

**DETERMINANTS OF HEALTH SEEKING BEHAVIOR AMONG CAREGIVERS OF
INFANTS WITH ACUTE CHILDHOOD ILLNESSES IN KENYATTA NATIONAL
HOSPITAL**

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DECLARATION

I, Winfred Muringi Wambui declare that this dissertation is my own original work and it has not been presented in a University or an academic institution of higher learning for an academic award.

Sign.....

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CERTIFICATE OF APPROVAL

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DEDICATION

This work is dedicated to my dear mum Lucy Nderitu and my brother Martin Nderitu. Thank you for your prayers, encouragement, love and understanding.

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I am very grateful unto the Lord God Almighty without whose divine enablement this dissertation wouldn't be a success.

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LIST OF ABBREVIATIONS

BSCN-Bachelor of science in nursing

FDGs-Focused Group Discussions

HBM-Health Belief Model

HCP-Health care providers

IMCI-Integrated Management of Childhood Illnesses

KHHEUS-Kenya Household Health Expenditure and Utilization Survey

KNH-Kenyatta National Hospital

MDGs-Millennium Development Goals

SDGs-Sustainable Development Goals

SPSS-Statistical Package for Social Science

UN-DESA-United Nations Department of Economic and Social Affairs

UNICEF-United Nations Children's Fund

UON-University of Nairobi

WHO-World Health Organization

OPERATIONAL DEFINITIONS

Caregivers-The person (adult) taking care of the infant during the admission and during the study

Danger signs in infancy: Danger signs are the warning when a hazard or a hazardous condition is likely to be life threatening. (Oxford Dictionary).In this study, it refers to deviation from normal health of newborns as manifested by poor sucking and feeding, lethargy, unconsciousness, bulging fontanelle, irritability, convulsions, abdominal pain and distension, hypothermia, and difficulty in breathing.

Healthcare-seeking behavior: In this study, it refers to the various actions and decisions taken by mothers of sick child to mitigate the effect of illness and prevent complications. These include caring for their sick newborn with home remedies, buying over the counter drugs, seeking advice taking them to faith healer, homoeopaths, private practitioners or governmental hospitals.

Infant-a baby aged 0-11months.

Study respondents- caregivers of infant suffering from acute childhood illnesses and admitted in pediatrics ward

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ABSTRACT

Background: The leading medical cause of infant and child deaths is the acute childhood illnesses which include acute respiratory infections, diarrhea, malaria, and meningitis. Health seeking behavior of caregivers plays a major role in determining the infants' survival from these illnesses. Poor or inappropriate health seeking behavior increases the chances of morbidity and mortality of infants. The WHO and UNICEF have come up with a recommendation of need to strengthen the family's capacity to identify danger signs and seek prompt care as interventions to curb childhood illnesses.

Study objective: This study sought to identify the determinants of health seeking behaviors among caregivers of infants admitted with acute childhood illnesses in Kenyatta National Hospital.

Materials and Methods: The study adopted a descriptive cross-sectional design whereby mixed methods (quantitative and qualitative) were used. It was carried out in K.N.H paediatric wards. The researcher gathered data among the caregivers of infants on the level of knowledge of caregivers of infants on danger signs of infancy, healthcare options including professional choice and the factors that influence the decision making on health seeking behavior. Study subjects were selected by consecutive sampling method. A total of 130 study participants were included in the study sample. Focused group discussions were also conducted. Data was collected using a researcher administered semi-structured questionnaire. Qualitative data was audio-taped. Data was cleaned, entered into computer and analyzed using Statistical Package for Social Sciences (SPSS) version 20. Results will be presented by use of tables, pie charts. Transcribed data was analyzed manually. Level of significance was at ≤ 0.05 .

Study results: Most of the respondents (53.8%) were aged 21-30 years and came from urban settings (63.1%). The highest proportion (43.8%) attained primary school. Caregivers residing in urban settings had significantly higher proportion of immediate health seeking behavior (61.0%) [OR=2.19; P=0.034] compared to those who resided in rural areas. Caregivers with tertiary level of education [P=0.022] and secondary school [P=0.028] had significantly increased proportion of

immediate health seeking behaviour compared to those with primary level of education. There was a significant relationship between knowledge of danger signs in infancy and immediate health seeking behavior [OR=6.34;P=0.000]. The proportion of immediate health seeking behaviour was more among caregivers staying less than one kilometre from health facilities [p=0.042]. Caregivers who rated services offered in health facility as excellent (P=0.005) and as satisfactory (P=0.025) had significantly increased proportion of immediate health seeking behavior. Lack of finance was reported to be the major hindrance for the care giver not seeking health care outside their homes.

Conclusion: Knowledge of danger signs of infancy among the respondents have been shown to be low and this has a significant relationship with immediate health seeking behavior. Perception that the illness is mild and has been shown to delay health care seeking practices. Having the facility near, rating health services offered at those facilities as excellent and satisfactory significantly increased proportion of immediate health seeking behavior compared to those who were not satisfied. Caregiver's level of education, severity of illness and accessibility of health facility showed a relationship and influences decision making regarding health seeking behavior.

Recommendations: Basic health care services should be strengthened at the community level through provision of supplies, medicines, equipment and minimizing the turnaround time. Tailored health education strategies and programmes on danger signs of infancy should be considered to enhance appropriate and prompt health care seeking practices.

Study utility: The findings of this study will inform policy and programming on issues of raising awareness of danger signs in infancy and improving on health seeking behaviors of caregivers during acute childhood illnesses.

Study duration: The study duration was eight months at a cost of Kshs. 122,580

CHAPTER ONE: INTRODUCTION

1.1 BACKGROUND

The under five morbidity and mortality is a global health problem. Recently, reports indicate that 75% of all under five deaths are reported to have occurred during their first year of life (WHO, 2015). The leading medical cause of infant and child deaths is the acute childhood illnesses which include acute respiratory infections, diarrhea, malaria, and meningitis. Acute respiratory infection such as pneumonia, bronchitis, and bronchiolitis account for 30% of childhood deaths; 95% of pneumonia cases occur in the developing world. Diarrhea is the second-largest cause of childhood mortality in the world, while malaria causes 11% of childhood deaths. Measles is the fifth-largest cause of childhood mortality (Brouillette, *et al*, 2008). Other causes are environmental, socioeconomic and war.

Health or care seeking behavior is defined as any form of action taken by an individual in order to find an appropriate remedy or treatment for themselves or for the person whom they take care of, when a health problem or illness arises (Olenja, 2003).

Health seeking behavior of caregivers plays a major role in determining the infants' survival. Little is known about how mothers behave when their infants fall sick. Poor or inappropriate health seeking behavior increases the chances of morbidity and mortality of infants. The WHO and UNICEF has recommended the need to strengthen the family's ability to identify danger signs and care seeking which is prompt as interventions to curb the childhood illnesses. The healthcare professionals usually undergo training on ways to educate the mothers about danger signs and also on how to advise them about the need to seek care promptly if these signs occur. Factors in care-seeking practices like combining home treatment and conventional medicine and inability to identify life-threatening illnesses were associated with delays in care seeking.

In the African region it is estimated that infant mortality is at 55 per 1000 live births. With the end of Millennium Development goals, and the emergence of renewed Sustainable Development goals, it is now Goal Number 3 "Ensure healthy lives and promote well-being for all at all ages" (UN-DESA, 2016). The goal is now at 25 deaths per 1000 live births according to UNICEF

(Levels and Trend in Child Mortality Report September 2015). This report also indicates that Sub-Saharan African countries in which Kenya is included reported the highest number of deaths. In Kenya, according to Kenya Demographic Health survey done in 2015, the infant mortality is rated at 39 deaths per 1000 live births. It is therefore ranked 52nd in the world in infant mortality rate. This indicates that more interventions are needed in order to achieve the SDG new goal.

These diseases can be prevented and treated with proper interventions. In Kenya various interventions have been which include as antibiotics for pneumonia, oral rehydration therapy in treatment of diarrhea, and the provision of insecticide treated nets (ITNs) to prevent malaria. *Malezi Bora* Initiative has also played a role since it includes child immunization and deworming of the under fives. Approximately 80% of the deaths occur at home without a child being seen by a health care provider (UNICEF 2009). These deaths can be reduced by seeking prompt and appropriate care for the infants and this is determined by the health seeking behaviors and practices of the mothers (Chandwani & Pandor, 2015). Appropriate health seeking behaviors will help reduce the incidences of childhood illnesses (Chepngeno *et.al*, 2005). In the IMCI Package by WHO (2015), a gap was identified in recognition of illness and appropriate health seeking behavior the strategy emphasizes on addressing those gaps through interventions.

1.2 PROBLEM STATEMENT

Acute childhood diseases have remained the major causes of illness and death in young children, and more so in the developing countries with about 13 million infant and children mortality in these countries. In the 5.9 million under-five deaths in 2015, nearly half were caused by conditions such as pneumonia, diarrhea, malaria and meningitis (WHO Report, 2015). Most of these infants die despite the existing interventions like IMCI and *Malezi Bora* that have been put in place.

Kenyatta National Hospital is the largest referral hospital in Kenya and in the year 2015 a total of 314 children with diarrhea, 443 with meningitis, 211 with malaria and 1200 with pneumonia were admitted. Out of all these admissions, 604 children died from these childhood illnesses.

Interventions in health care seeking have ability to reduce infant mortality and in these countries. A great number of these children die without reaching a health facility and due to delays in seeking health care.

Most mothers and other caregivers usually commence treatment at home for their ill children having the hope and believing that their child will recover, but when the condition becomes worse they seek the services from a qualified professional. Most of these treatments are adult drugs which remained in previous treatment, or drugs bought over the counter, herbal medicines and this is mostly the cause of complications or even death.

Caretakers play a very important role in the management of childhood diseases and their health seeking behavior is a major contributor to infant morbidity and mortality (Nasrin *et. al*, 2013). Mothers' practices have created a major disease burden. Most mothers usually present to the health facilities late, when the child is severely sick. This reduces the chance of child survival. There are adequate interventions in the health facilities but these can be utilized properly if the mothers present to the health care facilities on time. Mothers in the developing countries have inadequate level of knowledge on how to identify the danger signs of these illnesses, proper treatment and have no or limited access to the healthcare facilities(Liu *et.al*,2012).When children have become acutely ill ,parent are anxious, uncertain about their decision in health care seeking and are not able to determine the severity of the illness (Neill *et.al*, 2016).

This study will enable one to understand and come up with measures to influence caretakers' behavior therefore come up with policies that promote child health and survival.

1.2 JUSTIFICATION

The future of human race and the world at large is fully dependent on the infants' survival rate. Mother's knowledge on danger signs in infants is the initial necessary step for recognition of complications and a way to reduce infant mortality. Poor or inappropriate health seeking behavior increases the chances of morbidity and mortality of infants.

Delayed health seeking leads to severity of the illness and this prolongs hospital stay therefore a risk of acquiring nosocomial infections and financial burden of hospital bills. This also leads to a burden in the country's economy since more workforce in terms of human resource will be required.

According to the guidelines of (IMCI), at the home setting early recognition of illness and appropriate care seeking behaviors are paramount interventions in response to illness. (IMCI Module, 2015). The WHO and UNICEF also recommends that there is need to empower the families to identify danger signs and prompt care seeking as interventions to curb childhood illnesses. In spite of these guidelines infants continue to suffer and die due to these illnesses.

Interventions targeted to improving health seeking behavior of caregivers have the potential to greatly reduce infant mortality, in those countries where acute childhood illnesses are a major problem. Prompt and appropriate care seeking practices have significance in avoiding many deaths attributed to delays and not seeking care particularly in Kenya.

There is need to identify determinants of caregivers health seeking behaviors because this will enable identify the needed interventions to ensure prompt and appropriate health care for the infants. Identification of these determinants will facilitate the development of strategies to curb the childhood diseases.

The study's results are expected to provide a holistic approach towards instituting proactive preventive strategies in dealing with the burden of acute childhood illnesses, generate policies to be used at the community level in improving the health seeking behaviors and come up with interventions to reduce infant morbidity and mortality from childhood illnesses and in achieving the Sustainable Development Goals.

1.3 RESEARCH QUESTIONS

1. What are the most common acute childhood illnesses among infants admitted at Kenyatta National Hospital?
2. What is the level of knowledge of danger signs in infants among caregivers of infants admitted at Kenyatta National Hospital?
3. What are the health care options available for the caregivers of infants admitted with acute childhood illnesses at Kenyatta National Hospital?
4. What factors influence the caregivers' decision making regarding the health seeking behavior?

1.4 STUDY OBJECTIVES

1.4.1 BROAD OBJECTIVE

To establish the determinants of health seeking behaviors among caregivers of infants admitted with acute childhood illnesses in Kenyatta National Hospital.

1.4.2 SPECIFIC OBJECTIVES

1. To determine the common acute childhood illnesses among infants admitted in Kenyatta National Hospital
2. To assess the level knowledge on danger signs in infants among caregivers of infants admitted with acute childhood illnesses in Kenyatta National Hospital
3. To establish the health care options available among caregivers of infants admitted in Kenyatta National Hospital, including professional choice
4. To explore the factors that influences decision making regarding the health seeking behavior among caregivers of infants admitted with acute childhood illnesses in Kenyatta National Hospital.

1.5 STUDY HYPOTHESIS

Caregivers of infants 'level of knowledge on danger signs, available health care options and decision making factors have no significant relationship with health seeking behavior.

1.6 STUDY BENEFITS

This study will provide a better understanding of the determinants of health seeking behaviors among caregivers of infants with acute childhood illnesses. This will provide a basis to come up with programs that will improve the health seeking behaviors of caregivers during acute childhood illnesses. This will help reduce infant mortality and improve child survival rate.

1.7 STUDY VARIABLES

DEPENDENT VARIABLE

- Health seeking behavior

INDEPENDENT VARIABLE

- Demographic data-age, sex, residence level of education
- Level of knowledge of danger signs in infancy
- Health seeking options- the accessibility, availability, and services offered
- Factors influencing decision making regarding health seeking behavior-cultural, social, environmental and others

INTERVENING VARIABLES

- Socioeconomic status
- Religion
- Residence
- Ethnicity

OUTCOME VARIABLES

- Reduced infant mortality
- Appropriate health seeking behavior
- Prompt health care

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

In sub-Saharan Africa, pneumonia, diarrhea, meningitis and malaria have remained to be the leading killers for children under five. The mortality rate remains double that of the global average and particularly the most vulnerable are children from the poorest households. They have 80 % risk of dying during the first five years of life compared to children from the wealthiest households (MDG Report,2012).

