practiced it were affected by the expulsion order (Kwankye et al. 2007). The gap created by the exit of these people was then filled by Ghanaians with few modifications to the trade; with men preferring to carry heavy and more loads on hand-pulled trucks instead of on their head. With time, congestion on major markets caused by unplanned buildings and structures, human and vehicular traffic, it became difficult for the efficient use of trucks, thus

necessitating a change for a mode of transport that can function effectively in congested markets. Head porting thus assumed a place in the transport of goods from one part of town to another, particularly over short distances; and in the process provided employment for young people who migrate to cities.

In recent times, head porting has become dominated by young women commonly called "kayayei" a term which literally means "females who are kaya." According to Kwankye et al (2007), kayayei is a local term commonly used by the Gas (an ethnic group in Accra, Ghana). It is derived from two words; "Kaya" from Hausa dialect meaning ‘goods’ and "Yoo" from of Ga meaning woman or girl. ‘Yoo’ is singular and ‘Yei’ is plural.

The factors that triggers migration include social movement; to join spouses, burden of family members, benefit of social services such as education and health of abundant social amenities in urban areas and religious reasons (Transformations, Presidency and Council, 2017). Anzagra and Yeboah (2012) identified that over 50 percent of migrant migrated to find jobs in the Kumasi metropolis, while 46.7 percent of them migrated to fend for themselves because they said their parents were poor and could not take care of them. Their results were consistent with the view of Kwankye that the main reason of the decision of children to migrate is "independence and money" (Kwankye, 2012). Kese (2004) argues that the architectural designs of the markets in the cities of Ghana do not allow the use of intermediate and modern modes of transportation in congested markets, and rather promoted freight transport by humans, and so the migration of young women to the cities of southern Ghana to work as porters of the head. The head remains the cheapest and convenient means of porting, especially between markets and bus stations.

Socially, many migrant women in Ghana are from poor rural communities where children begin to gain their own independent revenue early, and to contribute to the family income. Thus, girls are encouraged to earn income for their own consumption and maintenance. In addition to the need for

income, the exodus of unmarried women to the cities of Accra and Kumasi is also variously linked to females escaping status traditionally assigned as obedience to male relatives, or excessive work or customary practices such as female genital mutilation or arranged marriages (Whitehead and Hashim, 2005; Awumbila, 2007). These socio-cultural factors make it very complex and difficult to eradicate completely the migration of girls to the cities to work as porters of the head.

Adu-Okoree (2012) also explains that "every woman should have a quantity of kitchen and dining room sets to decorate their rooms. The more of these items a woman has, the more attractive she is and thus obtains the best potential suitors. “Their decision to migrate to work and earn income is "economic" while the intention of being ready for marriage is a social reason (Adu-Okoree). This is summarized by the Ghana Statistical Service (2005) quoting Kelly and Williamson (1984) that the rural-urban migration is based on the opportunities in the cities; this is perfectly explained by the urban bias theory.

2.3 Description of the Urban Poor Location and Living Conditions

Ghana is rapidly urbanizing. In 1984, the country’s urban population was 30 percent (Farouk, 2013). Sixteen years later, the 2000 Population and Housing Census put Ghana’s urban population at 43.8 percent (Population and Housing Census, 2000). According to the 2010 Population and Housing Census, more than 50 percent of Ghanaians now live in urban areas. Part of this increase is due to the migration of women from rural areas (Population and Housing Census, 2010). Since the early 1980s, tens of hundreds of young females in northern Ghana have fled the growing unemployment in the north to the south. The traditional source of employment in the north, which is rain-fed agriculture, is no longer sustainable due mainly to increasing climate change. Majority of these women who are of school going age, escape to cities without knowing where they will live or work, and often ultimately

working as head porters, and engage in other menial jobs. Female head porters are now a distinct urban poor group, mostly operating in and around lorry parks and markets in Ghana's cities (Farouk, 2013)

According to a survey on Kayayei, conducted by the Ghana Federation of the Urban Poor (GHAFUP, 2010), the majority (58 percent) of 15,000 respondents were engaged in farming prior to their migration. Only 11 percent had attended school, while 13 percent had been idle.

2.4 Live-In Structures

Insecurity of tenure and lack of access to clean water and sanitation facilities are perennial problems in slums, therefore Kayayei living in these slums face considerable day-to-day struggles in meeting their shelter, water, sanitation, and livelihood needs (Farouk, 2013). Squatter housing tends to be made from flimsy scrounged materials that do not stand up under bad weather. Flooding is a frequent problem, because of locating these structures on flood hazard zones. Illegality or lack of tenure is a key feature of urban squatter settlements. Another feature of urban poverty is overcrowding, with several families crammed into a single room. Diseases, such as tuberculosis and measles and other infectious diseases, spread rapidly under such living conditions (Shamsu-Deen, 2013).

2.5 Environmental Health Conditions

Lack of water supply and sanitation facilities characterizes urban squatter areas. People line up at neighborhood standpipes, buy from vendors, or tap pipes illegally to obtain water. Some settlements have community toilets that are generally unsatisfactory. Most frequently, people defecate in pits or in the open or in ditches, canals, or rivers. The public health consequences are severe, especially for young children. Solid waste collection is also rare in poor urban areas. Accumulated waste creates

mountains of garbage that are the homes and work sites of scavengers, who are often children. Garbage dumps are also breeding sites for rodents and insects, such as mosquitoes, which carry dengue and malaria. Cities in the developing world have two to eight times the maximum tolerable levels of air pollution as defined by the World Health Organization (Counterpart international, 2001). Motor vehicles as well as unregulated industries emit smoke and particles that lead to lung disease. Lead in the air from leaded gasoline puts small children at risk for lower intelligence quotients (Ahmedabad Municipal Corporation, 2001).

2.6 Socio-Cultural and Economic Indicators Affecting the Survival of the Child

Social factors, such as marginalization, illiteracy, class status, and gender can determine whether a group lives in good health or not. Like the kayayei living in slums, a majority of urban poor households are headed by women who must earn a living. This situation has consequences on the health and development of children (International Institute for Population Sciences and ORC Macro, 2000). It is critical to grasp the true picture of the health status of children under five living in these slums as distinct from the general, or average, urban child population due to the difference in economic status and environmental conditions.

A 1994 disaggregated demography and health survey urban data for Accra, Ghana, and São Paulo, Brazil, using education, income, sewage, water, and housing density to create socio-environmental zones for comparison found that under-five mortality from respiratory infections and diarrhea was four times higher in the most deprived zones than in the most privileged ones (Stephens, 1994).

The poor have the least access to basic health, education and social services. Children from poor families are more likely to be sick and malnourished and less likely to go to school than those from the

poorest families. Low levels of literacy reduce access to information and public resources, further increasing the perpetuation of cyclical poverty.

Maternal Education is one of the social factors that affect the health of a child as infants are often rely on mothers for their interactions with the environment (Halfon, et al 2010). From1988 till date, many studies have looked at how maternal education affects the wellbeing of children in Ghana, which showed that child mortality was sensitive to maternal education and that the rate of child mortality declined as maternal education increased (Antoine and Douif, 1988). Later studies confirmed the association between low maternal education and high child mortality rates (Benefo and Schultz, 1996; Kanmiki et al 2014; Nakamura et al, 2011; Wirth et al, 2006)

Greenaway and colleagues argued that maternal education was strongly associated with health knowledge, helping to explain the association between maternal education and the use of health services (Greenway et al 2012). In Ghana, the relationship between maternal education and health-seeking behaviour is no different (Fosu, 1992).

2.7 Morbidity

National Family Health Survey (NFHS) morbidity data for children under 35 months in Mumbai, India shows that diarrheal disease affected 20% of urban children and 19% of those in rural areas. ARI affected 16% of urban children and 20% of rural children. Gujarat State NFHS data show that 20% of children had diarrhea in the previous two weeks (International Institute for Population Sciences and ORC Macro, 2000).

In the Counterpart International survey, 22% of mothers in Ahmadabad slums reported that their children had Acute respiratory tract infection (ARI) symptoms in the preceding two weeks, and 37% of children had diarrhea in the same period (Counterpart International, 2001).

The most common diseases that affect children are malaria and diarrhoea. Acute diarrhea might strike individuals at any age, but it is mostly an infant's disease, affecting especially those younger than one year. The period of weaning is a major factor to favor the occurrence of diarrhea, while many other risk factors should also be considered, such as low socioeconomic level, poor hygiene habits, unsavory dwelling, elevated environmental exposure to enteropathogens and poor nutritional status.

In a study done in India on children living in slum, Sex, age and early weaning were also found to be associated factors for a longer duration of episodes of diarrhea (Clotides, 2008). Children under 5 years of age are one of most vulnerable groups affected by malaria. There were an estimated 438 000 malaria deaths around the world in 2015, of which approximately 69% were in children under 5 years of age. In high transmission areas, partial immunity to the disease is acquired during childhood. In such settings, the majority of malarial disease, and particularly severe disease with rapid progression to death, occurs in young children without acquired immunity (WHO, 2016).

In a survey done by Anupam, there were 47 mothers (13.7%) of the 344 children who had some complain regarding their children's health during the time of the survey. The common complaints were – common cold (10.2%), fever (5.5%), and diarrhea (1.5%) (Anupam, 2015)

2.8 Immunization

Immunization is one of the most effective health interventions to date, saving millions of lives and protecting countless children from illness and disability. As a direct result of immunization, polio is on the verge of eradication. Deaths from measles, a major child killer, declined by 79 per cent worldwide

and by 86 per cent in sub-Saharan Africa between 2000 and 2014 (WHO, 2017). In the Ghana demographic and health survey (GDHS, 2014), a child is considered to have received all basic vaccinations if he or she has received a BCG vaccination against tuberculosis; three doses of DPT vaccine to prevent diphtheria, pertussis, and tetanus; at least three doses of polio vaccine; and one dose of measles vaccine. These vaccinations should be received during the first year of life. Unlike many other health interventions, vaccines have both short and long-term benefits not only for individuals but also for the entire population (UNICEF, 2008).

According to a multiple indicator cluster survey done in five densely populated localities in Accra, it was evident that minimal differences exist in the immunization coverage by sex or by the wealth status of the households. The immunization results of the five densely populated localities reflect the progress that has been made in immunizing children, and this can be attributed to the national Expanded Programme of Immunization (EPI), which has improved immunization coverage among children against vaccine preventable diseases in recent years. GHS 2005, report indicated those barriers such as inadequate understanding of immunization and insufficient demand for immunization services by families and communities; limited access to immunization services for communities in hard-to-reach areas; and inadequate numbers of health staff to provide services to very large and scattered communities have hampered the delivery of immunization services to many target populations.

2.9 Health Seeking Behaviours and Access to Health Care

Healthcare-seeking behavior is of prime importance and is pivotal to the well-being of the individual child as well as the community (Mbagaya, et al 2005). The determination of healthcare-seeking behavior is governed by the interplay of many factors, such as women's ages, education,

religion, ethnicity, culture, decision-making power, place of residence, and socio-economic status, as well as the cost, quality, and location of healthcare services (D'Souza and Biosoc, 2003).