Families take full responsibility for child care and if success is to be achieved, a partnership between health workers and families is required. Community support is also essential and this includes initiating appropriate health seeking behaviors (IMCI MODULE,2012)

2.2 HEALTH SEEKING BEHAVIOR

Health or care seeking behavior is defined as any form of action taken by a person in order to get an appropriate therapy or treatment for themselves or for the person they are taking care of, when a health problem or sickness arises(Olenja,2003).Health-seeking behavior in Kenya is influenced by a combination of factors among which are income, level of education, social environment, physical environment such as distance to health facility, personnel at the health facility, among others (Chuma, *et.al*, 2007).

According to KHHEUS (2013), the most commonly reported reasons for not seeking healthcare in the population were “high cost of care,” “self-medication,” “long distance to health care provider,” and “illness considered not serious enough”. IMCI Strategy in household setting seeks to enhance care seeking behaviors which are appropriate, proper nutrition and prevention, and the required implementation of prescribed care.

According to Neill(2000) parents respond to their children’s illness by first’ wait and see’, they make efforts to treat their children themselves using basic nursing interventions or over-the –

counter drugs and consulting the doctor is seen as the as resort after their effort to treat has failed.

Despite WHO/United Nations Children's Fund (UNICEF) recommendations that countries can reduce pneumonia mortality at the community level by “integrating community pneumonia treatment activities, malaria and treatment of diarrhea the household and community levels and other initiatives that promote child health” few countries in Sub-Saharan Africa have made such interventions policy (WHO, 2004).

Reviews from global literature have been found to suggest that factors that affect HSB can be classified as cultural beliefs, socio-demographic status, socio- economic conditions, physical and financial stability and accessibility, disease pattern, and health service issues (Shaikh& Hatcher, 2005)

The health seeking behavior is mainly determined by their awareness and early recognition of the danger signs, health seeking options available and the decisions made by care givers of these infants who are mainly the mother and other family members. Other factors that may determine the health seeking behavior may include social factors, political and economic factors (Musoke *et.al.*, 2014).

There is need to educate mothers, strengthen community based activities inorder to manage childhood illness, and conduct research to improve health seeking behavior of mothers (Webair&Salim,2013)

2.3 CAREGIVERS KNOWLEDGE OF DANGER SIGNS IN INFANTS

Danger signs are signs leading either to recognition of illness or heath care seeking. Knowledge and early recognition of danger signs are important inorder to manage childhood illness in developing countries. This also determines the likelihood of mothers seeking health care. Caregivers recognition of a danger sign will enable them to respond quickly thus enhance prompt treatment and thus enhance chances of child survival. According to IMCI the danger signs are being unable to drink or breastfeed, vomiting, episodes of convulsions, lethargy and loss of

consciousness. Studies have shown that there's a problem of not recognizing danger sign and this has impacted directly or indirectly on child mortality (Awasthi *et.al*, 2003).

There's is need to improve the caregivers knowledge on danger signs and the appropriate measure they need to take once they recognize a danger sign in an infant (Ekwochi *et.al* 2015).In this study it was identified that mothers knowledge of more than three of the nine of WHO danger signs was poor(3%).Majority of the mothers(95%) had knowledge of only one danger sign and that is fever. In this same study only (47.7%) of the mothers presented to the hospital immediately they noticed the signs and about one in four (23%) did not present to the hospital at all following the delays at the household level. This kind of delay can result in late presentation to hospital and subsequent late administration of appropriate interventions resulting in mortality.

A programme implemented to create care taker of infants awareness about danger signs through group and one to one health education sessions in Lusaka, Zambia led to increased care seeking for children with danger signs from 56% at baseline to 65.8% three years later upon follow up.

It was found out that to educate caretakers on danger signs and the need for prompt action can change behaviors, overcome distance, cost barriers, and increase care seeking .(Yasuyuki *et.al* 2009).

Poor knowledge of danger signs of childhood illness among mothers have an indication of the need to introduce community-based IMCI programmes that will help in improving care seeking behavior among families and their ability to recognize danger signs of childhood illness (Shankar *et.al*,2006)

2.4 HEALTH CARE OPTIONS

Millions of parents and guardians seek health care for their sick children each day, either by taking them to hospitals, health centers, pharmacists, doctors or traditional healers (IMCI/WHO, 2016)

Accessibility and availability of the health care facility also determines the pattern of health seeking behavior. Children of caregivers who live near the health facility are more likely to receive treatment for the illnesses compared to those who live far from the facility (Kante *et.al*,2015). Similar survey in Kenya (KHHEUS,2013) , showed that there was a significant reduction in the utilization of healthcare services as the distance from a health facility increased. This indicates that there is association between the distance of the health facility and child mortality.

Studies indicate that self-treatment plays a vital role, especially in rural areas where the healthcare facilities are limited, not easily accessible, available and affordability is also difficult. Self-treatment mostly practiced due to health care convenience in terms of distance, affordability, and because of the severity illness. It considered as the first choice and is usually influenced by the perception of that the symptoms are mild (Mayfong *et .al*, 2013)

In Guatemala, about two thirds of children with diarrhea and RIs were self-treated by their caregivers and only one third of these children were attended by healthcare providers such as pharmacists, doctors, and workers at health facilities and centers (Heuveline & Goldman,2000) In Nepal, a study done showed that often treatment for illness is only sought after home remedies have not been successful; women are the primary care givers at home and (42%) of the population doesn't go to the modern health facilities but instead seek the assistance from traditional healers.

A survey in a Kenya (KHHEUS, 2013) indicated that individuals who are ill commonly buy or use drugs that were prescribed for similar earlier symptoms or buy drugs from chemists without a prescription, meaning there is high prevalence of self medication (30.7%).

2.5 FACTORS INFLUENCING HEALTH SEEKING BEHAVIOR

Health seeking behavior can be influenced by different factors and these determine the child survival.

2.5.1 SOCIO-DEMOGRAPHIC FACTORS

Socio-demographic factors like level of education, age of the caregiver and economic status of the caregiver also influence health seeking behavior.

2.5.1.1 LEVEL OF EDUCATION

A caregiver who has attained secondary education has more knowledge on common health conditions and how to deal with them and this increases the chance of appropriate health seeking behavior (Webair&Salim, 2013). Highly educated caregivers are better in understanding health information thus making them to be in a better position in seeking health care for their children (Ahmed *et.al*,2000). Mothers who are educated are also more likely to make decision to seek for quality health care services, have better access to health service information and have an improved perception of the danger signs (Nigatu *et.al*,2015)

2.5.1.2 SOCIAL ECONOMIC STATUS

Low social economic status have been associated with poor health seeking behaviors and poor utilization of health care facilities unlike those in high economic status.(Ogunlesi *et.al*,2005) People with low socioeconomic status are often unable to afford health services due to the high cost. Once socioeconomic status of the urban poor has been developed it may overcome their financial constraints to seek care appropriately and promptly during the childhood illness (Shankar *et.al*, 2006)

2.5.1.3 AGE OF THE CAREGIVER

Caregivers' age influences the health seeking behaviors. A study in rural Tanzania identified that children of older caregivers(35yrs+) didn't perceive diarrhea as an illness therefore were less likely to seek health care for diarrheal diseases(Kante *et.al*.,2015). Young mothers (15-34YRS) have more help-seeking behavior during their child's illness. Such children are more likely to have complications like diarrhea and shock thus increase a chance of mortality It has also been

reported that young mothers are more exposed to mass media because of their level of education and this has been seen contribute to their better health care seeking (Astale&Chenault,2015).

2.5.2 SEVERITY OF THE ILLNESS

Severity of the illness determines the action to be taken by the caregiver. Mostly mild symptoms are usually managed at home whereas severe illnesses are taken to the health care facilities. This causes delays in medical care hence the risk of mortality. In a study in Ethiopia of 122 respondents who perceived ARIs as severe, 19 only took their children to the facility within 24hrs of the illness and this delay is what has been showed to be associated with complications and high number of child deaths (Astale & Chenault, 2015).

Caretakers seek health care when they perceived that the illness is severe and they do not see the reason for seeking health care if the illnesses is mild or the illness is not for medical attention (Webair & Salim,2013). .This concurs with another study in where 52% of the caretakers considered diarrhea as a mild illness therefore doesn't warrant a visit to care provider outside home (Nasrin *et.al.*,2013).This indicates that severity of the illnesses is one of the factors that influence decision making for health seeking and this results to delay and complications.

2.5.3 SOCIAL NETWORKING

In the African society social network like culture and family role plays a very vital role also in health care. A decision in regard choice of care during illness is determined by our cultural beliefs and practices and this causes delays in care seeking. A study by Omotosho (2010), indicated that gender bias and gender discrimination caused women to be deprived the power or to have a role in decision making and this has led to into inadequate health care utilization and access to healthcare services. The male dominance in African culture causes this problem. The head of the family or house is the decision maker in every home and this can also cause delay in seeking health if conflicts arise. A related study done in indicates that there is need to get a confirmation severity of the illness from senior members of the family or peers in the broader community. In this study men were found to be the principle caregivers or decision-maker within

a home, they made decisions alone, not only due to their increased access to financial resources but also due to the respective power positions between husband and wife.

Caregivers usually seek advice during illnesses from friends, other family members or social networks from whom they perceive to be experts in child care. Neill *et.al*, in their study reported that some parents reported seeking advice from their social network before consulting an HCP. Young parents in the South Asian and travelling family communities sought advice from their parents, or grandparents lived with them or nearby ((Neill *et al*, 2000)

2.5 THEORETICAL FRAMEWORK

Theoretical framework to be used in this study is adopted from the Health Belief Model which was developed in the 1950s by social psychologists Hochbaum, Rosenstock and Kegels working in the U.S. Public Health Services. The Health Belief Model (HBM) is a psychological model that gives an explanation and gives predictions about individuals' health behavior. It deals with the attitudes and beliefs of individuals during wellness or illness. The Health Belief Model helps explain individual patients' decision to accept or reject preventative health services or adopt healthy behaviors. It was developed to predict the likelihood of a person to take recommended preventative health action and to understand an individual's motivation and decision-making about health care seeking.

HBM is made up of six concepts and they are: Perceived susceptibility and this explains the level of risk a person perceives he or she has. Mothers of infants must first be able to identify the risks that are there when their children have acute childhood illnesses. Perceived severity explains how serious the consequences might be. Caregivers in this case need to be able to determine the severity of the illnesses so that they are able to make decisions for seeking health. To change health behavior in an effective manner, the individual has to believe in both susceptibility and severity of the illness. Perceived benefits and in this one belief in the efficacy of the action have been advised on to help reduce risk or seriousness of impact. Once the caregivers have understood the benefits of appropriate health seeking behavior infant mortality will be reduced. Perceived barriers which are one's belief in all the costs that are going to be encountered from the

advised behavior. Some of the barriers to appropriate health seeking behavior may include: accessibility and availability of health care facilities, inadequate knowledge on danger signs in infancy, low socioeconomic status and inability to determine the severity of the illnesses. Cues to action and this involve strategies to activate readiness. This can be achieved through creating awareness through health education forums so that the caregivers have adequate information on acute childhood illnesses. Self efficacy focuses on the confidence in an individual's ability to take action. In this caregivers once they understand they are able to make right decisions regarding appropriate health seeking behavior.

2.6 HEALTH BELIEF MODEL

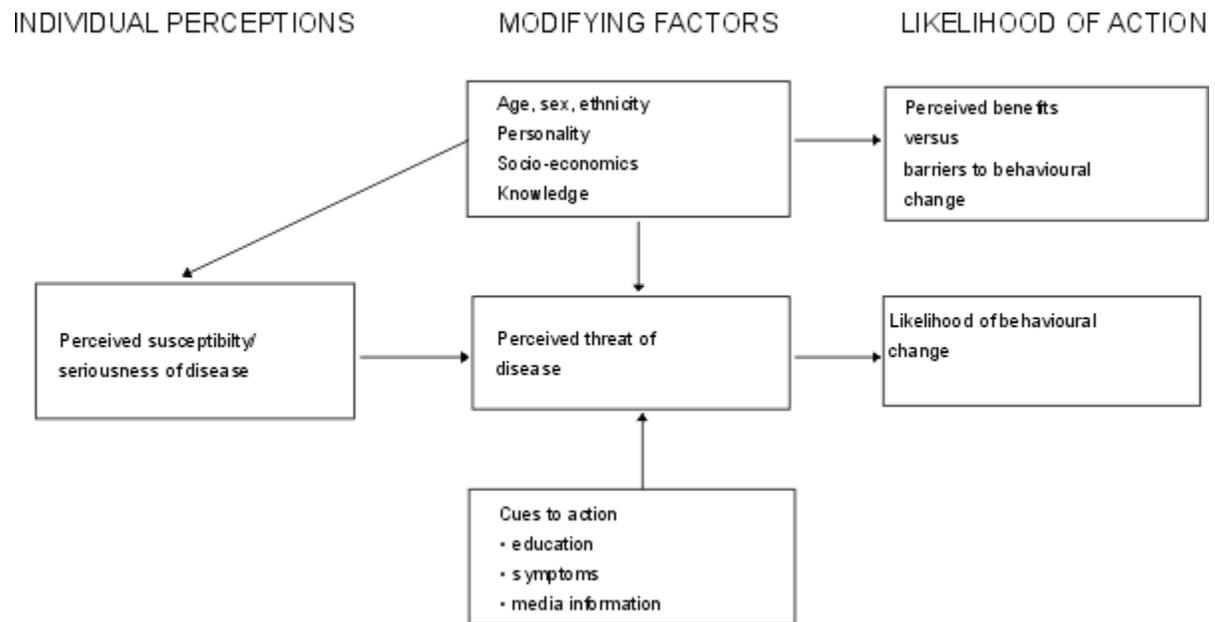


Figure 1: Theoretical framework

https://www.utwente.nl/cw/.../Health%20Communication/Health_Belief_Model/

2.7 CONCEPTUAL FRAMEWORK.

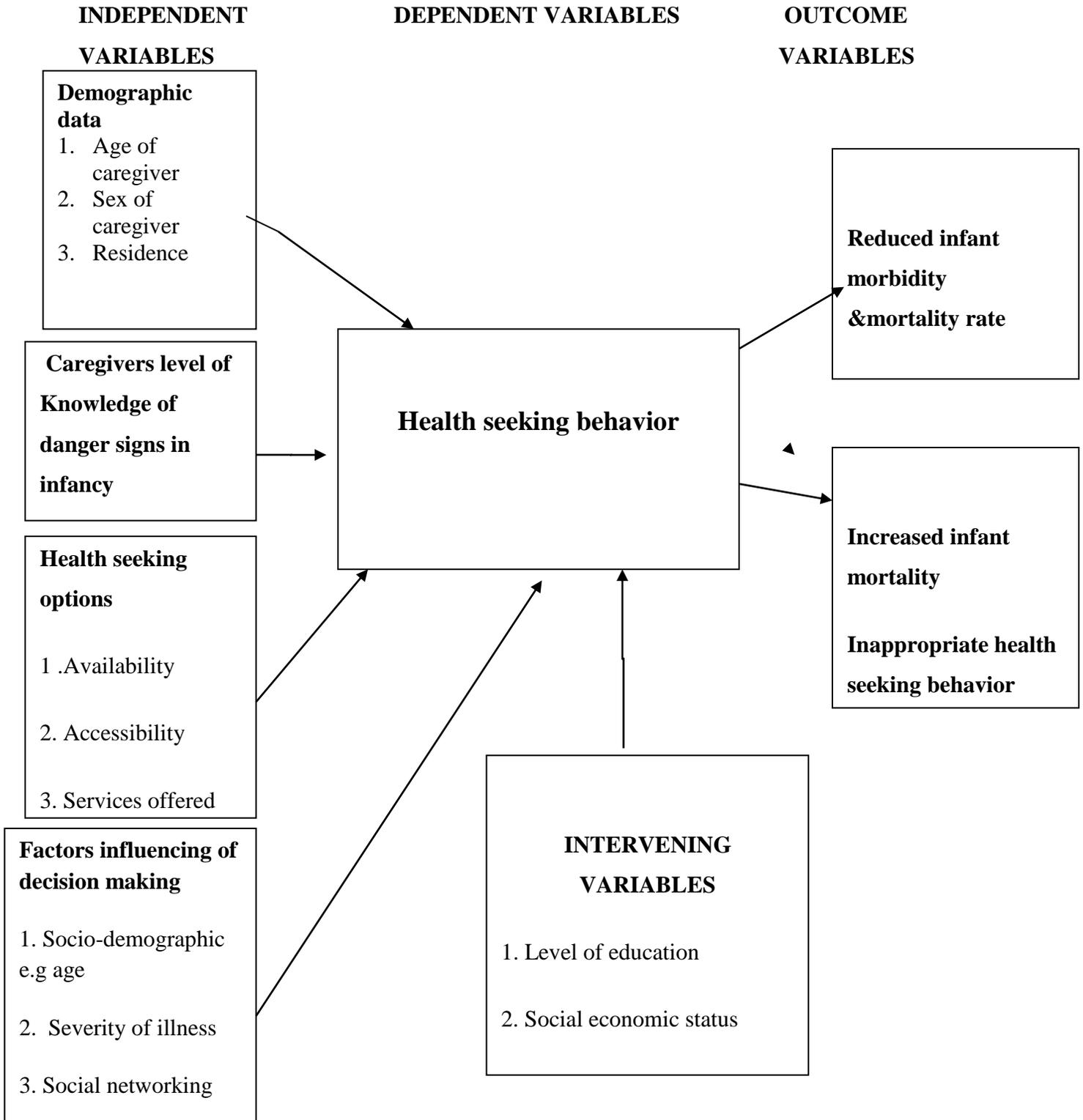


Figure 2: Conceptual framework

CHAPTER THREE: MATERIALS AND METHODS

3.1 STUDY DESIGN

Descriptive cross-sectional study design whereby mixed methods (qualitative and quantitative) was used.

3.2 STUDY AREA

The study was conducted in Kenyatta National Hospital (K.N.H) pediatrics wards. This is a major national referral hospital located in Kenya's Capital city 1.5kilometers from the central business district, in upper-hill area. It is located along hospital road, off-Ngong' road. The hospital occupies about 5hectares of land. It has 50 inpatient wards and a total bed capacity of 2000. The paediatric department has eight inpatient wards where general medical patients, orthopedic, oncology and surgical paediatric patients are admitted. The paediatric bed capacity is 256 and bed occupancy of not less than 150%

3.3 STUDY POPULATION

The study targeted caregivers of infants admitted with acute childhood illnesses at Kenyatta National Hospital pediatric wards.

3.4 INCLUSION CRITERIA

- Caregivers of infants admitted with acute childhood illnesses at K.N.H paediatric wards whose caregivers consented to participate in the study.
- Caregivers who consented to participate in focused group discussions

3.5 EXCLUSION CRITERIA

- Caregivers who didn't consent to participate in the study.
- Caregivers of infants who were severely sick.

3.6 SAMPLE SIZE CALCULATION

The sample size was determined using the formula by Fisher's *et al* (1998)

$$n = \frac{Z^2 p (1 - p)}{e^2}$$

Whereby,

n=indicates desired samples size (if the target population is greater than 10,000)

z = indicates the value for corresponding confidence level (i.e. 1.96 for a 95% confidence interval)

p= estimated value for the proportion of the target population that have the conditions of interest to the researcher (p=the most conservative estimate of the population, there being no documented incidence of acute childhood illnesses, 50% is used).

e=the level of statistical significance set which is 5% with a confidence interval of 95%

$$n = \frac{1.96^2 \times 0.5 (1 - 0.5)}{0.05^2} = \frac{(1.96 \times 1.96) \times (0.5)(0.5)}{0.05^2} = \frac{3.8416 \times 0.25}{0.0025} = \frac{0.9604}{0.0025}$$

$$n=384.16$$

The sample size was 385 study participants.

The study population was less than 10,000 therefore the Fisher's formula(1998) was used to calculate the finite study sample size and it was as follows:

$$n_f = \frac{n}{1 + (n/N)}$$

$$1 + (n/N)$$

Where

n_f = desired sample size (when the population is less than 10,000)

n = desired sample size (when population is greater than 10 000)

N = estimated size of the population in the study area (number of infants admitted with acute childhood illnesses to K.N.H paediatric wards per month is about 195)

$$n_f = 385$$

$$1 + (385 / 195) = 385 / 2.974 = 129.5 \text{ Respondents}$$

Sample size was 130 respondents

Proportionate allocation of specific acute childhood illnesses was done using formula $\{n_1/N\}n_f$

Where

n_1 = the total number of infants admitted with the specific acute childhood illness

N = the total number of infants admitted with acute childhood illnesses

n_f = desired sample size

It is as follows;

PNEUMONIA	Approx admissions =100 per month
	$100/195 \times 130 = 66.6$
	67 Respondents

DIARRHEA	Approx admissions = 25 per month
	$25/195 \times 130 = 16.6$
	17 Respondents

MALARIA	Approx admissions = 20 per month
	$20/195 \times 130 = 13.3$
	13 Respondents

MENINGITIS	Approx admission = 49
	$49/195 \times 130 = 32.6$
	33 Respondents

Total Sample size was 130 study respondents.

3.7 STUDY INSTRUMENTS

The researcher used semi-structured researcher administered questionnaire (Appendix 4) to collect data from the caregivers.

Desk review of patient's file was done to get information on the common acute childhood illnesses among infants admitted at KNH.

An interview guide (Appendix 4b) was used to guide focused group discussions.

3.8 TRAINING OF RESEARCH ASSISTANTS

One research assistant who is a registered BscN nurse was trained on data collection process.

3.9 PRETESTING OF STUDY INSTRUMENTS

The study instrument was pretested in Mbagathi Hospital in Nairobi. Mbagathi hospital is a public hospital just as K.N.H and serves a population with similar characteristics to those in K.N.H. Mbagathi Hospital is a key hospital that refers patients with acute childhood illnesses to K.N.H. It has a paediatric wing where children are admitted. The pretesting used 10% (13 respondents) of the study sample size.

3.10 SAMPLING PROCEDURE

Consecutive sampling method was used to get the study participants. Admission book was obtained so as to identify the infants admitted with acute childhood illnesses in each ward (3A, 3B, 3C and 3D). These wards were selected purposively. Infants meeting the inclusion criteria were consecutively sampled until the required sample size was achieved and thereafter a written consent was obtained from the caregivers.

Focused group discussions comprised of caregivers of infants admitted with acute childhood illnesses in the paediatric wards were conducted. Two FGDs were acquired from two paediatric wards selected by simple random method (3A & 3B). A list of infants admitted with acute childhood illnesses was obtained from each ward. Sampling was done by allowing the caregivers pick a folded numbered paper from a basket, written “YES” or ‘NO’. 32 folded papers were put in the basket, 16 written ‘YES’ and 16 written ‘NO’.. The ones who pick ‘YES’ were the ones recruited to participate in the focused group discussion. Those participants who had participated in the administered questionnaire were exempted in the sampling of FGD. Each FGD was comprised of 8 participants not included in the sample size.

3.11 DATA COLLECTION PROCEDURE

3.11a Recruitment process

Eligible participants were caregivers whose infants meet the inclusion criteria. They were recruited from the pediatric wards. Once recruited, the consenting procedure followed. FGD

participants were recruited purposively from the selected pediatric wards. The individuals were accessed prior to the set date for the FGD

3.11b Consenting procedure

The researcher produced evidence of approval to undertake the research to the ward in-charge and introduced self. Upon contact with the infant's caregiver, the researcher introduced self and issued the invitation to the study participant to participate in study. Study participants were given information that pertains to their participation (Appendix 3a) in the study in-order to make an informed consent (Appendix 3c). The FGD participants were given information on the study title, objectives and benefits. Once they accepted to participate, they were requested to sign a consent form (Appendix 3e).

3.11c Interview procedure (data collection)

Each prospective participant was approached and explained about the study (Appendix 3a). Once she/he consented to participate (Appendix 3c), he/she was taken to a room within the ward where face to face interview was conducted. The researcher asked questions as per questionnaire (Appendix 4a) and then recorded responses on the respective sections of the questionnaire.

3.11d Focused Group Discussion Procedures

FDGs were conducted in two wards (3A & 3B). This took place during afternoons, when many nursing procedures and doctors rounds had been completed. They were held in the doctor's room to avoid interruption of services in the ward. Caregivers from the same ward (3A & 3B) grouped in the same FGD. There was also a moderator to control the discussion and a recorder who was doing the recording. Once the caregivers had settled in the room, introductions were done followed by the consenting process (Appendix 3e or 3f). Then once signing had been done, the discussion started by the moderator using the focused group guide (Appendix 4b). Guided focus group discussions were audio-recorded using digital gadgets and also field notes were taken. This took about 45 minutes. Caregivers of very sick children were not included so that they could attend to their infants.

3.12 DATA MANAGEMENT AND ANALYSIS

The researcher collected data by interviewing the caregivers to infants admitted with acute childhood illnesses. At the end of each day of data collection, questionnaires were checked for completeness. Each questionnaire was entered against its unique identifier number into a Microsoft Excel program where data cleaning was done. Missing values, extreme values and inconsistency were identified and corrected. Incomplete and wrongly answered questionnaire were omitted during the data entry process. After cleaning, the data was then be exported to software for analysis using statistical package for social sciences (SPSS) version 20. Categorical data which include gender, marital status, and education level was analyzed by use of proportions Transcribed qualitative data was categorized into themes and analyzed manually. The data was stored in computer hard drives and back-ups in flash-discs and personal email accounts. Filled questionnaires were kept in lockable drawers whose access is limited to the researcher. The analyzed data was presented in tables, pie charts and graphs. Inferential data was analyzed using chi-square and odds ratio.

3.13 ETHICAL CONSIDERATIONS

Ethical approval to conduct the study was sought from the Kenyatta National Hospital and University of Nairobi Ethics and Research Committee (KNH/UON-ERC) and the Kenyatta National Hospital Administration. A written informed consent (appendix 1c) was obtained from the caregivers of infants admitted in KNH pediatric wards with acute childhood illnesses. Clear explanation about the study was given to the caregiver prior to consent to participate in study. Questionnaires had code numbers to ensure anonymity of study respondents. FDGs were conducted in two wards (3A & 3B). This took place in the afternoon, inside doctors room, when doctors rounds had been done and due ward nursing procedures had been completed to avoid interruption of services in the ward. There was also a moderator to control the discussion and a recorder who was doing the recording. Once the caregivers had settled in the room, introductions were done followed by the consenting process. Then once signing had been done, the discussion started. Guided focus group discussions were audio-recorded using digital gadgets.

Participation was purely on voluntary basis. Caregivers whose infants were very ill were excluded from the study until their babies were stable. Information gathered was only shared to relevant parties for implementation.

3.14 STUDY LIMITATIONS

The study was conducted in Kenyatta national Hospital whose patient population comes from Nairobi and the environs. The study sample therefore might proportionate representation of the Country`s population thus generalization may be limited to cosmopolitan setting. One point data collection (in a descriptive study may yield incomprehensive information should the caregiver have forgotten some previous information). Health professionals were assigned to be the Research assistants. Therefore, some mothers possibly answered questions mindful of preferable opinions for them.

3.15 DISSEMINATION PLAN

Reports of the research findings were written and presented to the management of KNH. The results were published in relevant journals; a copy also issued to the UON College of Health Sciences Medical library.

CHAPTER FOUR : RESULTS

4.1 Introduction

This chapter presents the findings of the study. The findings are presented and interpreted based on the objectives of the study. A total of 130 caregivers of infants admitted with acute childhood illnesses at Kenyatta National Hospital Pediatric wards participated in the study. The results are presented in tables and graphs form.

4.2 Common acute childhood illnesses among infants admitted in Kenyatta National Hospital

A desk review was done to determine the common acute childhood illness among infants admitted in the month of July 2017. A total 392 infants were admitted, 187 with pneumonia, 37 with malaria, 99 with meningitis and 69 with diarrhea. Out of these admissions, 43 infants died as a result of these illnesses.