The nature of the work and living condition of the head porters has a serious implication on their health and the health of their babies. It was realised that the active age group of child bearing were those who are mostly involved in kayayei trade. This has implications to maternal and child health policies.

Of the number of head porters that were interviewed in the study, 33 per cent of them reported malaria. Considering the environment in which they live, it is full of gutter with stagnant water that bread mosquitoes, the environment is very filthy and it can lead to the outbreak of malaria and other related disease. Skin rushes was third highest (15 %), due to the nature of their rooms and the number of people living in those small rooms made them prone to the spread of communicable disease (Shamsu –Deen, 2013).

Related to perceived illness severity, maternal recognition of certain signs and symptoms of child illness has been cited as a critical factor determining health care-seeking behaviour (Yoder & Hornik 1996; D'Souza 1999). In their study in rural Ghana, Hill *et al*. (2003) noted that only half of the illness episodes recognized as 'severe' were taken to a health facility.

The livelihoods of female carriers also contribute to the accessibility of health care. Not only are these women unable to afford or access health care because of the low income earned by the head portage, they are sometimes denied access to health facilities because they are perceived as dirty and so are not accorded priority treatment (Adjei et al 2016). A study revealed that only 13%, rather low, of head porters who patronized the clinic/hospitals had registered with the Ghana National Health Insurance Scheme (NHIS) (Anzagra and Yeboah 2012). The National Health Insurance Scheme is a pro-poor health financing ensuring equitable access to health care for all its citizens, however, whenever the

NHIS services are down, they have to go for treatment and medication in hospitals where they pay a relatively high fee with their scarce earnings. (Arhin, 2013).

These women are therefore forced to use other sources of treatment. Results indicate that 87% of the head porters obtained health care from drug stores, traditional medicine centers, and drug peddlers, while only 13% accessed health care from public and private clinics/hospitals. The use of non-prescribed drugs among the head porters confirms Kwankye et al. (2007) observation that head porters, having already determined what drugs they want to buy, visit chemical shops and buy drugs over the counter from the attendants who may not ask any questions. This health-seeking behavior among these women can cause a serious adverse reaction that could cause the death of their children. Anzagra and Yeboah (2012) add that self-medication seems to be more of the norm, particularly in Kumasi, often with symptoms diagnosed for them by friends or acquaintances who have suffered similar symptoms previously. In sum, studies have revealed that self-medication is prominent among the female head porters in any metropolis they find themselves in. It was deduced that the few who access health care from the hospitals and clinic are those who doubled as shop assistance and head porters. (Shamsu –Deen, 2013).

It is thus important for caregivers to be able to identify these childhood diseases and seek timely treatment for them, which can help to reduce the mortality rate of children under the age of five in Third World countries. In view of this, the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) have acknowledged the importance of seeking early care, and they developed the strategy called 'Integrated Management of Childhood Illness' (IMCI), which emphasizes appropriate family and community health practices are crucial for improving the health status of children and decreasing childhood mortality in the majority of developing countries (Bryce et al 2005).

2.10 Malnutrition

Malnutrition is a serious medical condition marked by a deficiency of energy, essential proteins, fats, vitamins, and minerals in a diet. It is the most recognizable and perhaps most untoward consequence of poverty in children. Currently, 195 million under-five children are affected by malnutrition, 90% of them live in sub-Saharan Africa and South Asia. At least 20 million children suffer from severe acute malnutrition (SAM), and another 175 million are undernourished.

In sub-Saharan Africa and in most developing countries, extreme urban poverty is concentrated in temporary or informal squatter settlements and slum areas, where most kayayei live. Aside poverty, a number of factors within informal settlements, including overcrowding, substandard housing, unclean and insufficient quantities of water, and inadequate sanitation, contribute to a high incidence of infectious diseases and to significant rates of childhood mortality.

2.11 Anthropometric Measurement

Nutritional status is the balance between nutrient intake and expenditure in the processes of growth, reproduction and maintenance of health. Although the overall growth model is genetically determined, it is significantly affected by nutrition. Nutrition, especially in children, can lead to significant mental and physical development problems. Socio-economic status, nutritional knowledge and feeding practices, among others, are some of the reasons why children may be undernourished. Only a few female head porters have a correct understanding of a balanced diet but hardly allow themselves and their children healthy meals because of the low wages they earn. So, the undernourished children of the kayayei are generally exposed to the risk of infectious diseases, weakening every part of the immune system, reduce energy and impair brain function (Stillwaggon, 2008). Malnutrition increases the risk of mortality associated with a high number of nutrition-related deaths such as kwashiorkor, malaria, marasmus, respiratory and diarrheal diseases (Pelletier et al, 1995).

Nutritional deficiencies such as iron, zinc and vitamin A affect the lives and health of children in the developing world (WHO, 2002) with estimates that malnutrition accounts for 54% of infant mortality worldwide (Walker and Watkins 2008; Manary et al., 2013). At an early age, malnutrition can lead to reduced physical and mental development and affect school performance (WFP, 2013).

In 2013, UNICEF reported that in sub-Saharan Africa and South Asia, malnutrition accounts for the majority of deaths among children aged 0-5 (UNICEF, 2013). Nutritional anthropometry measurement has been defined as "measurements of changes in the physical dimensions and gross composition of the human body at different age levels and levels of nutrition" (Jelliffe, 1966).

Anthropometric measure involves the use of weight, height, arm circumference measurements and skin fold as indicators for the assessment of nutritional status (Abraham et al. 1977). Growth charts were developed to allow researchers and clinicians to assess weight for age and height for age, as well as weight for height. The reference growth curves (Kuczmarski et al. 2002) were compiled from cross-sectional data collected from surveys of the population of American children. These have been adopted as international standards by the World Health Organization (WHO). For children, low height for age is considered to be stunting, while low weight for height indicates waste.

Body weight is the sum of proteins, fats, water and bone mineral mass. The usual length or height in children according to their age is used as indices of chronic nutritional status of children. Stunting is a slow growth of the skeleton of a child and the end result of a reduced rate of linear growth (Waterlow et al. 1978). The 2008 Kenya Demographic and Health Survey showed that 35.3% of under-five children were stunted nationwide, 6.7% were wasted, and 16.3% were underweight (KDHS, 2008).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

A quantitative method was used in this study to estimate the factors affecting the health of children (0-36 months) of head porters in Markola market, Accra. A comprehensive questionnaire was administered with the help of four research assistants

3.1 Study Site

The site chosen for this study is the Markola market.

Makola is a renowned shopping district in the centre of Accra, the capital of Ghana. The market is dominated by women who sell goods varying from fresh food, imported goods, local jewelry, shoes and many more.

Due to the busy nature of the Markola market, it attracts a lot of young ladies from the northern part of Ghana, who believe in coming down to seek greener pastures. Makola was selected because it hosts most of these head porters. The head porters are often seen in groups waiting for customers so it makes it easier to reach a larger group of them. Also, Markola comparably with other markets is busier and larger so likely to meet more head porters.

3.2 Study Design and Method

The study design is crossectional one, which was carried out for a period of four months from January to April 2017. The study was done to assess the health status of children of female head porters in Makola. This was done in two phases. In the first phase, questionnaires were administered to the head porter mothers. In the second phase anthropometric measurement of weight and height of their children were taken. The study focused on head porters with children in the age range 0 – 36 months.

3.3 Data Collection Technique and Tools.

The examination was carried out using a research tool from Center for Disease Control (CDC) on health status of children which was adopted and modified. The use of questionnaires was the mode of communication for data collection. Data was collected with the help of some community health nurses in the form of research assistants. A one day training program was conducted for all the team members to abreast themselves with the research tool. Information regarding demographic characteristics, the number of times a child falls sick and the type of sickness the child suffers from, history of immunization, access to healthcare, anthropometric measurement that is their weight and height/length, age/height, weight/age and living conditions were gotten.

For the anthropometric measurement, the weight was measured using a bathroom weighing scale which was placed horizontally on a flat surface on the ground. Children who could stand were asked to stand on it with shoes off and minimum clothing and weight was taken. Children who were too young to stand were carried by mothers and weight was taken barefooted with minimum clothing then mothers were asked to stand on the scale alone and weight taken. It is then subtracted from the weight of mother and child combine.

The height were recorded by asking children to stand with their back facing adjacent to the wall and keeping a scale straight on top of the head. A point was marked on the wall and the child was asked to move away and the height was measured using a tape measure. Children who could not stand were asked to lie horizontally on the floor. Two points were taken, one at the sole of the feet and the other at the top of the head. The child was asked to be taken from the marked area and a tape measure is used to take the reading of the two points.

The questions were more contextual, close ended questions to make it easier for the mothers to understand.

To know their immunization history/levels, mothers were asked to provide vaccination cards for children from 0-36 months. Interviewers copied vaccination information from the cards onto the questionnaire. Where vaccination cards were not available, mothers provided the information on the vaccinations that the child had received.

3.4 Study Population

The target population is children of head porters between the ages of 0-36 months. The inclusion criteria are that, the child has to have a head porter as a mother. Also the child lives with the mother in Markola market. Finally the child should be between the ages of 0-36 months. A child who does not have these characteristics is excluded from the research.

These children can't answer the questions for themselves so their mothers were asked for information about the child to answer the questionnaire for the research. The unit of analysis is the children of head porters, but their mothers reported on their observations of the kids.

3.5 Study Variables.

The dependent variables are health facility usage among the head porters and the nutritional status of the children of head porters.

The independent variables include demographic characteristics, type of household, insurance coverage and problems with paying child's hospital bills.

3.6 **Sampling**

A convenience sample which is a non probability sample technique was used. Due to the nature of work of the head porter it will be difficult to use a systematic sampling method. The convenience sampling method gives me the flexibility of interview any head porter I meet who shows interest in taking part of the research

3.7 **Sample Size.**

A sample size of 385 was determined based on an absolute precision of 5%, an unknown prevalence of 50% and a confidence interval of 95%

$$n = \frac{(Z)^2 P(1-P)}{D^2}$$

$$=\frac{1.962\text{^}2(0.5)(1-0.5)}{(0.05)^2}$$

$$=384.8$$

$$\mathbf{=385}$$

n is sample size

Z is level of significance

P is expected prevalence

D is precision

3.8 Pre-Testing

The questionnaire was pretested at Agbogbloshie market. It was noticed that some questions were not relevant whiles others were complicated to be explained. The necessary changes were made to the questionnaire before administering.

3.9 Data Handling

The data was entered by two (2) research assistants using excel on different computers. After the data entry, the data manager did data cleaning. The discrepancies found were resolved by tracing the questionnaire in question. The data contains personal information of the respondent hence the hard copy will be locked away and will only be brought out upon request.

3.10 Data Analysis.

The data was analysed using STATA 14. Descriptive and inferential statistical analysis was done to determine the demographic characteristics of the study participants. Results were reported in Odds ratios (OR), and 95% confidence intervals (C.Is) with the level of statistical significance set at $p<0.05$ for all tests. Results were expressed as means, frequencies, and percentages and in graphs. A measure of association between the outcome variable and predictive variables was determined using Fisher's Exact Test. A measure of strength of association between the outcome variable and the predictor variables were obtained by calculating the crude odds ratio using the Simple Logistic Regression Model. All confounding variables were catered for and the effect of prominent predictor variables evaluated using the multivariate Logistic Regression Model obtaining the adjusted odds ratios.