4.3 Socio-demographic and socio-economic characteristics of caregivers of infants

Most of the respondents (53.8%) were between aged 21-30 years, came from urban settings and (63.1%), were married (73.8%) and were Christian followers (93.8%). Regarding level of education, the highest proportion 57(43.8%) attained primary school followed by secondary school 43(33.1%) while there were only 30 (23.1%) with tertiary level. Half of the caregivers were unemployed 65(50.0%) and about a quarter were self-employed 36(27.7%). However, informal employment and students were only 24(18.5%) and 5(3.8%) respectively. Caregivers were also asked about the gross household income per month in Kenyan shillings and majority 83(63.8%) indicated less than 10,000 and 38(29.2%) whose gross income was between 10,000-20,000. Most of the caregivers 107(82.3%) had one to three children (**Table 1**)

Table 1: Socio-demographic and socio-economic characteristics of the respondents

Variables	Frequency (n=130)	Percent (%)
Age in years		
11-20	11	8.5
21-30	70	53.8
31-40	46	35.4
41-50	2	1.5
51 and above	1	0.8
Residence		
Rural	48	36.9
Urban	82	63.1
Marital status		
Single	29	22.3
Married	96	73.8
Separated/widowed	5	3.8
Religion		
Christian	122	93.8
Muslim	7	5.4
Pagan	1	0.8
Level of education		
Primary	57	43.8
Secondary	43	33.1
College	30	23.1
Occupation		
Self-employed	36	27.7
In formal employment	24	18.5
Not-employed	65	50
Student	5	3.8
Gross household income per month in Kenyan shillings		
<10,000	83	63.8
10,000-20,000	38	29.2
20,000-50,000	8	6.2
>50,000	1	0.8
Number of children		
1 to 3	107	82.3
4 to 6	18	13.8
7 to 9	2	1.5
10 or more	3	2.3

4.3.1: Relationship between Socio-demographic, socio-economic characteristics of caregivers and residence

Those married caregivers were more in urban area (82.9%) while single respondents were more in rural areas (37.5%) hence statistical significant association between marital status and residence ($p=0.006$). The proportion of respondents who had attended college were more in an urban setting (34.1%) compared to those dwelling in rural areas (4.2%) showing significant relationship between level of education and residence ($p=0.000$)

Caregivers with less than 10,000 income per month were more in rural areas (79.2%) than those in urban settings (54.9%). Gross household income per month in Kenyan shillings was also significantly associated with residence of caregivers ($p=0.007$). However, there was no significant association observed between the other variables. **(Table 2)**

Table 2: Relationship between Socio-demographic, socio-economic characteristics and residence

Variables	<u>Rural</u>		<u>Urban</u>		χ^2 value	df	*p value
	n	%	n	%			
Age in years							
11-20	5	10.4	6	7.3	0.45	2.0	0.799
21-30	26	54.2	44	53.7			
31 and above	17	35.4	32	39.0			
Marital status							
Single	18	37.5	11	13.4	10.4	2.0	0.006
Married	28	58.3	68	82.9			
Separated/widowed	2	4.2	3	3.7			
Religion							
Christian	46	97.9	76	92.7	1.6	1.0	0.211
Muslim	1	2.1	6	7.3			
Level of education							
Primary	26	54.2	31	37.8	15.3	2.0	0.000
Secondary	20	41.7	23	28.0			
College	2	4.2	28	34.1			
Number of children							
1 to 3	37	77.1	70	85.4	3.5	2	0.169
4 to 6	10	20.8	8	9.8			
7 and above	1	2.10	4	4.9			
Occupation							
Self-employed	12	25.0	24	29.3	4.5	3	0.209
In formal employment	5	10.4	19	23.2			
Not-employed	29	60.4	36	43.9			
Student	2	4.2	3	3.7			
Gross household income per month in Kenyan shillings							
<10,000	38	79.2	45	54.9	9.9	2	0.007
10,000-20,000	10	20.8	28	34.1			
>20,000	0	0.0	9	11.0			

χ^2 = Chi square; df = degree of freedom; * Significant at p<0.05 bolded

4.3.2: Prevalence of immediate health seeking behaviour

The prevalence of immediate health seeking behaviour was found to be 53.8% as indicated in Figure 3.

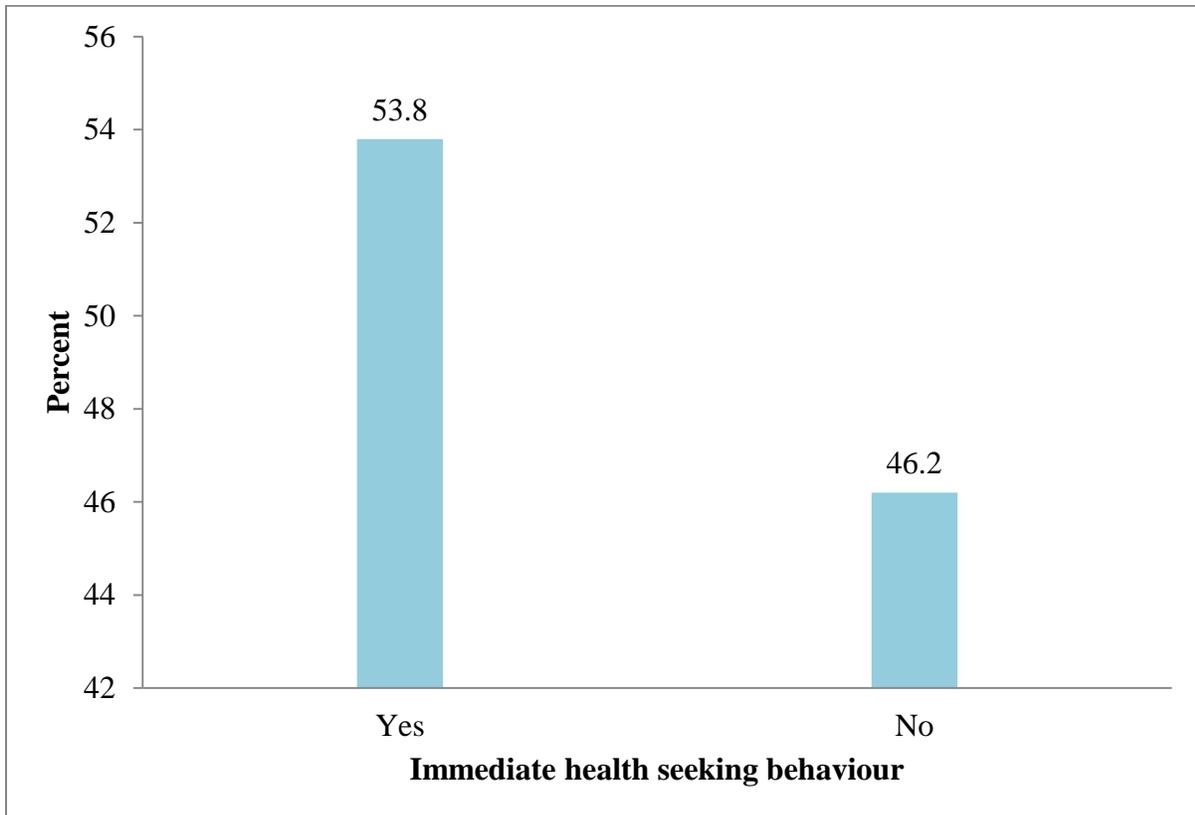


Figure 3: Proportion of immediate health seeking behaviour

4.3.3 Association between socio-demographic characteristics and immediate health seeking behaviour

Caregivers who resided in urban settings had significantly higher proportion of immediate health seeking behaviour (61.0%) [OR=2.19; 95%CI=1.06-4.52; P=0.034] compared to those who resided in rural areas (41.7%).

The proportion of immediate health seeking behaviour was more among married caregivers (61.5%) than single caregivers (31.0%) [OR=3.54; 95%CI=1.46-8.61; $p=0.005$].

Caregivers with tertiary level of education (66.7%)[OR=2.96; 95%CI=1.17-7.46;P=0.022] and secondary school (62.8%) [OR=2.50; 95%CI=1.11-5.63;P=0.028] had significantly increased proportion of immediate health seeking behaviour compared to those with primary level of education(40.4%) (**Table 3**)

Table 3: Association between socio-demographic characteristics and immediate health seeking behavior.

Variables	Immediate health seeking behavior				OR	95% CI		p value*
	Yes		No			Lower	Upper	
	n	%	n	%				
Age in years								
20-Nov	6	54.5	5	45.5	1.25	0.34	4.64	0.739
21-30	40	57.1	30	42.9	1.39	0.67	2.89	0.380
31 and above	24	49.0	25	51.0	Ref			
Residence								
Rural	20	41.7	28	58.3	Ref			
Urban	50	61.0	32	39.0	2.19	1.06	4.52	0.034
Marital status								
Single	9	31.0	20	69.0	Ref			
Married	59	61.5	37	38.5	3.54	1.46	8.61	0.005
Separated/widowed	2	40.0	3	60.0	1.48	0.21	10.46	0.693
Religion								
Christian	66	54.1	56	45.9	1.57	0.34	7.32	0.562
Muslim	3	42.9	4	57.1	Ref			
Level of education								
Primary	23	40.4	34	59.6	Ref			
Secondary	27	62.8	16	37.2	2.50	1.11	5.63	0.028
College	20	66.7	10	33.3	2.96	1.17	7.46	0.022
Number of children								
1 to 3	58	54.2	49	45.8	Ref			
4 to 6	9	50.0	9	50.0	0.85	0.31	2.30	0.741
7 and above	3	60.0	2	40.0	1.27	0.20	7.89	0.800
*Significant at p<0.05 bolded; OR= Odds ratio; CI= Confidence Interval; Ref = Reference								

4.3.4: Association between socio-economic characteristics and immediate health seeking behaviour

There was no significant association seen between socio-economic characteristics and immediate health seeking behaviour.

Table 4: Association between socio-economic characteristics and immediate health seeking behaviour

Variables	Immediate health seeking		No immediate health seeking		OR	95% CI		p value*
	n	%	n	%		Lower	Upper	
Occupation								
Self-employed	21	58.3	15	41.70	1.48	0.66	3.34	0.342
In formal employment	15	62.5	9	37.5	1.77	0.68	4.56	0.241
Not-employed/student	34	48.6	36	51.4	Ref			
Gross household income per month in Kenyan shillings								
<10,000	41	49.4	42	50.6	Ref			
10,000-20,000	24	63.2	14	36.8	1.76	0.80	3.858	0.161
>20,000	5	55.6	4	44.4	1.28	0.32	5.107	0.726

Abbreviations: OR= Odds ratio; CI= Confidence Interval; Ref = Reference

4.4: Knowledge of caregivers on danger signs in infants

About three quarter of the caregivers 95(73.1%) were familiar with danger signs in infancy while 35(26.9%) reported not familiar. Fever, vomiting and diarrhea were the common danger signs (60%) mentioned by the respondents. When the caregivers asked from where the danger signs in infancy were learned, majority indicated from well baby clinic 39(41.1%) (**Table 5**)

Table 5: Knowledge of caregivers on danger signs in infants

Variables	Frequency (n=130)	Percent (%)
Whether familiar with danger signs in infancy		
Yes	95	73.1
No	35	26.9
*Danger signs mentioned (n=95)		
Fever, vomiting, diarrhea	78	60.0
Fast/difficulty of breathing, coughing, pneumonia	35	26.9
Lethargic, low appetite	25	19.2
Malaria, meningitis, convulsion, etc	30	23.1
How danger signs in infancy learned (n=95)		
Child clinic	39	41.1
Ante natal clinic	31	32.6
Neighbors	10	10.5
Mass media (e.g. TV, Radio)	5	5.3
Others (personal knowledge)	10	10.5
*Multiple response		

This was corroborated by qualitative data;

Participant 1 in the first FDG “*My child had fever*”

Participant 2 in the first FDG “*Convulsions*”

Participant 1 in the second FDG “*The first sign i saw was that the eyes turned white then had fever*”

4.4.1: Relationship between Socio-demographic, socio-economic characteristics and knowledge of danger signs

There was increased proportion of knowledge on danger signs among caregivers residing in urban settings 66(80.5%) than to those who were living in rural areas 29(60.4%) indicating significant association ($p=0.013$). However, there was no significant association observed between the other variables (**Table 6**).

Table 6: Relationship between Socio-demographic, socio-economic characteristics and knowledge of danger signs

Variables	Familiar with danger signs		Not familiar with danger signs		χ^2 value	df	P value
	n	%	n	%			
Age in years							
20-Nov	6	54.5	5	45.5	2.12	2	0.347
21-30	52	74.3	18	25.7			
31 and above	37	75.5	12	24.5			
Residence							
Rural	29	60.4	19	39.6	6.2	1	0.013
Urban	66	80.5	16	19.5			
Marital status							
Single	17	58.6	12	41.4	3.98	2	0.136
Married	74	77.1	22	22.9			
Separated/widowed	4	80.0	1	20.0			
Religion							
Christian	89	73.0	33	27.0	0.01	1	0.930
Muslim	5	71.4	2	28.6%			
Level of education							
Primary	37	64.9	20	35.1	3.83	2	0.147
Secondary	33	76.7	10	23.3			
College	25	83.3	5	16.7			
Number of children							
1 to 3	80	74.8	27	25.2	1.59	2	0.452
4 to 6	11	61.1	7	38.9			
7 and above	4	80.0	1	20.0			
Occupation							
Self-employed	29	80.6	7	19.4	1.42	2	0.491
In formal employment	17	70.8	7	29.2			
Not-employed/student	49	70.0	21	30.0			
Gross household income per month in Kenyan shillings							
<10,000	60	72.3	23	27.7	0.13	2	0.935
10,000-20,000	28	73.7	10	26.3			
>20,000	7	77.8	2	22.2			

χ^2 = Chi square; df = degree of freedom; * Significant at p<0.05 bolded

4.4.2: Association between Knowledge on danger signs and immediate health seeking behaviour

Caregivers who were familiar with danger signs in infancy had significantly higher proportion of immediate health seeking behaviour (65.3%) [OR=6.34; 95%CI=2.59-15.52; P=0.000] compared to those who were not aware of the danger signs during infancy (22.9%).(Table 7).

Table 7: Association between Knowledge on danger signs and immediate health seeking behaviour

Variables	Immediate health seeking		No immediate health seeking		OR	95% CI		p value*
	n	%	n	%		Lower	Upper	
Whether familiar with danger signs in infancy								
Yes	62	65.3	33	34.7	6.34	2.59	15.52	0.000
No	8	22.9	27	77.1	Ref			

* Significant at p<0.05 bolded; OR= Odds ratio; CI= Confidence Interval; Ref = Reference

4.5: Health seeking options

Almost all respondents 127(97.7%) indicated that they had health facility near where they live and health center was the main 57(44.9%) health facility mentioned. Majority 82(64.6%) of the caregivers indicated the distance from the health facility and home was less than 1Km. The respondents were requested to rate the services offered in health facility and 48 (36.9%) rated satisfactory, 46(35.4%) rated excellent and 36(27.7%) rated unsatisfactory (Table 8).

Table 8: Health Seeking Options

Variables	Frequency (n=130)	Percent (%)
Any health facility near where you live		
Yes	127	97.7
No	3	2.3
Type of health facility near where you live (n=127)		
Dispensary	29	22.8
Health center	57	44.9
Sub-county Hospital	12	9.4
County Referral Hospital	2	1.6
National Referral Hospital	1	0.8
Private clinic	26	20.5
Distance of the nearest health facility (n=127)		
Less than 1km	82	64.6
2-10kms	43	33.9
11-20kms	1	0.8
More than 20kms	1	0.8
Rating the services offered in health facility		
Excellent	46	35.4
Satisfactory	48	36.9
Not satisfactory	36	27.7

4.5.1: Reasons for rating the services as unsatisfactory

The reasons why the respondents rated the services delivered in the health facilities as unsatisfactory were very slow services as the main reason mentioned (33.3%), lack of supplies, medicines, equipment and laboratory (25.0%) and no proper assessment of children (22.2%).(Figure 4)

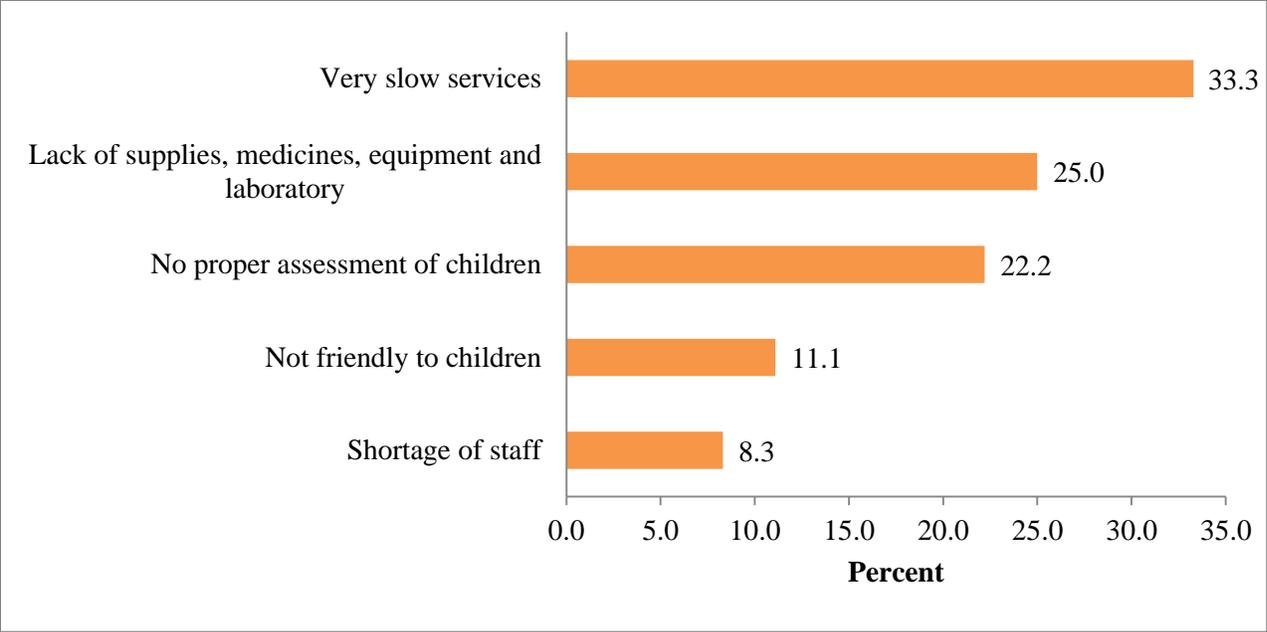


Figure 4 : Reasons for rating the services as unsatisfactory

4.6: Health seeking behaviors

About half 70(53.8%) of the caregivers indicated that they would take the child to the hospital immediately once danger signs identified. However, considerable percentage reported they either observe to see if it would worsen 29(22.3%) or bought medication from the chemist 29(22.3%). Most of the respondents 50(38.5%) indicated they get advice first from nurses when they identify a danger sign.

More than half 74(56.9%) of the respondents took the child to the hospital immediately after noticing danger signs. The main reason among those who did not immediately take the child to hospital was that they thought it was mild and would improve 30(53.6%)(**Table 9**)

Table 9: Health seeking behaviors

Variables	Frequency (n=130)	Percent (%)
First action to be taken when danger signs in the child are identified		
Observed to see if it will worsen	29	22.3
Used home remedies	2	1.5
Bought medication from the chemist	29	22.3
Took the child to the hospital immediately	70	53.8
From whom do you get advice first when you identify a danger sign in your child		
Traditional healers	3	2.3
Neighbors	25	19.2
Grandparents of the child	8	6.2
In-laws (mother- in- law, father- in- law)	12	9.2
My husband	13	10
Doctor	19	14.6
Nurse	50	38.5
Reasons for choice of advice		
They know more and are professional	56	60.2
They have children too	9	9.7
They are closer or we live together	21	22.6
Culture and religion	7	7.5
Missing	37	
Duration to take the child to the Hospital after noticing danger signs		
Immediately	74	56.9
1-2 days	35	26.9
More than 2 days	21	16.2
Reasons for not immediately taken to hospital		
It was mild and thought it would improve	30	53.6
Thought it was teething	8	14.3
Gave calpol, home remedies or medication and thought the baby would improve	10	17.9
Money problem	3	5.4
Others	5	8.9
Not applicable	74	

This was corroborated by the qualitative data;

Participant 4 in the second FDG “*when my child had fever I removed him clothes and rushed him to hospital*”

Participant 7 in the second FDG “*you to the chemist explain your problems and then you buy the medication*”

Participant 8 in the second FDG “*give painkiller first and observe the condition*”

4.7 Relationship of accessibility and satisfaction with immediate health seeking behaviour

The proportion of immediate health seeking behaviour was more among caregivers staying less than one kilometre from health facilities (61.0%) [OR=2.14; 95%CI=1.02-4.48; $p=0.042$] than those staying 2Kms or more (31.0%). Caregivers who rated services offered in health facility as excellent (65.2%) [OR=3.75; 95%CI=1.49-9.42; $P=0.005$] and as satisfactory (58.3%) [OR=2.80; 95%CI=1.14-6.89; $P=0.025$] had significantly increased proportion of immediate health seeking behaviour compared to those who were not satisfied (33.3%) (**Table 10**)

Table 10: Relationship of accessibility and satisfaction with immediate health seeking behaviour

Variables	Immediate health seeking		No immediate health seeking		OR	95% CI		p value *
	n	%	n	%		Lower	Upper	
Any health facility near where you live								
Yes	70	55.1	57	44.9	Ref			
No	0	0.0	3	100.0	UD	UD	UD	0.096
Type of health facility near where you live								
Dispensary	16	55.2	13	44.8	1.44	0.50	4.16	0.505
Health center	34	59.6	23	40.4	1.73	0.68	4.39	0.253
Hospital (Sub-county, county and national referral)	8	53.3	7	46.7	1.33	0.37	4.77	0.658
Private clinic	12	46.2	14	53.8	Ref			
Distance of the nearest health facility								
Less than 1km	50	61.0	32	39.0	2.14	1.02	4.48	0.042
More than 2kms	19	42.2	26	57.8	Ref			
Rating the services offered in health facility								
Excellent	30	65.2	16	34.8	3.75	1.49	9.42	0.005
Satisfactory	28	58.3	20	41.7	2.80	1.14	6.89	0.025
Not satisfactory	12	33.3	24	66.7	Ref			

*Significant at p<0.05 bolded; OR= Odds ratio; CI= Confidence Interval; Ref = Reference; UD= Undefined

4.8 Reasons that would hinder from seeking health care for the child outside home

Most of the caregivers (84.4%) indicated that lack of finance/money was the main reason that would hinder from seeking health care for the child outside home as demonstrated in **Figure 5**.

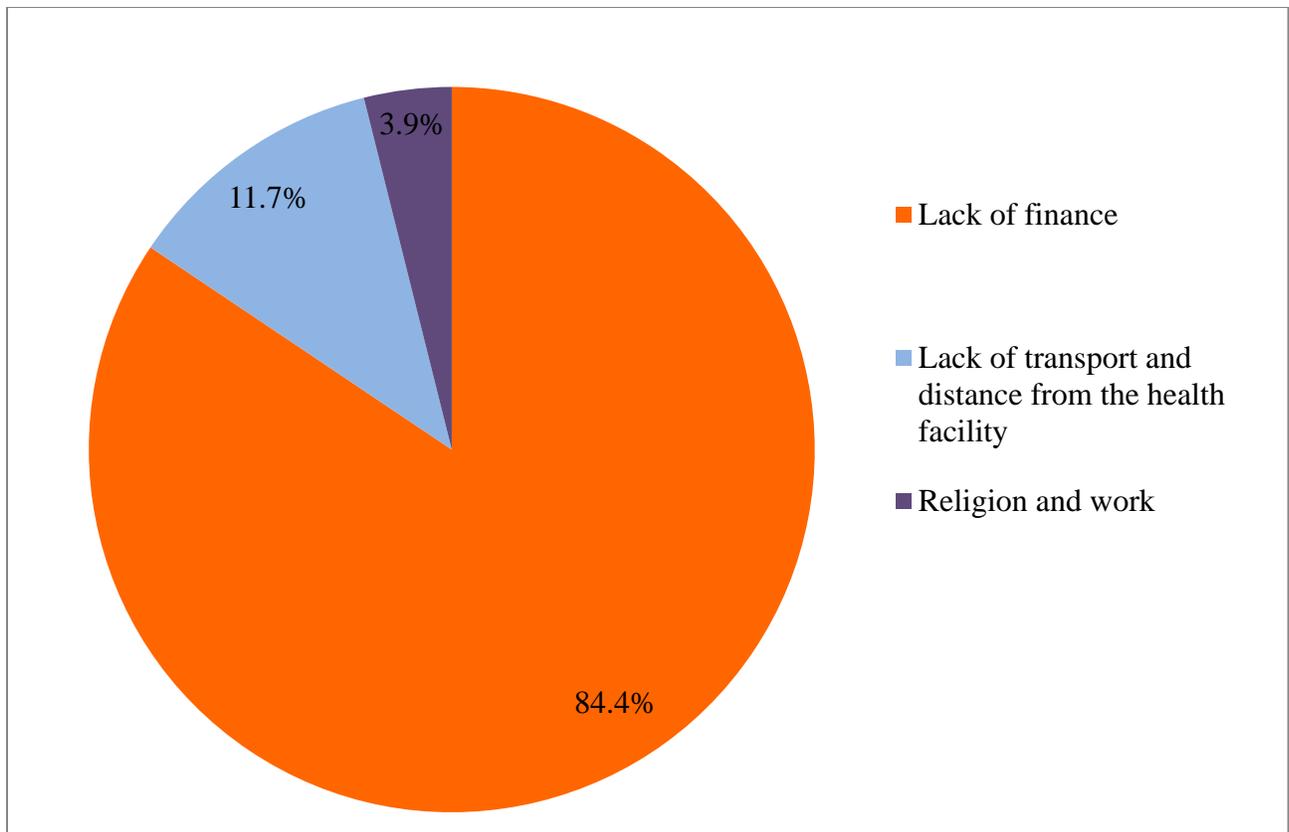


Figure 5: Reasons that would hinder from seeking health care for the child outside home

4.9: Determinant of immediate health seeking behaviour among caregivers of infants admitted with acute childhood illnesses

Multiple logistic regression analysis was performed in order to identify factors independently associated with immediate health seeking behaviour among caregivers of infants. All factors found to be significantly associated with immediate health seeking behaviour at bivariate analysis ($p < 0.05$) were considered together in a multivariable analysis. Six (6) factors were considered in the analysis and upon fitting these factors by specifying 'backward LR' method with removal at $P < 0.05$, three (3) factors remained in the final analysis or reduced model (Table 10).

Married caregivers were 3.3 times more likely to have immediate health seeking behaviour [AOR=3.34; 95%CI=1.22-9.18; $p=0.019$] than those who were single.

Caregivers with tertiary level of education were 4 times more likely [OR=4.20; 95%CI=1.43-12.38;P=0.009] and secondary school were 2.8 times [AOR=2.80; 95%CI=1.11-57.07;P=0.030] to have immediate health seeking behaviour compared to those with primary level of education.

Caregivers who were familiar with danger signs in infancy were 6.3 times more likely to have immediate health seeking behaviour [AOR=6.28; 95%CI=2.34-16.84; P=0.000] compared to those who were not aware of the danger sings during infancy.

Table 11: Determinant of immediate health seeking behavior among caregivers of infants

Variables	AOR	95% CI		p value*
		Lower	Upper	
Full model				
Residence				
Rural	Ref			
Urban	1.11	0.43	2.91	0.829
Marital status				
Single	Ref			
Married	3.33	1.10	10.06	0.033
Separated/widowed	1.31	0.15	11.68	0.810
Level of education				
Primary	Ref			
Secondary	2.66	1.02	6.89	0.044
College	3.53	1.09	11.37	0.035
Whether familiar with danger signs in infancy				
Yes	5.22	1.88	14.47	0.002
No	Ref			
Distance of the nearest health facility				
Less than 1km	1.95	0.80	4.76	0.140
More than 2kms	Ref			
Rating the services offered in health facility				
Excellent	1.93	0.65	5.74	0.234
Satisfactory	1.44	0.50	4.14	0.498
Not satisfactory	Ref			
Reduced model				
Marital status				
Single	Ref			
Married	3.34	1.22	9.18	0.019
Separated/widowed	1.35	0.15	11.79	0.788
Level of education				
Primary	Ref			
Secondary	2.80	1.11	7.07	0.030
College	4.20	1.43	12.38	0.009
Whether familiar with danger signs in infancy				
Yes	6.28	2.34	16.84	0.000
No	Ref			
AOR = Adjusted Odds Ratio; CI = Confidence interval; Ref = Reference; *Significant p value bolded				

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter includes of the discussion of the study findings, conclusion, and recommendations. A total of 130 caregivers of infants admitted with acute childhood illnesses at Kenyatta National Hospital Pediatric wards participated in the study. Univariate and bivariate analysis was done.