3.11 Ethical Consideration

Ethical issues to be considered will be confidentiality. Names of participants were not included in the questionnaires. Permission or consent was asked from the mothers of the children that were examined. Participants were also assured that at any point during the data collection they had every right to withdraw without any consequences to their person, image or self-esteem.

Ethical clearance was obtained from the Ethical committee of the Ensign College Of Public Health before the study begun.

3.12 Limitation of the Study

In choosing this site, one major limitation was language. Most of them have difficulty in expressing themselves in Twi or English. Literacy rate was an issue when it came to understanding the questions asked them, very simple diction was used and also the questions was explained to them. The research assistants helped fill the questionnaire.

In overcoming this limitation the research assistants were community health nurses who could speak Dagomba, Mampruli or Hausa.

Another limitation was getting information on the history of the child's immunization from the mother; some mothers had their record books with them so information was taken from it. In circumstances where mother did not have immunization booklet with her, recall from mother was used to collect the information.

The information collected in the questionnaire on malaria, diarrhoea, convulsion, skin rashes and cough /cold is based on mothers' perceptions of illness and is not validated by any qualified medical personnel. The accuracy of these measures is also affected by the reliability of the mother's recall of when the disease episode occurred.

3.13 Assumptions

The assumptions considered are

1. The participants answered the interview question in an honest and candid way

2. The inclusion criterions of the sample are appropriate and therefore, assure that the participants have experienced the same or similar phenomenon of the research.
3. Participant had a sincere interest in participating in the research.

CHAPTER FOUR

RESULTS

4.0 Introduction

This section presents the results of the data analysis and its interpretation. Data were analysed and presented in tables and charts.

4.1.0 Demographic Characteristics

The overall average age of mothers who are head porters and have children between the ages of birth to 36 months is 24 years with $\pm$7 standard deviation. Most of these respondents fall within the age group of 23-30 (55.59%) years with only a few (8.05%) in the older age group, that is, 31- 40 years. On the other hand, the youngest age group of the head porters is 15-22 years constituting 36.36% of the total respondents. Majority of these mothers have had no formal education (86.23) very few (2.08%) have attained Junior high school (JHS) education. Secondary education is also low (3.90%) followed by primary education (7.79%). Head porters from Mamprusi origin were among the majority interviewed (76.88) with Dagomba and other ethnicity constituting just a little over 23% of the total respondents. The sex distribution among the children study was nearly the same between male and females (49.53% and 50.65% respectively).

On their religious background, Muslims forms the majority with 90.43% as against 7.01% and 1.56% for Christians and other religions respectively. Mamprusi language is the commonly speaking language among the head porters interviewed (76.36%) followed by Dagbani (11.17%) and other languages such as Twi and Frafra comprising 12.47%. Figure 4.1 Below

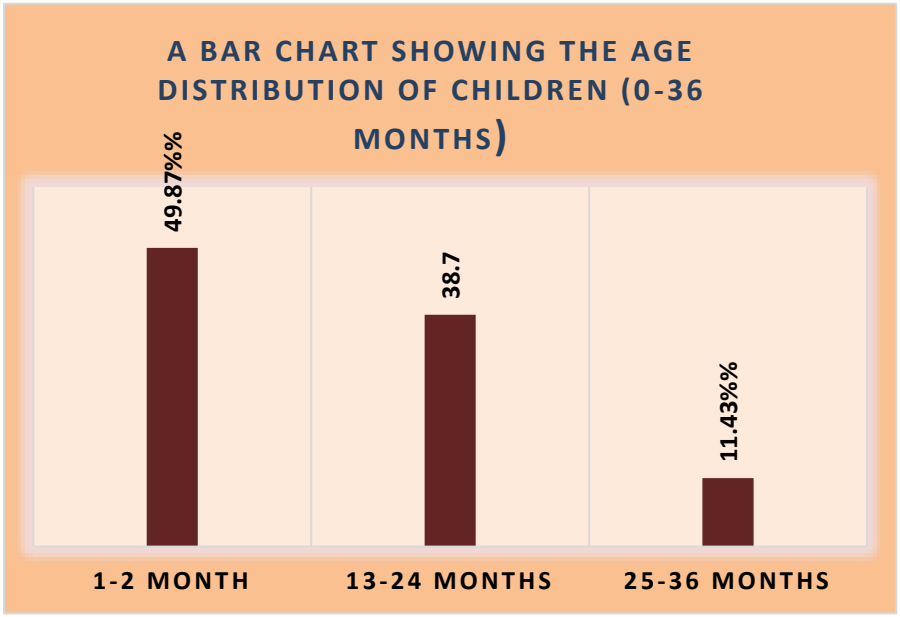
Table 4.1: The Demographic characteristics of Respondents

Characteristics	Frequency (N)	Percentage (%)
Age of Child (Months)		
>12 months	192	49.87
13-24 months	149	38.70
25-36 months	44	11.43
Mother's Education		
Primary	30	7.79
Middle/JSS/JHS	8	2.08
Secondary/SHS/Vocational	15	3.90
No Formal Education	332	86.23
Sex of the Child		
Female	195	50.65
Male	190	49.35
Ethnicity		
Mamprusi	296	76.88
Dagomba	40	10.39
Other	49	12.73
Religion		
Muslim	352	91.43
Christian	27	7.01
Other	6	1.56
Language Speaking		
Mamprusi	294	76.36
Dagbani	43	11.17
Frafra	29	7.53
Twi	19	4.94
Average of Mothers =24	Sd = $\pm$7	
Average of Children(Months) =16	Sd= $\pm$ 9	

4.1.1 Age Distribution of Children of Head Porters

The bar chart below shows that children within the age of 1-12 months form the majority and they constitute almost half of the total children population studies (49.87%). The second largest age groups of children are within 13-24 months (38.70). Age group 25-36 constitutes the minority.

Figure 4.1: Age Distribution of Children of Head Porters



4.2.0 COMMON MORBIDITY AMONG THE CHILDREN OF HEAD PORTERS

In order to satisfy the research question and the objectives of the study, information was gathered on the common diseases and or illness that affect children of Head Porters (Kayayei).

Figure 4.2: Morbidity Status of Children as at the time of the study

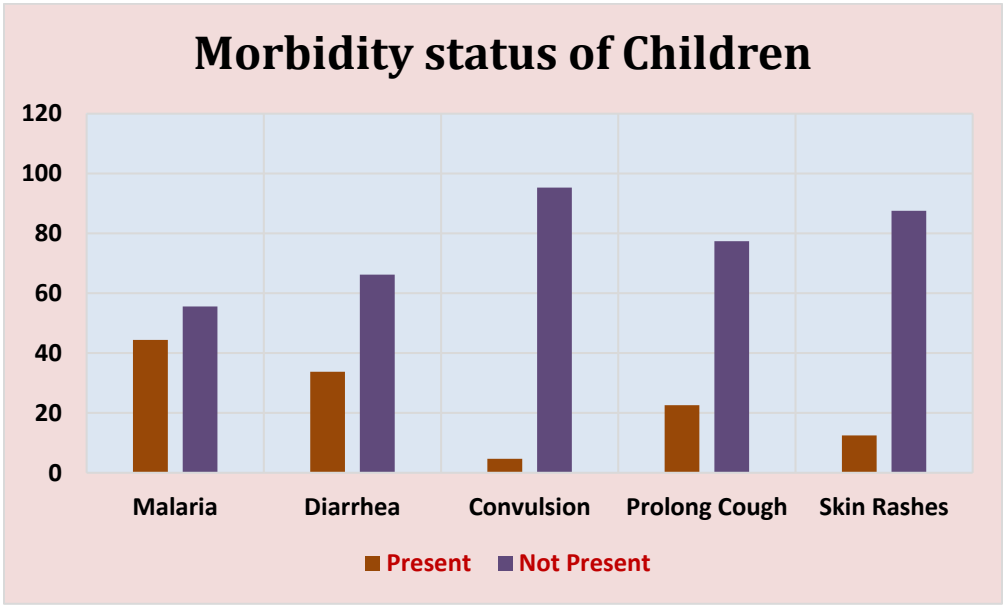


Figure 4.2 above shows the common morbidity affecting the health status of children of head porters in the past one month. It was realized that Malaria had the highest prevalence of the disease present (44% presents in the past one month whiles 56% not present in the past one month prior to the study). The presence of Diarrhea was also highest (34%) as against 66% (not present) in the past one month. Convulsion and Skin rashes were low with majority of the children not having it present. Another condition which was also recorded was Prolong cough which was present in 23% of the Children and not present in 77.40% of them.

4.2.1: The Distribution of Malaria among Children by gender of the head porters.

Table 4.2: Common Morbidity by Sex and Gender of Children

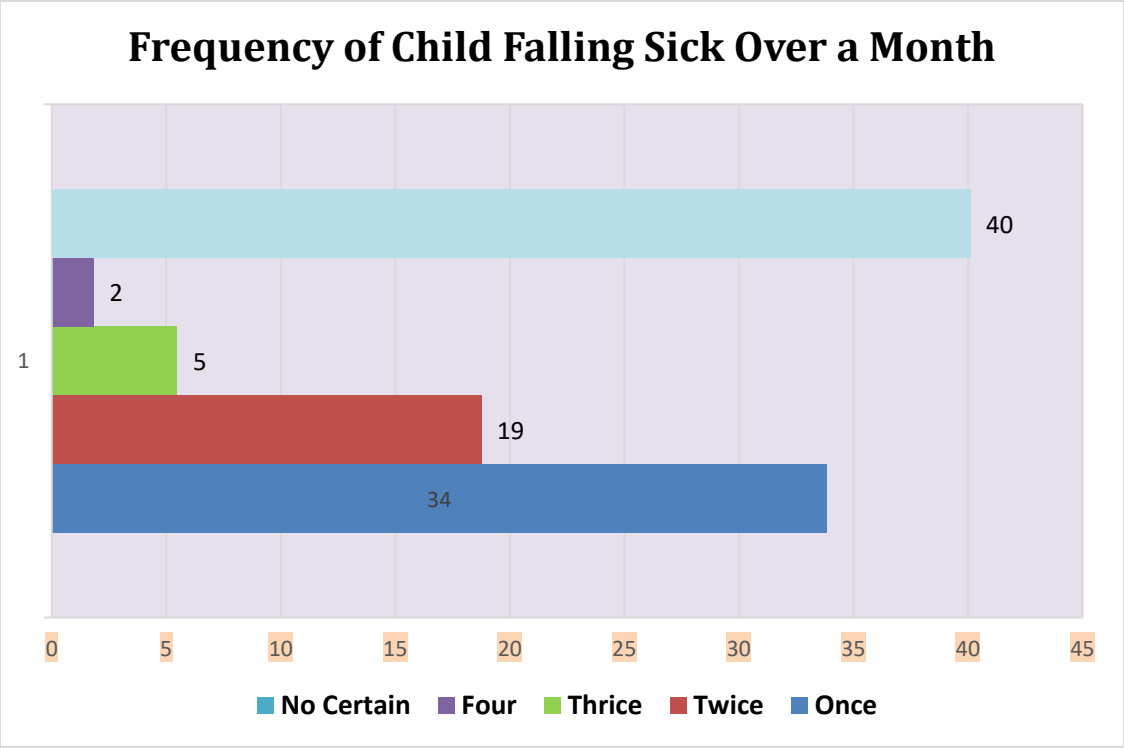
Charac.	Malaria		Diarrhea		Convulsion		Prolong Cough		Skin rashes
	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Age									
>12	95(55.5)	97(45.3)	53(40.7)	139(54.5)	7(38.8)	185(50.4)	42(48.2)	150(50.3)	25(52.0)
13-24	71(41.5)	78(36.4)	54(41.5)	95(37.2)	7(38.8)	142(38.6)	33(37.9)	116(38.9)	16(33.3)
25-36	5(2.92)	39(18.2)	23(17.6)	21(8.2)	4(22.2)	40(10.9)	12(13.7)	32(10.7)	7(14.5)
Sex									
Female	74(43.2)	121(56.5)	66(33.8)	129(66.1)	11(5.6)	184(94.3)	53(27.1)	142(72.8)	28(14.3)
Male	97(56.7)	93(43.4)	64(33.6)	126(66.3)	7(3.6)	183(96.3)	34(17.8)	156(82.1)	20(10.5)

From the above table, the distributions of common morbidity are shown among children's age and gender. For malaria, children who have had it in the past one month were the youngest age group that is 1 – 12 months (55.56%). The older age shows few cases (5%) and 41.52 % for 13-24 months. Males are also the majority among those with malaria present, 56.73%, a little above that of females (43.27%).