5.2 DISCUSSION

5.2.1 Sociodemographic characteristics

Majorities (53.8%) of the respondents were between the age group of 21-30 years, were from urban settings and were married. It was also observed that caregivers from urban setting were highly educated (34.1%). Regarding the association between socio-demographic characteristics and immediate health seeking behavior, caregivers residing in urban settings had significantly higher proportion of immediate health seeking behavior [$p=0.034$] compared to those who resided in rural areas. This difference could be attributed to educational backgrounds and probably proximity of the health facilities. People living in the urban areas tend to have more improved level of education, are more exposed to current trends in health and this can also be attributed to their increased chances of health seeking behavior.

Married caregivers were 3.3 times more likely to have immediate health seeking behavior [$p=0.019$] than those who were single. This may be attributed to the fact that married caregivers get financial and social support from their partners who also help them in decision making regarding health care seeking during illness.

5.2 .2 Knowledge of danger signs in infancy

One of the major strategies of IMCI to reduce the under-5 child mortality is education of the mother and/or caregiver on home care of the child during illness (WHO, 2015). In this context

knowledge of danger signs in infancy was assessed because this determines the likelihood of caregivers seeking health care.

Majority (73.1%) of the caregivers in this study were familiar with danger signs. About 60% mentioned fever, vomiting and diarrhea as the common danger signs. However, some mothers mentioned that ', 'pneumonia', 'malaria' as the danger signs though they were not aware of the specific danger signs. This is different with a study conducted in Nigeria that indicated that majority (95%) of the mothers had knowledge of only one danger sign and that is fever (Ekwochi *et.al* 2015). This indicate that respondents knowledge of WHO danger signs is poor and this may lead to delay in seeking treatment and increase the chance of mortality.

This study also depicts that caregivers who were familiar with danger signs in infancy were 6.3 times more likely to have immediate health seeking behavior compared to those who were not aware of the danger sings during infancy. These findings are supported with a study on a programme implemented to create care taker of infants' awareness about danger signs through group and one to one health education sessions in Lusaka, Zambia that led to increased care seeking for children with danger signs from 56% at baseline to 65.8% three years later upon follow up.(Yasuyuki, *et.al* 2009).All these studies indeed agree that caregivers recognition of a danger sign will enable them to respond quickly, enhance prompt treatment and thus improve chances of child survival. This indicates that there is need to educate caretakers on all danger signs in infancy and the need for prompt action inorder to change behavior and increase care seeking. This can be achieved by intensive community based IMCI programmes to reinforce on recognition of danger signs and appropriate action.

5.2.3 Health seeking options

About half (53.8%) of the respondents indicated that they will take their child to hospital immediately once they identified a danger sign. This study also indicates that almost all respondents (97.7%) indicated that they had a health facility near where they live and health center as the main (44.9%) health facility mentioned. The study also depicts that some of the reasons why the caregivers rated the services delivered in the health facilities as unsatisfactory

are very slow services, poor laboratory services, lack of supplies; medicine, equipments and no proper assessment of children. Slow services being mentioned by the majority of the respondents (33.3%) could be attributed to the fact that there is shortage of staffs (8.3%) and hence also no proper assessment of the infants. All these factors are likely to increase the risk of developing complications from acute childhood illnesses and infant mortality. However caregivers who rated services offered in health facility as excellent had significantly increased proportion of immediate health seeking behavior compared to those who were not satisfied. This indicates that immediate health seeking during acute childhood illnesses can be influenced by the satisfaction of services offered at health facilities. Health care providers and stakeholders therefore have a major role in influencing the health seeking behavior by ensuring medical supplies are available, proper staffing, the turnaround time is minimized equip clinicians with proper skills in pediatric assessment and management.

5.2.4 Factors influencing decision making in health seeking behavior

5.2.4.1 Social demographic characteristics

Socio-demographic factors like level of education, distance from the health facility and economic status of the caregiver also influence health seeking behavior.

Several studies have reported a positive relationship between maternal education and care seeking behaviour which is in agreement with the present study. A study in Yemen reported that caregiver who has attained secondary education has more knowledge on common health conditions and how to deal with them and this increases the chance of appropriate health seeking behavior (Webair&Salim,2013).Similarly a study in Bangladesh showed that highly educated caregivers are better in understanding health information thus making them to be in a better position in seeking health care for their children(Ahmed *et.al*,2000).This is in line with this study as the results indicated that caregivers with tertiary level of education [P=0.022] and secondary school [P=0.028] had an increased proportion of immediate health seeking behavior compared to those with primary level of education. Among those with primary education, about half (59.6%)

did not have immediate health seeking behavior. A possible explanation to this finding is that high level of education increases the mother's knowledge about common illnesses and appropriate healthy practices since these aspects are mostly incorporated in the school curriculum. In addition, educated caregivers are more likely to be able to interpret, comprehend and thus appreciate health aspects better. They are also likely to understand health education messages offered in hospitals, mass media and through other ways more than the less-educated caregivers.

Accessibility and availability of the health care facility have also been found to determine the pattern of health seeking behavior. In this study immediate health seeking behavior was inversely associated with distance to health facility. Immediate health seeking behavior was more (61.0%) among caregivers staying less than one kilometer from health facilities than those staying 2Kms or more. These findings concur with a study by Kante *et.al*, (2015) in which children of caregivers who lived near the health facility were found more likely to receive treatment for the illnesses compared to those who lived far from the facility. Similarly, a survey done in Kenya by (KHHEUS, 2013), showed that there was a significant reduction in the utilization of healthcare services as the distance from a health facility increased. The findings of this study indicate that proximity to the health facility is also important in determining health-seeking behavior, the closer the health facility the higher the chance of immediate health seeking behavior. This indicates that increased distance from a health facility is likely to increase child mortality.

In this study there was no significant association seen between socio-economic characteristics and immediate health seeking behavior. In contrast, a study in Nigeria reported that low social economic status have been associated with poor health seeking behaviors and poor utilization of health care facilities (Ogunlesi *et.al*, 2005). However, most of the respondents (84.4%) mentioned lack of finance as the main hindrance in seeking healthcare outside their home. This is supported and well explained by the fact that majority (63.8%) earned less than 10,000 Kenya shillings per month. In addition about half (50.6%) of those respondents who earned an income of <10,000 had no immediate health seeking behavior during their infants ill health. This means poor economic status still has an influence on the respondents' health seeking behavior.

5.2.4.2 Severity of the illness

Severity of the illness determines the action to be taken by the caregiver. 43.1% of the respondents in this study reported that did not take their children to the hospital immediately after noticing danger signs. The main reason was that they thought the illness was mild and would improve. This closely agrees with another study in Asia where majority of the caretakers considered diarrhea as a mild illness therefore doesn't warrant a visit to care provider outside home (Nasrin *et.al.*, 2013). Similar study in Yemen by (Webair & Salim, 2013) found that caretakers sought health care when they perceived that the illness is severe and they didn't see the reason for seeking health care if the illnesses is mild or the illness was not for medical attention.

It is possible that most caregivers delay health care seeking when they perceive symptoms as mild symptoms and this causes delays in medical care hence the risk of mortality.

5.2.4.3 Social networking

Majority (38.5%) of the respondents reported that they get advice first from healthcare practitioners when they identify a danger sign as they believed the professionals are more knowledgeable. In contrast, Neill *et.al.*, in their study reported that some parents sought advice from their social network before consulting a HCP while the young parents and travelling family communities sought advice from their parents, or grandparents who lived with them or nearby (Neill *et al.*, 2000). This can imply that those who sought advice from HCP had knowledge of danger signs.

5.3 CONCLUSION

1. The common acute childhood illnesses among infants admitted at KNH were diarrhea, malaria, pneumonia and meningitis.

2. Knowledge of danger signs of infancy among the respondents have been shown to be low and this has shown a significant relationship with immediate health seeking behavior. Fever, vomiting and diarrhea were the common danger signs mentioned by majority of the caregivers.
3. Majority of the caregivers reported they had health facilities closer to where they live. Having the facility near and rating health services offered at those facilities as excellent and satisfactory significantly increased proportion of immediate health seeking behavior compared to those who were not satisfied. A slow service at the facilities was the main reason for the unsatisfied respondents.
4. Factors that influence decision making regarding health seeking behavior were caregiver's level of education, severity of illness, socioeconomic status and accessibility of health facility and they showed a significant relationship with health seeking behaviour. This study depicts caregivers with tertiary level of education and secondary school had an increased proportion of immediate health seeking behavior compared to those with primary level of education. Perception that the illness is mild and that it will improve has been shown to be the main cause of delay in health care seeking practices.

5.4 RECOMMENDATIONS

- To improve health seeking behaviors of caregivers, basic health care services should be strengthened at the community level through provision of supplies, medicines, equipment equip clinicians with necessary skills in pediatric assessment and minimizing the turn around time.
- Tailored health education strategies and programmes especially targeting the less educated on danger signs of infancy should be considered to enhance appropriate and prompt health care seeking practices.
- Frequent review and auditing on quality of services offered in our health facilities.
- Further studies on client flow analysis to assess the quality of services at the facilities

REFERENCES

Ahmed, S.M, Adams, AM, Chowdhury, M, Bhuiya A.(2000), Gender, socioeconomic development and health-seeking behaviour in Bangladesh. *Social Sci Med.*; 51:361–371.

Astale,T.&Chenault,M.(2015),Help-Seeking Behavior for Children with Acute Respiratory Infection in Ethiopia: Results from 2011 Ethiopia Demographic and Health Survey . *PLoS ONE* 10(11): e0142553. doi:10.1371/journal.pone.0142553

Awasthi S, Verma T, &Agarwal M. (2006), Danger signs of neonatal illness: perceptions of caregivers and health workers in northern India. *Bull World Health Org*; 84:819–26

Brouillette, A.K,&Brouillette R.T. (2008). "Mortality, Infant". *Encyclopedia of Infant and Early Childhood Development.Elsevier*. pp. 343–359.

Chandwani, H.& Pandor J. (2015),Healthcare-Seeking Behaviors of Mothers regarding their Children in a Tribal Community of Gujarat, India. *Electronic Physician.* ;7(1):990-997.

Cheepngeno,G.&Negussie,T.(2005) Determinants of health care seeking for childhood illnesses in Nairobi slums.*Tropical Medicine &International Health*:10(3);240-245

Child health in the community – “Community IMCI”: briefing package for facilitators [webpage on the internet] Geneva: World Health Organization; 2004. *Joint statement: management of pneumonia in community settings* Geneva/New York: WHO/UNICEF; 2004 (WHO/FCH/CAH/04.06).

Chuma, J., Gilson, L. and Molyneux, C., (2007). Treatment-seeking behaviour, cost burdens and coping strategies among rural and urban households in Coastal Kenya: an equity analysis. *Tropical Medicine & International Health*, 12(5), pp.673-686.

Glanz, K., Rimer, B.K. & Lewis, F.M. (2002). *Health Behavior and Health Education. Theory, Research and Practice*. San Francisco: Wiley & Sons.

Heuveline, P. & Goldman, N. (2000). A description of child illness and treatment behavior in Guatemala. *SocSci Med.* ;50:345–364.

<http://aphrc.org/integrated-community-case-management-of-childhood-illness-in-kenya-addressing-policy-and-implementation-barriers/>

[https://www.utwente.nl/cw/.../Health%20Communication/Health Belief Model/](https://www.utwente.nl/cw/.../Health%20Communication/Health%20Belief%20Model/)

Jones, G., Steketee, R.W, Black ,R.E, Bhutta, Z.A, Morris, S.,(2003): How many child deaths can we prevent this year? *The Lancet.*, 362 (9377): 65-71.

Kanté, A., Larsen, M ., *et.al*,(2015) ,Childhood illness prevalence and health seeking behavior patterns in rural Tanzania .*BMC Public Health*:15:951

Kenya Demographic Health Survey Report, 2015 [<https://www.knbs.or.ke/2015-kenya-demographic-and-health-survey-kdhs/>]

Kenya Household Health Expenditure and Utilisation Survey, 2013,

[<https://www.healthpolicyproject.com/index.cfm?id=publications&get=pubID>]

..

Liu, L., Cousens, S., *et al.*, (2012) ,Global, regional, and national causes of child mortality: an updated systematic analysis for 2010 with time trends since 2000,” *The Lancet.*;379(9832):2151–2161.

Mayfong,M. Visanou ,*H.et.al*,(2013) Respiratory illness healthcare-seeking behavior assessment in the Lao People’s Democratic Republic (Laos): *BMC Public Health.*; 13: 444

Millennium Development Goals Report 2012 [<http://unstats.un.org/unsd/mdg/Default.aspx>]

Musoke,,P,Boynton.,*C.*, *et.al*,(2014), Health seeking behaviour and challenges in utilising health facilities in Wakiso district, Uganda: *Africa Health Sciences* ; 14(4): 1046–1055.

Nasrin,D.,Wu,Y.,*et.al* (2013),Health care seeking for Childhood Diarrhea in Developing Countries: Evidence from Seven Sites in Africa and Asia: *American Journal of tropical medicine and hygiene*:89(1 Suppl): 3–12

Negussie.T,&Chepngeno.G,(2005), Determinants of health care seeking for childhood illnesses in Nairobi slums: *Tropical Medicine and International HealthJournal* : African Population and Health Research Center (APHRC);10(3): 240–243

Nigatu,S ,Worku,A. & Dadi,A.,(2015) Level of mother’s knowledge about neonatal danger signs and associated factors in North West of Ethiopia: a community based study. *BMC Research Notes*. 8:309.

Ogunlesi, T.,Okeniyi ,J.,*et.al*,(2005).The influence of maternal socio-economic status on the management of malaria in their children: implications for the ‘Roll Back Malaria’ Initiative. *Nig J Paediatr.*;32:40–46.

Olenja, J. ,(2003), Editorial Health seeking behaviour in context. *East African Med J*;80(2):61–62.

Omotosho O.(2010), Health-seeking behavior among the rural dwellers in Ekiti State, *Nigeria.Int. Multi-Disciplinary J*;4(2):125–138.