The presence of diarrhea is also nearly the same among both children within 1-12 months and 13-24 months (40.77% and 41.54% respectively). A similar trend is shown among both gender 33.85% and 33.68% for females and males respectively. A few cases were recorded for convulsion for the children from the various age groupings as well as among the genders. Prolong cough / cold was also low but was higher among children from 1-24 months than those above 24 months. Skin rashes show a higher proportion (52.08) among group 1-12 months as compared with the other age groups.

4.2.2. Frequency of Children Falling Sick

Figure 4.3: Frequency of Child falling ill within a Month



Interestingly, 40% of the respondents were not sure of the number of time their wards get sick within a month. 34% recounted that their children get sick only once within a month. Furthermore, others also indicated that their wards fall sick twice within a month. Children falling sick three times and four times over a month constituted only 8%.

4.2.3 Identifying children with special Health Needs.

Table 4.3: Some special needs identified from Children of Head Porters

Variable	Frequency N=385	Percentage (%)
Use Prescribed Medicine		
Yes	68	17.6
No	305	79.2
Whether Child is Limited in Ability to do anything		
Yes	45	11.7
No	326	84.7
Don't Know	14	3.6
Ability to Walk (18-36months)		
Walk normally	137	83.5
Has limited or not walking	12	7.32

Information was gathered on children to identify any special health needs. Out of the 385 children study only 18% (68) had some type of special needs and on prescribed medicine. And among them, that is those on prescribed medicine, almost 81% are using the drug because of the presence of special condition. Nearly half (49.09) believed that their children condition will last for 12 months or over.

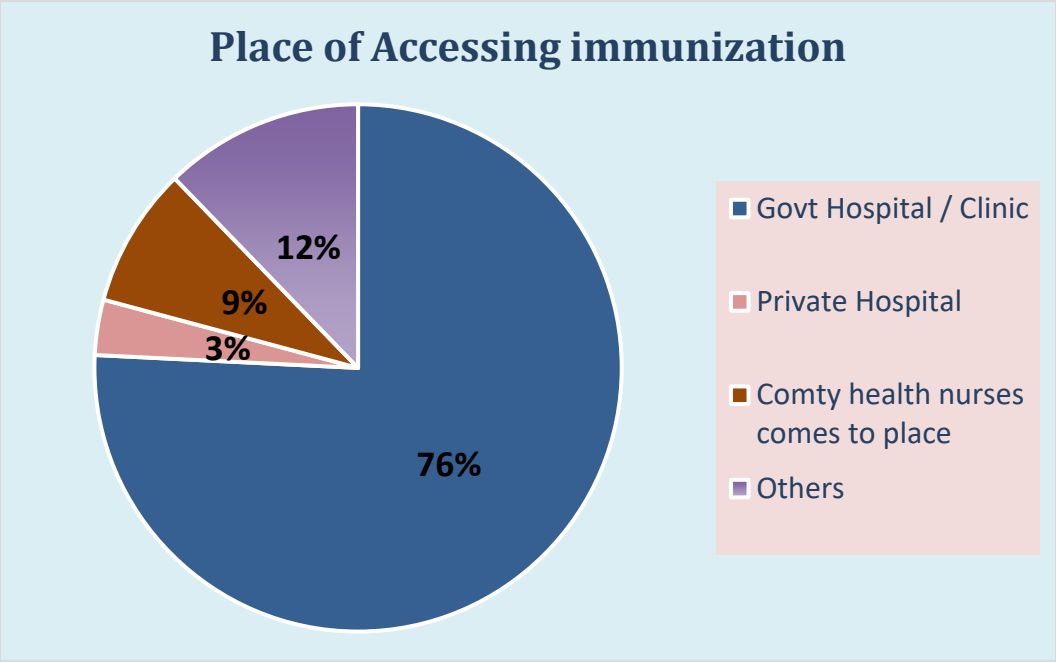
Limitation in activity level was found among 45% of the children and these limitations prevent them to do things most kids of their age do. Also among children 18 months and above, the majority (83.54%) have the ability to walk normally. Only few suffer has limitation or cannot walk (7.32%).

4.3.0. LEVELS OF IMMUNIZATION COVERAGE AMONG THE CHILDREN OF HEAD PORTERS

Immunization coverage among the children of head porter was determined during the study. The details are presented below.

4.3.1 Place of Accessing Immunization for Children by the Mothers

Figure 4.3: Children's places of obtaining Immunization.

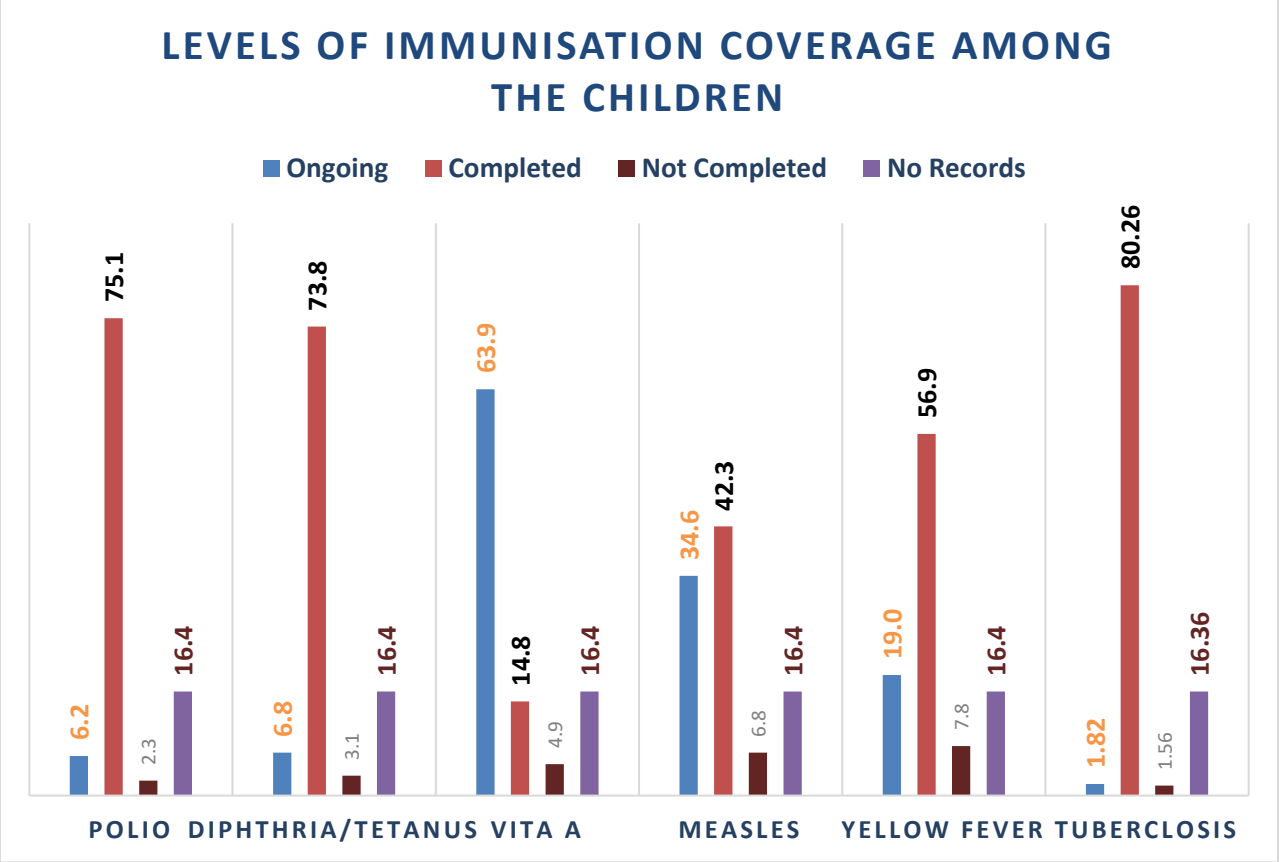


The pie chart above shows the places or facilities where immunization is accessed for the children. The government hospitals or clinic is the most used place of accessing immunization service for the children (76%). Other immunization services are accessed by Community health nurses outreach activities where immunization is given to these children at their destinations (9%). Private facilities and other facilities constituted only 15%.

4.3.2 Levels of Immunization coverage among the children of head porters.

Immunization against the major childhood diseases were accessed and this is shown in the chart below.

Figure 4.4: Immunization among Children



Immunization coverage was high across all the six-major childhood killer disease. From the above chart, it is found that majority of the immunization has been completed among the children, thus Polio, Diphtheria and Tuberculosis were recorded to have been completed among the children at 75.1%, 73.8% and 80.26% respectively. Yellow fever and Measles were also at 42.3% and 56.9% completed. Vitamin A only recorded a low completion level (14.8) with majority of the children (63.9%) still ongoing as at the time of the study. 7% and 6% of the children also having their Polio and Diphtheria/tetanus vaccination ongoing. Also found was

that some children have their immunization not completed at all. 2.3%, 3.1%, 4.3%, 6.8%, 7.8% and 1.56% for Polio, Diphtheria, Vitamin A, Measles, Yellow fever and tuberculosis respectively. Overall 16.4% of the children had no records on immunization across all the six major childhood killer diseases.

More than half of the mothers (60%) could not provide their immunization book, thus mothers recall was used in obtaining information about child's immunization. Immunization book was obtained from 40% of the mothers and thus immunization history recorded accordingly.

4.3.3 Mothers Knowledge of Immunization

Mothers were accessed of their knowledge on immunization and it was revealed that majority of the mothers (80.78%) have knowledge about immunization as compared to 19.22% who did not have any knowledge on immunization.

Table 4.4: Factors Associated with Mother's knowledge of Immunization

Characteristics	**Have Knowledge of Immunization**		**P-Value**
	Yes	**No**	
Age			
15-22	101(32.48)	39(52.70)	0.004*
23-30	185(59.49)	29(39.19)	
31-40	25(8.04)	6(8.11)	
Education			
Primary	26(8.36)	4(5.41)	0.271
Middle/JSS	5(1.61)	3(4.50)	
Secondary	14(4.50)	1(1.35)	
None	266(85.53)	66(89.19)	
Religion	287(92.28)	65(87.84)	0.100
Muslim	18(5.79)	9(12.16)	
Christian	6(1.93)	0(0.00)	
Others			

Among the various factors assessed, only age was significantly associated with mother's taking child for immunization with P-value (0.04). Thus, knowledge is higher among women within 23-30 years of age. Mother's education and religion was not found to be significant with mother's knowledge (p-value 0.271 and 0.100 respectively).

4.4.0 HEALTH SEEKING BEHAVIOUR AMONG HEAD PORTERS FOR THEIR CHILDREN

4.4.1 Health Insurance Coverage and treatment of child's sickness

Mother's health seeking behaviour was studied to ascertain the use of health facility when child is sick and the coverage of health insurance among the children. Households or living areas characteristics of head porters were also studied.

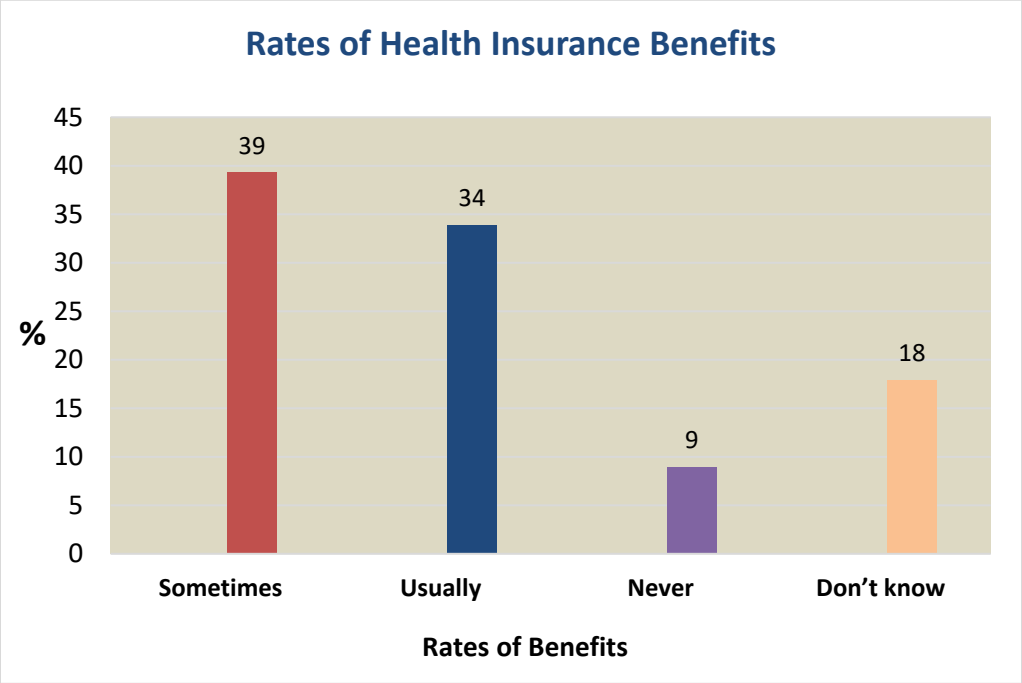
Table 4.5: Table showing use of health services and health insurance coverage.

Variable	Categories	Frequency (%) N=385
Health Insurance Cover for the Baby	Yes	258(67.01)
	No	127(32.99)
Problem Paying bills	Yes	211(54.81)
	No	174(45.19)
How sickness is treated	Child is taken to the hospital/clinic	133(34.55)
	Child is given over the counter drugs	185(48.05)
	Child is given home remedies	17(4.42)
	Others	50(12.99)
Use of Health Facility	Yes	133(34.55)
	No	252(65.45)

Results from the study shows that 67% of the children had health insurance coverage, and was active at the time of the study. Almost 33% of the children had no insurance cover thus health

cost is paid by their mothers pay cash. 54.81% of the mothers indicated that they have ever faced problems paying for health bills. With 45.19% of the mothers, they have not experienced any difficulties financing for child's care. Even though there was high health insurance coverage, over the counter drugs is mostly used to treat children when they are sick. Hospital attendance or the use of health facility to treat child's sickness is only 35%. Other remedy used which includes home remedies was 17.41%.

Figure 4.5: A Bar chart showing the Frequency of Health Insurance benefits



When mothers were asked of how frequent they benefit from health insurance. The bar chart above indicated that almost 40% of the mothers claimed that they sometimes benefit from health insurance. 34% stated they usually benefit from health insurance. A few of the mothers indicated that they never benefited from health insurance and for 18% of the women they don't have an idea whether they have benefited or not.

4.4.2 Factors Influencing health facility usage among Head porters for their children

Some demographic and other factors were assessed to identify their association with use of health facility to treat child's sickness. The table below shows that two factors were found to be significantly associated with health facility use. These are age and the type of living area or household of head porter with p-value 0.02 and 0.001 at 0.05 significant levels. Education of the mother, religion and ethnicity were also not found to be significant. (P-value 0.34, 0.39 and 0.76 respectively).

Interestingly, health insurance coverage and mothers' problem of paying bills were also not found to be significant. However, among those who have insurance 68.3% did use health insurance.

Table 4.6: Factors associated with health facility use

Characteristics	**Health Facility use**		**P-Value**
	Yes	**No**	
Age			
15-22	77(42.1)	63(31.2)	**0.020***
23-30	97(53.0)	117(57.9)	
31-40	9(4.9)	22(10.9)	
Education			
Primary	12(6.6)	18(8.9)	0.343
Middle/JSS	6(3.3)	2(1.0)	
Secondary	6(3.3)	9(4.46)	
None	159(86.9)	173(85.64)	
Religion			
Muslim	165(90.2)	187(92.6)	0.397
Christian	16(8.7)	11(5.5)	
Others	2(1.1)	4(2.0)	
Ethnicity			
Mamprusi	140(76.5)	156(77.2)	0.764
Dagomba	21(11.5)	19(9.4)	
Other	22(12.0)	27(13.4)	
Household Type			
Uncompleted building	37(56.9)	28(43.1)	0.001*
Completed building	4(30.8)	9(69.2)	

In a shop/Kiosk	59(62.1)	36(37.9)	
Under a shed	81(38.6)	129(61.4)	
Child's Age(In months)			
1-12 months	88(48.1)	104(51.5)	0.681
13-24 months	75(41.0)	74(36.6)	
25-36 months	20(10.9)	24(11.9)	
Health Insurance Cover			
Yes	125(68.3)	133(65.8)	0.664
No	58(31.7)	69(34.2)	
Problem Paying Child's bills			
Yes	97(53.01)	114(56.44)	0.499
No	86(46.99)	88(43.56)	

∗significant Values at 0.05 significant level

Table 4.7: An output of Multivariate Logistics Regression of factors affecting health facility usage among head porters for their children

Variables	**Categories**	**P-value**	**OR(95%CI)**	**P-value**	**Adjusted OR (95% CI)**
Mother's Age	15-22 years	Ref	1	Ref	1
	23-30 years	0.0755	0.68(0.441,1.044)	0.233	0.76(0.488,1.190)
	31-40 years	0.0091*	0.34(0.141, 0.794)	0.017*	0.35(0.146, 0.830)
Living Area	Uncompleted Building	Ref	1	Ref	1
	Complete building	0.0711	0.32(0.861,1.181)	0.116	0.35(0.961,1.294)
	In a shop/kiosk	1.1766	1.18(0.620,2.233)	0.452	1.29(0.664, 2.51)
	Under a shed	0.0048*	0.45(0.255,0.796)	0.004*	0.63(o.245, 0.767)
Have Insurance	Yes	Ref	1	Ref	1
	No	0.608	0.894(0.583,1.370)	0.061*	0.64(0.397,1.021)

*indicates that measure of association is satisfactorily significant

In this multivariate model, it is indicated that age especially group 31-40 years is significantly associated with health facility usage (p-value 0.0091). Thus, with reference to age group 15-22 years, mothers within the age group 31-40 are 0.017 more likely to send their children to health

facility for treatment when their child gets ill as compare to those in the other age group when all other predictor variables are held constant.(OR=0.34, CI=0.141,0.794). Similarly, those living in shed are also 0.45 more likely to use health facility when all predictor variables are held constant, P-value=0.004 (OR=0.45, CI= 0.255, 0.796)

4.4.3 General hygiene practice and household conditions among respondents

The general hygiene practice among head porter was assessed to indicate their bearing on health seeking behaviour.

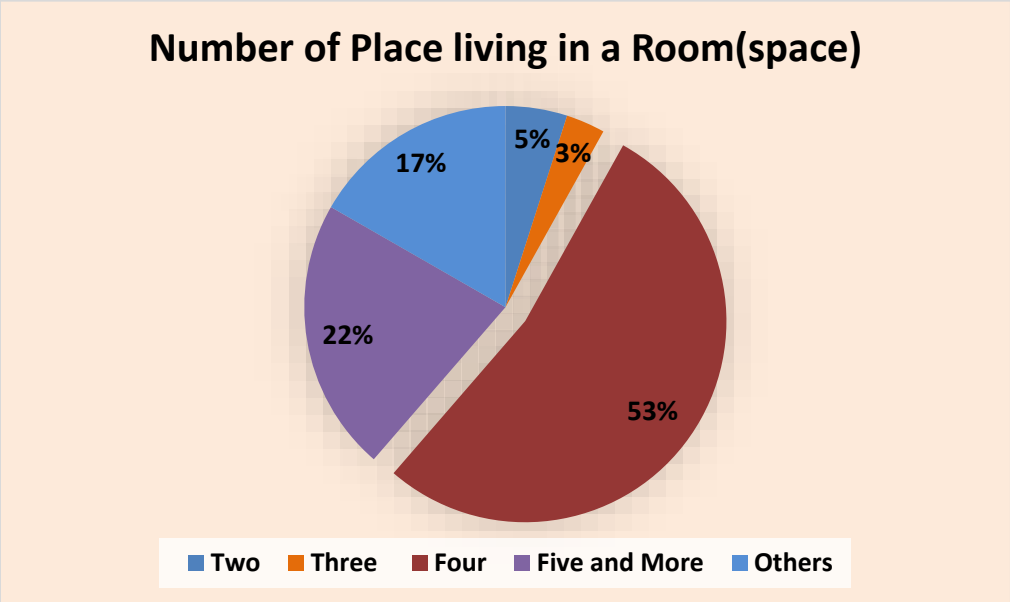
Table 4 .8: Hygiene practice and household features of head porters

Characteristics	Frequency N	Percentage (%)
Living Area(House)		
Uncompleted building	65	16.97
Completed building	13	3.39
In a shop/ Kiosk	95	24.80
Under a shed	210	54.83
Disposal stool		
Child uses toilet/building	27	7.02
Throw in the toilet/latrine	53	13.77
Throw outside the yard	86	22.34
Rinse away	53	13.77
Use disposable diapers and throw away in the toilet	166	43.12
Domestic Water source		
Piped water	271	70.39
Satchel water	88	22.86
Others	26	6.75
Storage of Drinking water		
Plastic container/bucket	259	67.27
Metal container	16	4.16
Pot/earthenware vessel	8	2.08
Bottle/sachet	102	26.49

The data revealed that majority of these head porters lived under a shed (54.83%) with the other half living either in a shop/kiosk (24.80) or uncompleted buildings (16.97). Only 3.39% of the respondents lived in a completed building. Disposal of fecal matter or stools of these children were mostly done by the use of disposable diapers (43.12%). Other practices of stool disposal include throwing outside a yard (22.34%) and throwing the stool in a toilet (13.77%). Only 7.02% of the children used toilet facility.