Shaikh, B.& Hatcher, J.,(2005),Health seeking behaviour and health service utilization in Pakistan: challenging the policy makers: *J Public Health (Oxf).*; 27(1):49-54.

Shankar, R.P Sreeramareddy, C.T., Sreekumaran, B.V., Subba, S.H., Joshi, H.S. and Ramachandran, U.,(2006). Care seeking behaviour for childhood illness-a questionnaire survey in western Nepal. *BMC International Health and Human Rights*, 6(1), p.1.

Sustainable Development Knowledge Platform".UN-DESA. Retrieved 23 April 2016

[<https://sustainabledevelopment.un.org/sdinaction/newsletter/april2016>]

UNICEF Levels and Trend in Child Mortality Report, September

2015[https://www.unicef.org/publications/files/Child_Mortality_Report_2015_Web_9_Sept_15.pdf]

Webair, H.H. & Salim, A.B., (2013). Factors affecting health seeking behavior for common childhood illnesses in Yemen. *Patient Preference & Adherence*; p1129-1138

WHO (2015) Integrated Management of Childhood Illnesses Module

5[http://www.who.int/maternal_child_adolescent/topics/child/imci/en/]

WHO (2004) Counsel the mother: management of childhood illnesses. Geneva.

APPENDICES

APPENDIX 1: STUDY TIME FRAME

Duration of study: Nine months (November 2016-August 2017)

Month Activity	November 2016- January 2017	February 2017	March-Mid March 2017	March- April 2017	May- June 2017	July 2017	August 2017
Research proposal writing and submission to supervisor							
Submission to E.R.C							
E.R.C recommendations acted upon							
Data collection, entry and data cleaning							
Data analysis							
Research report writing							
Discussion and presentation							

APPENDIX 2: STUDY BUDGET

Serial no	Item	Unit cost	Quantity	Total cost
1	Personnel			
	Research assistant	1000*1	30days	30,000
2	Supplies and equipment			
	Pens	20	10	200
	Flash-disk	1500	2	3,000
	Printing paper	500	4	2,000
	Printing charges	1000	4	4,000
3	Consultancy			
	Biostatistician	30,000	1	30,000
	Data management	1500	20days	30,000
4	Operating costs			
	Binding fee	1500	4	6000
Total				115,200
Contingency	15% of total cost			17,280
Grand total	Total + contingency cost			122,480

APPENDIX 3a: INTERVIEW PARTICIPANT/CARETAKER INFORMATION SHEET

Investigator: WAMBUI WINFRED MURINGI Tel.: 0723082279

School of Nursing Sciences,
University of Nairobi
P.O. Box 19676, Nairobi.

Introduction: Hello! My name is Winfred, a nursing student from the University of Nairobi. I am conducting a study to establish the health seeking behaviours among caregivers of infants admitted in this hospital with acute childhood illnesses. **The study title is: `Determinants of health seeking behavior among caregivers of infants admitted with acute childhood illnesses in Kenyatta National Hospital paediatric wards`, A descriptive cross sectional study at Kenyatta national Hospital, Nairobi.** This study will be conducted at Kenyatta national hospital paediatric wards.

You are invited to participate in this study. The following information is important to help you make an informed decision.

Background and objective: The purpose of the study is to identify the determinants of health seeking behavior of caregivers during acute childhood illnesses.

It aims at establishing the level of knowledge about danger sign in infancy, identification of the health care options available and how accessible they are and what factors influence the caregivers decision to seek health care. This will enable in guiding the caregivers on appropriate health seeking behavior hence prompt care during illness and thus reduce infant mortality.

You are therefore considered suitable participant because you are one of the caregiver with an infant suffering from acute childhood illness.

Study Benefits and risks

The information you give will help us provide a holistic approach towards instituting proactive preventive strategies in dealing with the burden of acute childhood illnesses, generate policies to be used at the community level in improving the health seeking behavior and come up with interventions to reduce infant morbidity and mortality from childhood illnesses. Minimal risk is expected in the study on the area of you giving us your information. There will be no direct monetary benefits.

What participation means

Participation is voluntary.

The study will involve interviews at the bedside where questions will be asked and you give answers to the questions. The interview is expected to take 15-20minutes.

The information that you will provide will be kept confidential and your name will not be identified with the information given.

You have the freedom to:

Decide whether to participate or not.

Answer the questions you are comfortable with.

Withdraw from the study at any point and your information will be confidential and destroyed.

For more information and clarification; you are free to contact;

CONTACT DETAILS

SUPERVISORS: DR.SAMUEL.KIMANI-0722384917

MRS. EUNICE ODHIAMBO-0722358164

KNH/UON ERC: Tel. +254-020-2726300 extension 44355

Email: uonknh_erc@uonbi.ac.ke

APPENDIX 3b: FOMU YA MAELEZO KUHUSU IDHINI

MTAFITI: WAMBUI WINFRED MURINGI

NAMBA YA SIMU: 0723082279

MWANAFUNZI KATIKA SHULE YA WAUGUZI

CHUO KIKUU CHA NAIROBI

SANDUKU LA POSTA, 19676, Nairobi.

UTANGULIZI: Jina langu ni Winfred, mwanafunzi katika chuo kikuu cha Nairobi. Ninafanya utafiti kuhusu vipengele ambavyo vinadhiri tabia za kutafuta huduma za afya kwa watu ambayo wana chungwa watoto walio na umri chini ya mwezi mmoja katika hospitali hii kuu ya Kenyatta. Umekaribishwa katika utafiti huu.

Maelezo yafuatayo yatakusaidia kumanikika unapotoa idhini kushiriki katika utafiti huu. Lengo la utafiti huu nikitambua vipengele ambavyo vinadhiri uamuzi wetu kuhusu tunavyotafuta huduma za afya. Utafiti huu unalenga kutambua kama tunafahamu ishara hatari za magonjwa kwa watoto walio katikati ya mwezi mmoja na miezi kumi na moja, huduma za afya zilizoko, ziko umbali gani na kama tuna uwezo kifedha wa kuzitumia.

Umehesabiwa kuwa mshirika ufaaye kwa sababu wewe ndiye mzazi wa motto anayeugua maradhi hayo.

Faida za utafiti

Majibu utakayopeana yatasaidia kutambua vipengele ambavyo vinaathiri jinsi tunavyo tafuta huduma za afya ndipo tuweze kutafuta jinsi yakurekebesha ili tuwezeshe watoto wetu kuishi vizuri.

Matokeo ya utafiti yataweza kutumika kuelekeza maamuzi kuhusu kutambulikana kwa njia ambazo zinaweza zingatiwa ili kuhakikisha watoto wanapata huduma za afya mapema ili kuzuia magonjwa haya na pia vifo vinavyosababishwa na magonjwa haya.

Kutoa habari kujihusu na motto ndio yanayotarajiwa.

Kuhusika/kushiriki.

Kushiriki ni kwa hiari yako.

Utaulizwa maswali ulipo kuhusu unapoishi na maswali mengine. Kujibu maswali kutachukua muda wa dakika 15 hadi 20.

Habari utakazopeana zitalindwa zisiweze kupatikana na watu wasiohusika kwa utafiti na habari yako haitaweza kutambulishwa nawe.

Unao uhuru wa:

1. Kushiriki au kutoshiriki.
2. Kujibu maswali uko sawa kwayo.
3. Kusitisha kushiriki wakati wowote na habari yako italindwa na kuharibiwa.

Kwa habari na maelezo zaidi, una uhuru wa kuulizia,

Mwalimu wangu: Daktari Samuel.Kimani-0722384917

Mrs.Eunice Odhiambo-0722358164

Shule ya wauguzi

Chuo Kikuu Cha Nairobi.

KNH/UON ERC: Rununu +254-020-2726300 extension 44355

Email: uonknh_erc@uonbi.ac.ke

APPENDIX 3c: INTERVIEW PARTICIPANT/PARENT INFORMED CONSENT FORM

I ... (serial number)..... do agree to participate in the study on determinants of health seeking behavior among caregivers of infants with acute childhood illnesses, whose purpose, benefits and risks have been explained to me.

I am informed that my participation is voluntary and no financial benefits are provided, no risk is expected in the study on the area of me giving the information. There will be no direct monetary benefits as it has been explained to me. I have also been informed that the research has been approved by KNH/UON Ethics committee which has a role in protecting the participants' rights.

I have also been informed that my information will be confidentially maintained and it will not be possible to identify the information with me. I am also informed that I can withdraw from the study at whichever level I find appropriate to do so. In case I have any questions on my rights as a research participant I can contact the Kenyatta Hospital/UON Ethics and Research Committee on **+254-020-2726300 or email: uonknh_erc@uonbi.ac.ke**

I therefore willingly and voluntarily agree to participate in this study.

Participant`s signature/thumb print.....

Date

Time

Interviewer name.....sign

Date Time.....

APPENDIX 3d: FOMU YA KUTOA IDHINI KUSHIRIKI

Mimi.....(nambari ya siri)natoa idhini yangu kwa hiari kushiriki katika utafiti ambao nimeelezwa lengo, faida na madhara yake. Nimejulishwa kwamba kushiriki kwangu ni kwa hiari na hakuna faida zozote zakifedha nitapokea.Nimejurishwa pia hakuna hasara inayotarajiwa kwa mimi binafsi kushiriki katika utafiti huu.Nimejulishwa pia kuwa utafiti huu umeidhinshwa na KNH/UON Ethics Committee ambayo jukumu lake kuu ni kulinda haki za wanaoshiriki katika utafiti wa aina hii.

Nimejulishwa pia kwamba ujumbe nitakaotoa utawekwa kisiri na hautaweza kutambulishwa nami. Nafahamu naweza kusitisha kushiriki kama itafaa kwa wakati wowote.Kama nina swali lolote kuhusu mimi na haki zangu kama mshiriki katika utafiti huu nimejulishwa naweza wasiliana na the Kenyatta Hospital/UON Ethics and Research Committee kutumia **namba ya simu +254-020-2726300 Barua pepe: uonknh_erc@uonbi.ac.ke**

Hivyo basi natoa idhini yangu kushiriki katika utafiti huu kwa hiari yangu.

Sahihi ya mshirika.....

Tarehe.....

APPENDIX 3e: FOCUSED GROUP DISCUSSION CAREGIVER INFORMATION SHEET

Investigator: WAMBUI WINFRED MURINGI Tel.: 0723082279

School of Nursing Sciences,
University of Nairobi
P.O. Box 19676, Nairobi.

Introduction: Hello! My name is Winfred, a nursing student from the University of Nairobi. I am conducting a study to establish the health seeking behaviors among caregivers of infants admitted in this hospital with acute childhood illnesses. **The study title is: `Determinants of health seeking behavior among caregivers of infants admitted with acute childhood illnesses in Kenyatta National Hospital paediatric wards`, A descriptive cross sectional study at Kenyatta national Hospital, Nairobi.** This study will be conducted at Kenyatta National Hospital paediatric wards.

You are invited to participate in this study. The following information is important to help you make an informed decision.

Background and objective: The purpose of the study is to identify the determinants of health seeking behavior of caregivers during acute childhood illnesses.

It aims at establishing the level of knowledge about danger sign in infancy, identification of the health care options available and how accessible they are and what factors influence the caregivers decision to seek health care. This will enable in guiding the caregivers on appropriate health seeking behavior hence prompt care during illness and thus reduce infant mortality.

You are therefore considered suitable participant because you are one of the caregiver with an infant suffering from acute childhood illness.

Study Benefits and risks

The information you give will help us provide a holistic approach towards instituting proactive preventive strategies in dealing with the burden of acute childhood illnesses, generate policies to be used at the community level in improving the health seeking behavior and come up with interventions to reduce infant morbidity and mortality from childhood illnesses. Minimal risk is expected in the study on the area of you giving us your information. There will be no direct monetary benefits.

What participation means

Participation is voluntary.

The study will involve group discussion at the at the doctors room where questions will be asked and you give answers to the questions. The discussion will be audio-taped. The discussion is expected to take 45 minutes.

The information that you will provide will be kept confidential and your name will not be identified with the information given. The tapes will be kept under lock and once the researcher has transcribed the data the tapes will be destroyed.

You have the freedom to:

Decide whether to participate or not.

Answer the questions you are comfortable with.

Withdraw from the study at any point and your information will be confidential and destroyed.

For more information and clarification; you are free to contact;

CONTACT DETAILS

SUPERVISORS: DR.SAMUEL.KIMANI-0722384917

MRS. EUNICE ODHIAMBO-0722358164

KNH/UON ERC: Tel. +254-020-2726300 extension 44355

Email: uonknh_erc@uonbi.ac.ke

APPENDIX 3f: FOMU YA MAELEZO KUHUSU IDHINI YA KUSHIRIKI KATIKA MJADALA

MTAFITI: WAMBUI WINFRED MURINGI

NAMBA YA SIMU: 0723082279

MWANAFUNZI KATIKA SHULE YA WAUGUZI

CHUO KIKUU CHA NAIROBI

SANDUKU LA POSTA, 19676, Nairobi.

UTANGULIZI: Jina langu ni Winfred, mwanafunzi katika chuo kikuu cha Nairobi. Ninafanya utafiti kuhusu vipengele ambavyo vinaadhiri tabia za kutafuta huduma za afya kwa watu ambayo wachunga watoto walio na umri chini ya mwezi mmoja katika hospitali hii kuu ya Kenyatta. Umekaribishwa katika utafiti huu.

Maelezo yafuatayo yatakusaidia kumanikika unapotoa idhini kushiriki katika utafiti huu. Lengo la utafiti huu ni kutambua vipengele ambavyo vinaadhiri uamuzi wetu kuhusu tunavyotafuta huduma za afya. Utafiti huu unalenga kutambua kama tunafahamu ishara hatari za magonjwa kwa watoto walio katikati ya mwezi mmoja na miezi kumi na moja, huduma za afya zilizoko, ziko umbali gani na kama tuna uwezo kifedha wa kuzitumia.

Umehesabiwa kuwa mshirika ufaaye kwa sababu wewe ndiye mzazi wa mtoto anayeugua maradhi hayo.

Faida za utafiti

Majibu utakayopeana yatasaidia kutambua vipengee ambavyo vinaathiri jinsi tunavyotafuta huduma za afya ndipo tuweza kutafuta jinsi ya kurekebeshwa ili tuwezeshe watoto wetu kuishi vizuri.