Pipe water (70.39%) was the major source of water for domestic use. Other sources included sachet water and others. Drinking water is mostly stored in a plastic container or bucket (67.27%).

Figure 4.6: A pie chart of Number of people sleeping in at a space.



From the above chart, most of the space used a sleeping space by these head porters are occupied by four people (53%). Five and more people sleeping in a space also constitute the next majority of 22%. Two and three people sleeping in a space is 8%.

4.5.0 NUTRITIONAL STATUS OF CHILDREN (0-36 MONTHS OLD) OF HEAD PORTERS

A total of 125 children (27.01%) were stunted, underweight (8.47%) and wasting was (5.71%) whiles 67.53% (260/385) had a good nutritional status per the nutrition indices used by the study.

Table 4.9: Prevalence of under nutrition among Children of Head Porters

Category	**Anthropometric Indices**			**Overall nutritional Status**
	Height-for-age (%)	**Weight-for-Height (%)**	**Weight-for-age (%)**	
Low (below -2 SD)	104(27.01)	22(5.71)	33(8.47)	125(32.47)
Normal(Above -2 SD)	281(72.99)	363(94.29)	352(91.43)	260(67.53)
Total	**385(100)**	**385(100)**	**385(100)**	**385(100)**

Stunted was recorded to be 27.01% among the children while almost 6% were wasting and underweight was 8.47 (33/385). The mean Z-score from the anthropometric measure were WHZ=0.34, W4A=-0.40, HAZ=-1.41 for wasting, underweight and stunting.

Table 4.10: Malnutrition among the children at the various levels

Indices	**Severe**	**Moderate**	**Normal**
Height-for-Age	2(0.52)	102(26.49)	281(72.99)
Weight-for-Height	1(0.26)	21(5.57)	363(94.29)
Weight-for-Age	0(0.00)	33(8.57)	363(94.29)

Overall two children were severely stunted (0.52%) and also severely wasting was also found with one child. No severe underweight was found among the children. Generally, majority of the children were found to be Normal or had a normal nutritional level on the anthropometric

measures. 72.99% (281/385), 94.29 % (363/385) and 94.29 % (363/385) for Height-for-Age, Weight-for-Height and Weight-for-Age respectively.

Table 4.11; Categorization of Under-nutrition among children of Head Porters by Age Group and Sex Distribution

	Height-for-Age(Stunting) N=385 Frequency (%)			Weight-for-Height (Wasting) N=385 Frequency (%)			Weight-for-Age (Underweight) N=385 Frequency (%)			Overall Nutritional status N=385 Frequency (%)	
Variable	**Below -3SD**	**Below -2SD**	**Normal**	**Below -3SD**	**Below -2SD**	**Normal**	**Below -3SD**	**Below -2SD**	**Normal**	**Undernourished**	**Normal**
Age											
0-6	0(0.0)	7(16.3)	36(83.7)	0(0.00)	6(13.95)	37(86.05)	0(0.0)	7(16.28)	36(83.7)	15(34.88	28(65.1)
7-12	0(0.0)	43(28.9)	106(71.1	1(1.67)	4(2.68)	144.(96.6)	0(0.0)	13(8.72)	136(91.3)	49(32.89	100(67.1)
13-24	2(1.34)	49(32.9)	98(65.7)	0(0.00)	8(5.37)	141(94.6)	0(0.0)	12(8.05)	43(97.8)	55(36.91	94(63.09)
25-36	0(0.00)	3(6.82)	41(93.2)	0(0.00)	3(6.82)	41(93.2)	0(0.0)	1(2.27)	43(97.7)	6(13.64)	38(86.36)
Sex											
Female	1(0.51)	47(24.1	147(75.4	1(1.51)	11(5.64)	183(93.8)	0(0.0)	16(8.21)	179(91.8)	59(30.26	136(69.7)
Male	1(0.53)	55(28.9	134(70.5	0(0.00)	10(5.26)	180(94.7)	0(0.0)	17(8.95)	173(91.1)	66(34.74	124(65.3)

From table (4.10) above, no severe stunting was found among children 0-12 months old, however, there were two severe stunting cases was found among children aged 13-24 months old and they are a male and a female. High percentage of stunting was found among children 13-24 months as compared to 25-36 months (6.82%). More males were below -2SD of population from the reference group whiles a lot more females than males are normal, that is, have the mean Z-score above -2SD. Only one severe wasting was recorded and it was among the 7-12months age group and a female. There was no much difference between the moderately wasting females and males (5.64% and 5.26% respectively). No child between the age of 13-36 months and below 6 months was severely wasted. For underweight, no case of underweight was recorded among all the age groups and both sex. Moderate underweight was low among 25-36 month children as compared with the other children from the other age groups. An almost equal number of females and males suffer moderately underweight (16 and 17 children respectively). Overall, majority of them have a normal Z-score for underweight.

Children who were undernourished was even across all age groups except 25-36 age group (only 13.6%). Males were more undernourished than females (34.8% and 30.3% respectively). A lot of the children in age 25-36 had a normal nutritional status.

Table 4.12: Bivariate Analysis of Nutritional Status Exposure Variables of Children of Head Porters

	Nutritional Status of Child			
Factors	**Undernourished**	**Normal**	**X^2**	**P-Value**
Mothers' Age				
15-22	52(41.6)	88(33.8)	2.451	0.294
23-30	65(52.0)	149(57.3)		
31-40	8(6.4)	23(8.9)		
Education Mother				
None	106(84.8)	226(86.9)		
Primary	7(5.6)	23(8.9)		0.118
Middle/JSS	5(4.0)	3(1.2)		
Secondary/SHS	7(5.6)	8(3.1)		

Religion				
Christian	13(10.4)	14(5.3)		0.185
Muslim	110(88.0)	242(93.1)		
Others	2(1.6)	4(1.5)		
Having NHIS				
Yes	78(62.4)	180(69.2)	5.616	0.230
No	47(37.6)	80(30.8)		
Living Area				
Uncompleted building	23(18.4)	44(16.9)		0.438
Complete Building	5(4.0)	8(3.1)		
In a shop/Kiosk	36(28.8)	59(22.7)		
Under a shed	61(48.8)	149(57.3)		
Sex of the child				
Female	59(47.2)	136(52.3)	0.8811	0.348
Male	66(52.8)	124(47.7)		
Childs' Age (month)				
0-6	15(12.0)	28(10.8)		
7-12	49(39.2)	100(38.5)	8.5853	0.035*
13-24	55(44.0)	94(36.2)		
25-36	6(4.8)	38(14.6)		
Drinking water storage				
Plastic	33(66.4)	176(67.7)		0.012*
container/bucket	4(3.2)	12(4.6)		
Metal container	7(5.6)	1(0.4)		
Pot/earthenware	31(24.8)	71(27.3)		
Bottle				
Domestic water source				
Pipe water	76(60.8)	158(60.8)		0.573
Well Water	22(17.6)	58(22.3)		
Sachet water	17(13.6)	28(10.8)		
Other	10(8.0)	16(6.2)		

Measured association is significant at α=0.05

The table above shows the distribution of factors that may be associated with the nutritional status of children. Association is found to be significant at α=0.05. Only two factors were found to be significant, that is, with their p value less than 0.05. These are the age of the child (p-value, 0.012) and drinking stored water. More males were found to be found undernourished (52.8%) as compared with females (47.2%), however, no association was found between sex of the child and nutritional status. Mothers' age, her educational level, religion among other variables was found not to be significant.

Table 4.13: Associations between Exposure Variables and Nutritional Status of the child

Variables	Categories	P-value	OR (95%)	P-Value	AOR (95%)
Childs' Age (month)	0-6	Ref	1	Ref	1
	7-12	0.8071	1.09(0.53, 2.24)	0.823	0.92(0.42, 1.98)
	13-24	0.8081	0.92(0.45,1.87)	0.417	0.73(0.34, 1.57)
	25-36	0.0213*	3.39(1.13, 10.25)	0.059	3.06(0.095, 9.82)
Sex of the Child	Female	Ref	1	Ref	1
	Male	0.3485	0.82(0.53, 1.25)	0.388	0.82(0.52, 1.29)
Mother's Education	Middle/JHS	Ref	1	Ref	1
	None	0.0688	3.55(0.83, 15.29)	0.076	3.90(0.87, 17.46)
	Primary	0.0367*	5.48(0.91, 32.94)	0.021*	8.12(1.37, 48.27)
	Secondary	0.4789	1.90(0.31, 11.69)	0.605	1.61(0.26, 9.82)
Mother's Age	15-22	Ref	1	Ref	1
	23-30	0.1862	1.35(0.86, 2.13)	0.418	1.22(0.75, 1.99)
	31-40	1.2328	1.70(0.70, 4.10)	0.747	1.61(0.26, 9.89)
Drinking water storage	Plastic container	Ref	1	Ref	1
	Metal container	0.5571	1.41(0.44, 4.53)	0.700	1.27(0.37, 4.32)
	Pot/earthenware	0.0011*	0.07(0.01, 0.58)	0.006*	0.05(0.05, 0.43)
	Bottle/Sachet	0.7611	1.08(0.66, 1.78)	0.834	1.06(0.62, 1.78)

Measured association is significant at α=0.05

From table 4.13, mother's who have had primary education with reference to mothers who have had middle / JHS education was found to have an association with the nutritional status of the child with a p – value of 0.04. Mothers who have primary education are 8 times more likely

(AOR: 8.1, CI:1.3, 48.27) to have children not undernourished as compared with those who have had a middle school / JHS education when all predictor variables have been adjusted for and held constant. Drinking water stored in earthenware pot was also found to be a predictor of the child's nutritional status with a p value of 0.006 with reference to water stored in plastic container when all predictor variables were adjusted for.

CHAPTER FIVE

DISCUSSION

5.0 Introduction

This chapter discusses the results from the study in relation to what was found in literature.

5.1 Demographic Characteristics of Mother and Child.

In this study, the overall average age of mothers who are head porters and have children between the ages of birth to 36 months is 24 years. Most of these respondents fall within the age group of 23-30 (55.59%) years. This agrees with the study by Yeboah and Appiah-Yeboah (2009) who reported that *kayayei* are mostly younger women, who are often times unskilled migrants from northern Ghana and comes from underdeveloped, rural areas in search of jobs in cities in the south. Children within the age of less than 12 months form the majority and they constitute almost half of the total children population studied (49.87%). The second largest age groups of children are within 13-24 months (38.70). Age group 25-36 constitutes the minority. These age categories are very vulnerable years in a child's life because their immune system is still being developed. However, these children live in the market and sleep out in the open on the verandas in front of peoples shop with their mothers, hence at a high risk of ill health.

Majority of these head porter mothers have had no formal education (86.23%) very few (2.08%) have attained Junior high school (JHS) education. Secondary education is also low (3.90%) followed by primary education (7.79%). In Ghana the males and the females are socialized differently. The female is said to be the home maker hence should stay home, whiles the man is encouraged to seek employment. The idea of taking the female to school is not taken seriously especially in the northern region (Amu *et al*, 2005). A study on head porters found that majority of

these girls lacked basic education (Yeboah and Appiah-Yeboah, 2009). To the porters, as noticed by Yeboah's research, the head porter business is seen as simple self-employment with quick results that afford them minimum assets for marriage or for sending funds back home to their family in northern Ghana.

Many head porters are encouraged by their families in northern Ghana to move to the cities due to financial hardships at home (Opare, 2010). Because of their lack of education and have no skills, when these women from the north get to the south, they tend to work in the informal sector by transporting goods on their heads from cargo cars to the shops in the market and also help shoppers carry their various goods bought in the market (Opare, 2010). Also to Anzagra and Yeboah (2012), the very young age at which these porters begin their trade greatly accounts for their general low educational levels as the years that should have been spent in school are spent on the streets as head porters.

The study shows that 76.88% of the head porters are Mamprusi. This confirms a study by Opare (2003) that majority of the head porters who come from the northern region to work in the southern part are Mamprusi.

5.2 Common Morbidity among Children

It was realized that Malaria had the highest prevalence of the disease presence (44%) compared to diarrhoea which was (34) and prolonged cough and cold (23%). When the distribution of common morbidity among the children was done in terms of their age, it was noticed that for malaria, children who have had it in the past one month were the youngest age group who were less than 12 months (55.56%). A report by WH0 (2016) states that children under 5 years of age are one of the most vulnerable groups affected by malaria. It goes on to say that, the majority of malarial disease,

and particularly severe disease with rapid progression to death, occurs in young children without acquired immunity.

The presence of diarrhea is also nearly the same among both children less than 12 months and 13-24 months (40.77% and 41.54% respectively). Acute diarrhea might strike individuals at any age, but it is mostly an infant's disease, affecting especially those younger than one year .The period of weaning is a major factor to favor the occurrence of diarrhea, while many other risk factors should also be considered, such as low socioeconomic level, poor hygiene habits, unsavory dwelling, elevated environmental exposure to enteropathogens and poor nutritional status (Guerrant, Kirchhoff and Shields et al, 1983). Studies have shown that, in developing countries like Ethiopia, the occurrence of diarrheal disease among under-five children is complex and the relative contribution of each factor varies as a function of interaction between socioeconomic, environmental, and behavioral variables. In many developing countries sociodemographic characteristics like maternal and child age and availability of sanitary facilities, hygienic practices, flies infestations, and regular consumption of street food are also some determinant factors for the occurrence of diarrheal disease (Yasin, 2000; Oadi and Kuitunen, 2005). The incidence of diarrhea is higher in the second half of the infant’s life when inborn immunity is weak and exposure to contaminated weaning foods increases (Fischer Walker, Rudan and Liu et al 2013).

As mothers of young children, porters most frequently look after their children personally on the street or leave them with other sellers on the street. Studies have shown that children who remained on the streets with their mothers suffered more frequently from gastro-intestinal, acute respiratory diseases and accidents than the national average (Hernandez et al, 1996)

In identifying with children with special needs, Out of the 385 children studied, only 18% had some type of special needs and on prescribed medicine. Nearly half (49.09%) believed that their children

condition will last for 12 months or over. Also limitation in activity level was found among 45% of the children and these limitations prevent them from doing things most kids of their age do. Furthermore, among children 18 months and above, only few of them cannot walk (7.32%). For all children, early childhood provides an important window of opportunity to prepare the foundation for life-long learning and participation, while preventing potential delays in development and disabilities. For children who experience disability, it is a vital time to ensure access to interventions which can help them reach their full potential as written in the Status of the Convention on the Rights of the Child report (2015). Despite being more vulnerable to developmental risks, young children with disabilities are often overlooked in mainstream programmes and services designed to ensure child development (Simeonsson 2000). In WHO (2015) report on disability, it says that these with some form of disabilities children do not receive the specific supports required to meet their rights and needs. It goes on to say that children with disabilities and their families are confronted by barriers including inadequate legislation and policies, negative attitudes, inadequate services, and lack of accessible environments. If children with developmental delays or disabilities and their families are not provided with timely and appropriate early intervention, support and protection, their difficulties can become more severe often leading to lifetime consequences, increased poverty and profound exclusion.

5.3. Levels of Immunization Coverage among the Children of Head Porters

The study showed that the government hospitals or clinic (76%) were the mostly accessed health facility by these head porters for the immunization of their children. This might be due to the presence of a government children's hospital which is within the vicinity of Markola market and also the presence of a clinic in the market.

It was noticed that Immunization coverage was high across all the six-major childhood killer disease. That is Polio, Diphtheria and Tuberculosis (BCG) (DPT/PENTA3) were recorded to have been completed among the children at 75.1%, 73.8% and 80.26% respectively and measles had 56.9%. Comparing these results to a Multiple Indicator Cluster Survey in 5 High Densely Populated Localities in Greater Accra which shows that about 83.2% of children have been fully immunized. These immunization results reflects the progress that has been made in immunizing children, and this can be attributed to the national Expanded Programme of Immunization (EPI), which has improved immunization coverage among children against vaccine preventable diseases in recent years. However, there were 16.4% of head porter mothers who had no records of immunization on their children. They have not taken their children for immunization. This means that the child can fall sick from vaccine preventable disease.

When mothers were accessed of their knowledge on immunization it was revealed that majority of the mothers (80.78) have knowledge on immunization even with their low educational status. However, among the various factors assessed, only age was significantly associated with mother's taking child for immunization with P-value (0.04). Thus, knowledge is higher among women within 23-30 years of age. This was in contrast to the findings of a study done by Nath et al (2006), that found that maternal education and socioeconomic status were significant independent predictors of immunization status. This change has probably occurred due to the improved access to immunization and improved social mobilization of the health workers in Ghana.

5.4 Health seeking behaviour among Head Porters for their Children

The determination of healthcare-seeking behavior is governed by the interplay of many factors, such as women's ages, education, religion, ethnicity, culture, decision-making power, place of

residence, and socio-economic status, as well as the cost, quality, and location of healthcare services. In terms of cost of health, having access to health insurance increases health care seeking behaviour. From the survey, 67% of the children had health insurance coverage which was still active at the time of the survey. 54.81% of the mothers indicated that they have ever faced problems paying for health bills. Despite the high health insurance coverage, over the counter drugs is mostly used to treat children when they are sick (48.05%) compared to the child being taken to the hospital when he falls sick (34.55%). The findings agree to a study done by Shamsu-Deen (2013) on head porters which says that about three quarters of the female porters access health care from the chemical stores or from the drug peddlers. It was only few of them who reported to seek treatment from the hospital and clinics. It was deduced that the few who access health care from the hospitals and clinic are those who doubled as shop assistance and kayayei. From Chattopadhyay (2005) study, he also indicated that 87% of the head porters obtained health care from drug stores, pharmacy shops and drug peddlers. Anzagra and Yeboah (2012) add that self-medication seems to be more of the norm, particularly among head porters in Kumasi, often with symptoms diagnosed for them by friends or acquaintances who have suffered similar symptoms previously. Most of these head porters not accessing health facilities may be explained by the results from a study done by Adjei et al that, these women unable to afford or access health care because of the low income earned by the head portage, they are sometimes denied access to health facilities because they are perceived as dirty (Adjei et al 2016). In addition, the national health insurance scheme that was launched as pro-poor health financing to ensure equitable access to health care for all Ghanaian citizens has lost its value (Arhin, 2013) and these women are asked to pay a relatively high fee for treatment and medication in hospitals they barely have.

The age of the mother and their living area were found to have an association with seeking healthcare for the child with p-value of 0.017 and 0.004 respectively. This contradicts a study

by Shaikh et al (2003) which noted that the mother's education has a strong and positive influence on the utilization of child healthcare services.

5.5 General Hygiene Practice and Household Conditions among Respondents

The study shows that most of the space used as sleeping area by these head porters is usually the shed (54.83%) in front of peoples shop while, about 24.08% of these head porters who have children sleep in the shops or kiosk. 16.9% sleep in uncompleted building which are mostly uncompleted shops. For security reason these girls sleep in groups. A small shop will have about four people (53%) sleeping in it. About five and more (22%), which, usually is about five to twenty female sleeping in the open under a shed at night exposing them to the vagaries of the weather and several other risks such as harassment from street boys. The coping strategy is however to sleep in groups to offer support to one another in times of need. This to the head porters has proven to be an effective antidote to rape from their male partners on the street. A finding which tallied well with King and Amponsah's (2012) observation that the slums are the hubs of migrants. These dwelling units do not have the basic household facilities such as bathhouses, toilet and kitchen. King and Amponsah (2012) argue that slum dwellers are priced out of the formal housing systems because of low incomes.

5.6 Nutritional Status of Children (0-36 months) of Head Porters

Adequate nutrition during infancy and early childhood is essential to ensure the growth, health and development of children to their full potential. Results from the study showed that majority of the children of the head porters had generally good nutritional status (67.53%). However, about 27.01% of the children were stunted, underweight (8.47%) and wasting was (5.71%).

There was an association between the age of the child and the drinking of stored water in an earthenware pot with the child getting malnourished which was significant. Also, mothers who have had primary education are 8 times more likely (AOR: 8.1, CI: 1.3, 48.27) to have children not undernourished as compared with those who have no education was noted from the results of the survey. Parental education had been identified as a predictor of child's nutritional status (Musa et al, 2014). These children who live with their head porter mother who have no appropriate place to cook food for their children but rather buy food on the street for these children to eat, it is very encouraging to know that they have a general adequate nutritional status. This study confirms a study done by Eto (2015) on the nutritional status of head porters' children in agboloboshie. In her study she found that children of head porters have normal nutritional status. Studies in Lesotho by Ruel *et al.* (1992) show that nutrition education for mothers could contribute to improving children's growth, but only in households that have access to a minimum level of resources. However this study showed that even though majority of the female head porters had no formal education and earned little income their children had a good nutritional status.

CHAPTER SIX

6.0 CONCLUSION

This study made an attempt to examine the factors affecting the health status of children (0-36months) of head porters in Markola market in Accra. The conclusion made in the study is that children within the age of 1-12 months form the majority and they constitute almost half of the total children population studies (49.87%). The second largest age groups of children are within 13-24 months (38.70). Age group 25-36 constitutes the minority. It was realized that Malaria had the highest prevalence of the disease presence (44%) compared to diarrhoea which was (34) and prolonged cough and cold (23%). When a distribution of common morbidity among the children was done in terms of their age, it was noticed that for malaria, children who have had it in the past one month prior to the study were the youngest age group that is children less than 12 months (55.56%).

The study showed that the government hospitals or clinic (76%) is mostly accessed by these head porters for the immunization of their children. This might be due to the close proximity of the princess Marie children's' hospital and the presence of a clinic in the market.

It was also noticed that Immunization coverage was high across all the six-major childhood killer disease. From the above chart, it is found that majority of the immunization has been completed among the children, thus Polio, Diphtheria and Tuberculosis (DPT/PENTA3) were recorded to have been completed among the children at 75.1%, 73.8% and 80.26% respectively and measles had 56.9%.

When mothers were assessed on their knowledge on immunization it was revealed that majority of the mothers (80.78%) have knowledge on immunization even with their low educational status. However, among the various factors assessed, only age was significantly associated with mothers taking child for immunization with P-value (0.04).

From the survey, 67% of the children had health insurance coverage which was still active at the time of the survey. 54.81% of the mothers indicated that they have ever faced problems paying for health bills. Despite the high health insurance coverage, over the counter drugs is mostly used to treat children when they are sick (48.05%) compared to the child being taken to the hospital when he falls sick (34.55%)

The age of the mother and their living area were found to have an association with seeking healthcare for the child with a p-value of 0.02 and 0.001 respectively which is statistically significant at alpha level of 0.05.

Finally there was an association between the age of the child and the drinking of stored water in an earthenware pot with the child getting malnourished which was significant. Also, mothers who have had primary education are 8 times more likely (AOR: 8.1, CI: 1.3, 48.27) to have children not undernourished as compared with those who have no education was noted from the results of the survey.

6.1 **RECOMMENDATION**

The future of Africa is to ensure that its children grow up in an environment where they can reach their full potential therefore following the findings, it is recommended that the Ministry of gender,

children and social protection, the National Youth Council and NGOs with interests in the welfare of children and women should collaborate with each other to develop a database on the head porters so that programmes can be designed to enhance their welfare in the end.

It is also recommended that decent hostels can be built to house them in the cities premised on the fact that the economic activity of these head porters is in response to the lack of cost-effective means of transport between market centers and bus terminals in the cities. This will help improve the in humane conditions the head porters live in.

Furthermore, it is recommended that, further study be carried on the health status of children of the head porters especially in the area of morbidity where a clinical assessment can be done to ascertain the true prevalence of disease present among the children.

Finally, research could be done to find out reasons why some mothers do not take their children for immunization.

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APPENDIX

CONSENT FORM

Part 1.

Participant Information

Introduction

I am from Ensign College of Public Health in Kpong. I am conducting a study about the health status of children of head porters.

Why you are being asked to participate

You are being asked to take part in this study because you are a head porter in Makola market and you also have a child who is within the age of 0-36 months.

Procedures

If you agree to be a part of the study, I will be answering a questionnaire with you which will take about 10 minutes.

Your child will be taken through anthropometric measurement, in which the weight of the child will be taken and the height will be measured. This means that we will be touching your child but be assured that no harm will come to the child due to the procedure.

Your response to the questions will be taken down which will later be analysed by a staff of the study. As a participant, if you agree to take part in this study, data from your responses may

be used as part of my assessment in identifying the factors that affects the health of the children of head porters.

Risk and Benefits

We anticipate minimal or no risk to you for being a part of this study. There is no direct benefit to you for being in the study; however, study outcomes may lead to the planning of health services for the children and it will also contribute to knowledge.

Confidentiality

All data will be kept private. Your name or date of birth of your child will not be used in documents, reports, or publications related to this research.

The Office of Ethical Review Board of Ensign College may have access to study records upon their request.

Your responses will not be shown to other participants or community members.

Voluntariness and Withdrawal

Your participation in the study is completely voluntary and you reserve the right not to participate, even after you have taken part, to withdraw. Please note however, that some of the information that may have been obtained from you without identifiers, before you chose to withdraw, may be used in analysis, reports and publications.

Who to contact

This study has been approved by the Institutional Review Board of Ensign College. If you have any concern about the conduct of this study, your welfare or your rights as a research participant or if you wish to ask questions, or need further explanations later, you may contact

the research team (0265969970) of Ensign College of Public Health, or the Supervisor Dr. Sovoe (0246099870). You may also contact the Administrator of the Institutional Ethics Committee of the Ensign College of Public Health on +233245762229.

Thank you.

Part 2. CONSENT DECLARATION

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

Signature of **Participant** _____

Left thumbprint of participant

Date: / / 2017

Name of **investigator** _____

Signature of **investigator** _____

Date: / / 2017

QUESTIONNAIRE ON THE HEALTH STATUS OF CHILDREN (0 – 36 MONTHS OLD) OF HEAD PORTERS (KAYAYEI)

Please kindly spare us 30 minutes to answer questions below. **Questionnaire No…..**

Section 1: Demographics

1. Age of child……..

2. Age of mother…….

3. Educational status of mother
A) None B) Primary C) Secondary/middle school D) Tertiary

4. Is child male or female?
A) Male B) Female

5. What is your religion?
A) Christian B) Muslim C) Traditionalist D) Other:…….

6. What is child's ethnicity?
A) Dagomba B) Mamprusi C) Kusasi D) Frafra E) Kasina
F) Other: …….

7. What is the primary language spoken in your home?
A) Dagbanli B) Mamprusi C) Twi D) Ewe E) Frafra
F) Hausa G) English

Section 2: Health and Functional Status

8. In general, how would you describe child's health?
A) Excellent B) Very Good C) Good D) Fair
E) Poor F) Don't Know G) Refused

9) What was child's birth weight?
A) …….. Kg B) Don't Know C) Refused

10. Current weight and height of child to be taken by the survey team
A) Weight……Kg B) Height……. m

11. Was child born prematurely, that is, more than 3 weeks before his/her due date?
A) Yes B) No C) Don't Know D) Refused

Section 3: Presence Of A Special Health Care Need

The next questions are about any kind of health problems, concerns, or conditions that may affect child's behavior, learning, growth, or physical development.

12. Does child currently need or use medicine prescribed by a doctor, other than vitamins?

A) Yes C) Don't Know [Skip to Q15]
B) No [Skip to Q15] D) Refused

13. Is [his/her] need for prescription medicine because of ANY medical, behavioral or other health condition?

A) Yes C) Don't Know [Skip to Q15]
B) No [Skip to Q15] D) Refused [Skip to Q15]

14. Is this a condition that has lasted or is expected to last 12 months or longer?

(1) Yes C) Don't Know [Skip to Q16]
(2) No [Skip to Q16] D) Refused [Skip to Q16]

15. Is child limited or prevented in any way in [his/her] ability to do the things most children of the same age can do?

A) Yes C) Don't Know
B) No D) Refused

This question is to be asked if child is between (18 months – 36 months.)

16. How would you describe [his/her] usual ability to walk? Would you say he/she …

A) Walks normally C) Walks with a cane
B) Crutches or walker D) Has limited or no walking?

Section 4: Health Insurance Coverage

17). Does child have national health insurance?

A) Yes C) Don't Know [Skip to Q22]
B) No [Skip to Q22] D) Refused [Skip to Q22]

18) Since the child's birth, was there any time when [he/she] was not covered by any health insurance?

A) Yes C) Don't Know
B) No D) Refused [All Skip to Q22]

19). Does child's health insurance offer benefits or cover services that meet his/her needs?

A) Never B) Sometimes C) Usually
D) Always E) Don't Know F) Refused

20). Do you pay any money for child's health care?

A) Yes C) Don't Know
B) No D) Refused

21). How often are these costs reasonable? Would you say never, sometimes, usually, always?

A) Never B) Sometimes C) Usually D) Always
E) No out of pocket costs F) Don't Know G) Refused

Section 5: Expenses and Barriers to Care

22). In the past 12 months, did you have problems paying or were unable to pay any of child's medical bills? This includes bills for hospitals or medication.

A) Yes B) No C) No Expenses
D) Don't Know E) Refused

Section 6: Health Care Access and Utilization

23). Is there a place that the child usually goes when he/she is sick or you need advice about his/her health?

A) Yes D) Don't Know [Skip to Q28]
B) No [Skip to Q30] E) Refused [Skip to Q28]
C) There is more than one place

24). What kind of place does child go to most often?

A) Government hospital / clinic B) Private hospital / clinic
C) Pharmacy shop / chemical sellers

Section 7: Parent's Evaluation of Developmental Status

25). Do you have any concerns about child's learning, development, or behavior?

A) Yes B) No C) Don't Know D) Refused

26) If answer is No, READ: The next section asks about specific concerns some parents may have. Please tell me if you are currently concerned a lot, a little, or not at all about the following.

A) How child talks and makes speech sounds?
B) How [he/she] understands what you say?
C) How [he/she] uses [his/her] hands and fingers to do things?
D) How [he/she] uses [his/her] arms and legs?
E) How [he/she] behaves?
F) How [he/she] gets along with others?

Section 8: Child care

27). Do you take child with you since he/she was born when you are working?

A) Yes B) No C) Don't Know D) Refused

28). In your opinion what sickness does the child often suffer from

A) Malaria B) Diarrhea C) Convulsion
D) Prolong cough and cold E) Skin rashes

29). How is / are these sicknesses treated?

A) Child is taken to the hospital / clinic
B) Child is given over the counter drugs without being taken to hospital
C) Child is given home remedies
D) I don't know

E) No response

(30) When is the child taken to the hospital?

A) When child is severely sick and has a high temperature
B) Has a slight temperature
C) Is unconscious
D) I don't know
E) No response

31). How many times does the child falls sick in a month?

A) Once a month
B) Twice a month
C) Three times in a month
D) Four times in a month
E) I don't know
F) No response

Section 9: Immunization of the child

32). Where is the child taken for immunization?

A) Government hospital/ Clinic
B) Private hospital
C) Community health nurses comes to the place
D) Don't know
E) Refused

33). Ask for immunization record book and record/ use immunization recall

Vaccine	On going	Completed	Not completed
Tuberculosis (BCG)			
Poliomyelitis			
Diphtheria/pertussis/tetanus/heptB/ H. influenza B			
Vitamin A			
Measles			
Yellow fever			

Immunization book not available [ ] (tick)
Mother has no knowledge of immunization [ ] (tick)

Section 10: Living conditions

34). What is the source of water for domestic use?

A) Piped water
B) Pond/lake
C) Bottled water
D) Well Water
E) Dam
F) Satchel water
G) Borehole
H) Rainwater

35). How does your household store drinking water?

A) Plastic container/bucket
B) Metal container
C) Pot/earthenware vessel
D) Bottle/sachet

36). What is usually done to dispose of your child's stools when he/she does not use any toilet facility?

A) Child uses Toilet/latrine
B) Throw in the toilet/latrine
C) Rinse away

D) Throw outside the yard E) Use disposable diapers and throw in the bin

37). What type of house/living area do you live in with the child?
A) Uncompleted building B) Completed building C) In a shop D) Kiosk
E) Under a shed F) Don't know G) No response

38). How many people sleep in the room
A) Four and more in a room C) Don't know
B) Ten and more on the veranda D) No response