Matokeo ya utafiti yataweza kutumika kuelekeza maamuzi kuhusu kutambulikana kwa njia ambazo zizweza zingatiwa ili kuhakikisha watoto wanapata huduma za afya mapema ili kuzuia magonjwa haya na pia vifo vinavyosababishwa na magonjwa haya.

Kutoa habari kujihusu na mtoto ndio yanayotarajiwa.

Kuhusika/kushiriki.

Kushiriki ni kwa hiari yako.

Utaulizwa maswali ulipo kuhusu unapoishi na maswali mengine. Kujibu maswali na mjadala huu kutachukua muda wa dakika 45.

Habari utakazopeana zitalindwa zisiweze kupatikanana watu wasiohusika kwa utafiti na habari yako haitaweza kutambulishwa nawe. Habari hizi zitawekwa kwa rekodi ya kada na baada ya mtafiti kutmia ujumbe huu kada hio itaharibiwa.

Unao uhuru wa:

1. Kushiriki au kutoshiriki.
2. Kujibu maswali uko sawa kwayo.
3. Kusitisha kushiriki wakati wowo tena habari yako italindwa na kuharibiwa.

Kwa habari na maelezo zaidi, una uhuru wa kuulizia,

Mwalimuwangu: Daktari Samuel.Kimani-0722384917

Mrs.Eunice Odhiambo-0722358164

Shuleyawauguzi

Chuo Kikuu Cha Nairobi.

KNH/UON ERC: Rununu +254-020-2726300 extension 44355

Barua pepe: uonknh_erc@uonbi.ac.ke

**APPENDIX 3g: FOCUSED GROUP DISCUSSION PARTICIPANTS INFORMED
CONSENT FORM**

I ...(serial number)..... do agree to participate in the study on determinants of health seeking behavior among caregivers of infants with acute childhood illnesses, whose purpose, benefits and risks have been explained to me. I have been informed that the information I will provide will be audio taped.

I am informed that my participation is voluntary and no financial benefits are provided, minimal risk is expected in the study on the area of me giving the information. There will be no direct monetary benefits as it has been explained to me. I have also been informed that the research has been approved by KNH/UON Ethics committee which has a role in protecting the participants' rights.

I have also been informed that my information will be confidentially maintained and it will not be possible to identify the information with me. I am also informed that I can withdraw from the study at whichever level I find appropriate to do so. Incase I have any questions on my rights as a research participant I can contact the Kenyatta Hospital/UON Ethics and Research Committee on **+254-020-2726300 or email: uonknh_erc@uonbi.ac.ke**

I therefore willingly and voluntarily agree to participate in this study.

Participant`s signature/thumb print.....

Date

Time

Interviewer name.....sign

DateTime.....

APPENDIX 3h: FOMU YA KUTOA IDHINI KUSHIRIKI KATIKA MJADALA.

Mimi.....(nambari ya siri)natoa idhini yangu kwa hiari kushiriki katika utafiti ambao nimeelezwa lengo, faida na madhara yake. Nimejulishwa kwamba kushiriki kwangu ni kwa hiari na hakuna faida zozote zakifedha nitapokea.Nimejurishwa pia hakuna hasara inayotarajiwa kwa mimi binafsi kushiriki katika utafiti huu.Nimejurishwa pia mazungumzo haya yatachukuliwa kwa njia ya rekodi kwa kada.Nimejulishwa pia kuwa utafiti huu umeidhinishwa na KNH/UON Ethics Committee ambayo jukumu lake kuu ni kulinda haki za wanaoshiriki katika utafiti wa aina hii.

Nimejulishwa pia kwamba ujumbe nitakaotoa utawekwa kisiri na hautaweza kutambulishwa nami. Nafahamu naweza kusitisha kushiriki kama itafaa kwa wakati wowote.Kama nina swali lolote kuhusu mimi na haki zangu kama mshiriki katika utafiti huu nimejulishwa naweza wasiliana na the Kenyatta Hospital/UON Ethics and Research Committee kwa **simu ya rununu +254-020-2726300 au barua pepe: uonknh_erc@uonbi.ac.ke**

Hivyo basi natoa idhini yangu kushiriki katika utafiti huu kwa hiari yangu.

Sahihi ya mshirika.....

Tarehe.....

Saa

Jina la mtafiti.....Sahihi.....

Tarehe.....Saa.....

APPENDIX 4a: STUDY QUESTIONNAIRE

Questionnaire on: **Determinants of Health seeking behavior among caregivers of infants admitted with acute childhood illnesses in Kenyatta National Hospital paediatric wards.**

Serial Number..... Date of interview.....

Instructions: Thank you for your willingness to respond to my questions. This session will take 15-20minutes. You will be interviewed as the questionnaire is filled. Your responses will be recorded just the way you put them.

Thank you.

SECTION 1: SOCIAL DEMOGRAPHIC DATA

AGE THE CAREGIVER

1. How old are you?

a) 11-20yrs [] b) 21-30yrs[] c)31-40yrs []

d) 41-50yrs [] e) above 50yrs[]

LEVEL OF EDUCATION

2. What is your highest level of education?

a) No education [] b)Nursery [] c)Primary []

d) Secondary [] e) College []

OCCUPATION

3. What is your occupation?

a) Self-employed [] b) In formal employment [] c) Not-employed []

d) Student []

4. To which religion do you belong to?

A) Christian [] b) Muslim [] c) Hindu [] d) others (specify) _____

RESIDENCE

5. How would you describe the area you live?

a) Rural [] b) Urban []

6. What is your marital status?

a) Single [] b) Married [] c) separated [] d) Widowed []

e) Divorced []

7. What is your gross income per month?

a) <10,000 [] b) 10,000-20,000 [] c) 20,000-50,000 [] d) >50,000 []

8. How many children do you have?

a) 1-3 []

b) 4-6 []

c) 6-9 []

d) More than 10 []

9. How many of these children are not your own? (specify) _____

SECTION 2: KNOWLEDGE OF CAREGIVERS ON DANGER SIGNS IN INFANTS

1. Are you familiar with danger signs in infancy?

a) Yes []

b) No []

2. If yes, List the danger signs that you know

3. If yes, how did you learn about it?

a) Child clinic []

b) Ante natal clinic []

c) Neighbors []

d) Mass media (e.g. TV, Radio) []

e) Others (specify) _____

SECTION 3: HEALTH SEEKING OPTIONS

AVAILABILITY

1. Do you have any health facility near where you live?

a) Yes [] b) No []

2. If yes, which one?

a) Dispensary [] b) Health center [] c) Sub-county Hospital []

d) County Referral Hospital [] e) National Referral Hospital [] f) Private clinic []

Others (specify) _____

ACCESSIBILITY

1. How far is the nearest Health facility from your home?

a) Less than 1km [] b) 2-10kms [] c) 11-20kms [] d) more than20kms []

SERVICES OFFERED

1. How would rate the services offered in that health facility?

a) Excellent [] b) satisfactory [] c) not satisfactory []

2. Explain your reason for rating it as above _____

SECTION 4: DETERMINANTS OF HEALTH SEEKING BEHAVIORS

1. What first action did you take when you identified a danger sign in your child?

a) Observed to see if it will worsen []

b) Used home remedies []

c) Bought medication from the chemist []

d) Took the child to the hospital immediately []

2. From whom do you get advice first when you identify a danger sign in your child?

a) Spiritual leader [] b) Traditional healers [] c) Neighbors []

d) Grandparents of the child [] e) In-laws (mother- in- law, father- in- law) []

f) Nurse [] g) Doctor []

3. Do you have reason for your choice above (explain) _____

4. Can you recall the time you noticed the danger sign in your child?

a) Yes []

b) No []

5. If yes, after how long did you take your child to the Hospital?

a) Immediately [] b) 1-2 days [] c) More than 2 days []

6. If not immediately why? Explain _____

What are some of the reasons that would hinder you from seeking health care for your child outside your home?

APPENDIX 4b: FOCUSED GROUP DISCUSSIONS GUIDE

Dear participant,

You are hereby invited to take part in a discussion on “**Determinants of Health seeking behavior among caregivers of infants admitted with acute childhood illnesses in Kenyatta National Hospital pediatrics wards**” study as one of the members in a focused discussion group made up of 8 members. We will start by introducing ourselves.

Be honest and active in your participation .There will be a moderator and a recorder as you respond to the questions asked. Free discussion is encouraged.

What are the common symptoms did you observe when your child has these conditions (Malaria, pneumonia, diarrhea and meningitis) e.g. Fever.....

What are some of the interventions do you carry out when you notice a danger sign in your child?

.....

.....

Why did you decide to take seek health care?

.....

.....

Where do you take your child when they are sick?

What factors influence your decision making regarding health care seeking when you identify your child is unwell?

.....

Who decides on where you take your child for treatment and why?

.....

.....

Thank you for your participation.

APPENDIX 5: REQUEST FOR APPROVAL TO CARRY OUT STUDY

Winfred Muringi W

University of Nairobi

School of Nursing Sciences

Telephone No: 0723082279

wambuiw4@gmail.com

The Chairperson,

Ethics and Research Committee-University of Nairobi and Kenyatta National Hospital,

Dear sir/ madam,

RE: REQUEST FOR PERMISSION TO CARRY OUT RESEARCH STUDY:

I am a post-graduate student pursuing Master of Science in Nursing-Paediatrics at The University of Nairobi. I wish to carry out a study titled `Determinants of health seeking behavior among caregivers of infants with acute childhood illnesses in Kenyatta National Hospital .I am kindly requesting for your approval to undertake the said study. I am committed to observe and adhere to the ethical principles of respect for persons, justice and beneficence.

I look forward to your favorable response.

Yours faithfully,

Winfred MuringiWambui.

APPENDIX 6: REQUEST FOR PERMISSION TO CARRY OUT STUDY

Winfred Muringi W,

University of Nairobi,

School of Nursing Sciences.

Telephone No: 0723082279

Email: wambuiw4@gmail.com

The Chairperson,

Ethics and Research Committee-Kenyatta national Hospital,

Dear sir/ madam:

RE: REQUEST FOR PERMISSION TO CARRY OUT RESEARCH STUDY

I am a post-graduate student pursuing Master of Science in Nursing (Pediatrics) in the University of Nairobi. I wish to undertake a study on` Determinants of health seeking behavior among caregivers of infants with acute childhood illnesses in Kenyatta National Hospital .

I am kindly requesting for your approval to undertake the said study in your institution. Attached is a copy of the letter of approval from the University of Nairobi and Kenyatta National Hospital Ethics and Research Committee.

I look forward to a positive response.

Yours faithfully,

Winfred MuringiWambui

.

APPENDIX 7: ETHICS APPROVAL LETTER



UNIVERSITY OF NAIROBI
COLLEGE OF HEALTH SCIENCES
P O BOX 19676 Code 00202
Telegrams: varsity
Tel: (254-020) 2726300 Ext 44355



KNH-UON ERC
Email: uonknh_erc@uonbi.ac.ke
Website: <http://www.erc.uonbi.ac.ke>
Facebook: <https://www.facebook.com/uonknh.erc>
Twitter: @UONKNH_ERC https://twitter.com/UONKNH_ERC



KENYATTA NATIONAL HOSPITAL
P O BOX 20723 Code 00202
Tel: 726300-9
Fax: 725272
Telegrams: MEDSUP, Nairobi

Ref: KNH-ERC/A/75

8th March 2017

Winfred Muringi Wambui
Reg. No.H56/80788/2015
School of Nursing Sciences
College of Health Sciences
University of Nairobi

Dear Winfred

REVISED RESEARCH PROPOSAL: DETERMINANTS OF HEALTH SEEKING BEHAVIOR AMONG CAREGIVERS OF INFANT WITH ACUTE CHILDHOOD ILLNESSES IN KENYATTA NATIONAL HOSPITAL (P953/12/2016)

This is to inform you that the KNH- UoN Ethics & Research Committee (KNH- UoN ERC) has reviewed and **approved** your above revised proposal. The approval period is from 8th March 2017 – 7th March 2018.

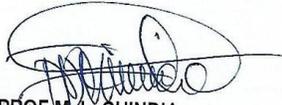
This approval is subject to compliance with the following requirements:

- a) Only approved documents (informed consents, study instruments, advertising materials etc) will be used.
- b) All changes (amendments, deviations, violations etc) are submitted for review and approval by KNH-UoN ERC before implementation.
- c) Death and life threatening problems and serious adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the KNH-UoN ERC within 72 hours of notification.
- d) Any changes, anticipated or otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to KNH- UoN ERC within 72 hours.
- e) Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. (*Attach a comprehensive progress report to support the renewal*).
- f) Clearance for export of biological specimens must be obtained from KNH- UoN ERC for each batch of shipment.
- g) Submission of an *executive summary* report within 90 days upon completion of the study. This information will form part of the data base that will be consulted in future when processing related research studies so as to minimize chances of study duplication and/ or plagiarism.

For more details consult the KNH- UoN ERC website <http://www.erc.uonbi.ac.ke>

“Protect to Discover”

Yours sincerely,



PROF M. L. CHINDIA
SECRETARY, KNH-UoN ERC

- c.c. The Principal, College of Health Sciences, UoN
 The Director, CS, KNH
 The Assistant Director, Health Information, KNH
 The Chair, KNH-UoN ERC
 The Director, School of Nursing Sciences, UoN
 Supervisors: Dr. Samuel Kimani, Mrs. Eunice Ajode Odhiambo

“Protect to Discover”

APPENDIX 8: KENYATTA NATIONAL HOSPITAL DATA



KENYATTA NATIONAL HOSPITAL
P.O. BOX 20723, 00202 Nairobi

Tel.: 2726300/2726450/2726550
Fax: 2725272
Email: knhadmin@knh.or.ke

Ref: KNH/PAEDS-AD/48 Vol.I

Date: 20th March, 2017

Winfred Muringi Wambui
School of Nursing Sciences
College of Health Sciences
University of Nairobi

Dear Winfred

RE: APPROVAL TO COLLECT DATA IN PAEDIATRICS DEPARTMENT

Following approval by the KNH/UON-Ethics & Research Committee for your Research Proposal, this is to inform you that authority has been granted to collect data in Paediatrics Department, on your study titled "*Determinants of health seeking behavior among caregivers of infant with acute childhood illnesses in Kenyatta National Hospital*".

Kindly liaise with the Senior Assistant Chief Nurse, Paediatrics for facilitation and forward to this office a report of your findings.


DR. IRENE INWANI
HEAD OF DEPARTMENT, PAEDIATRICS

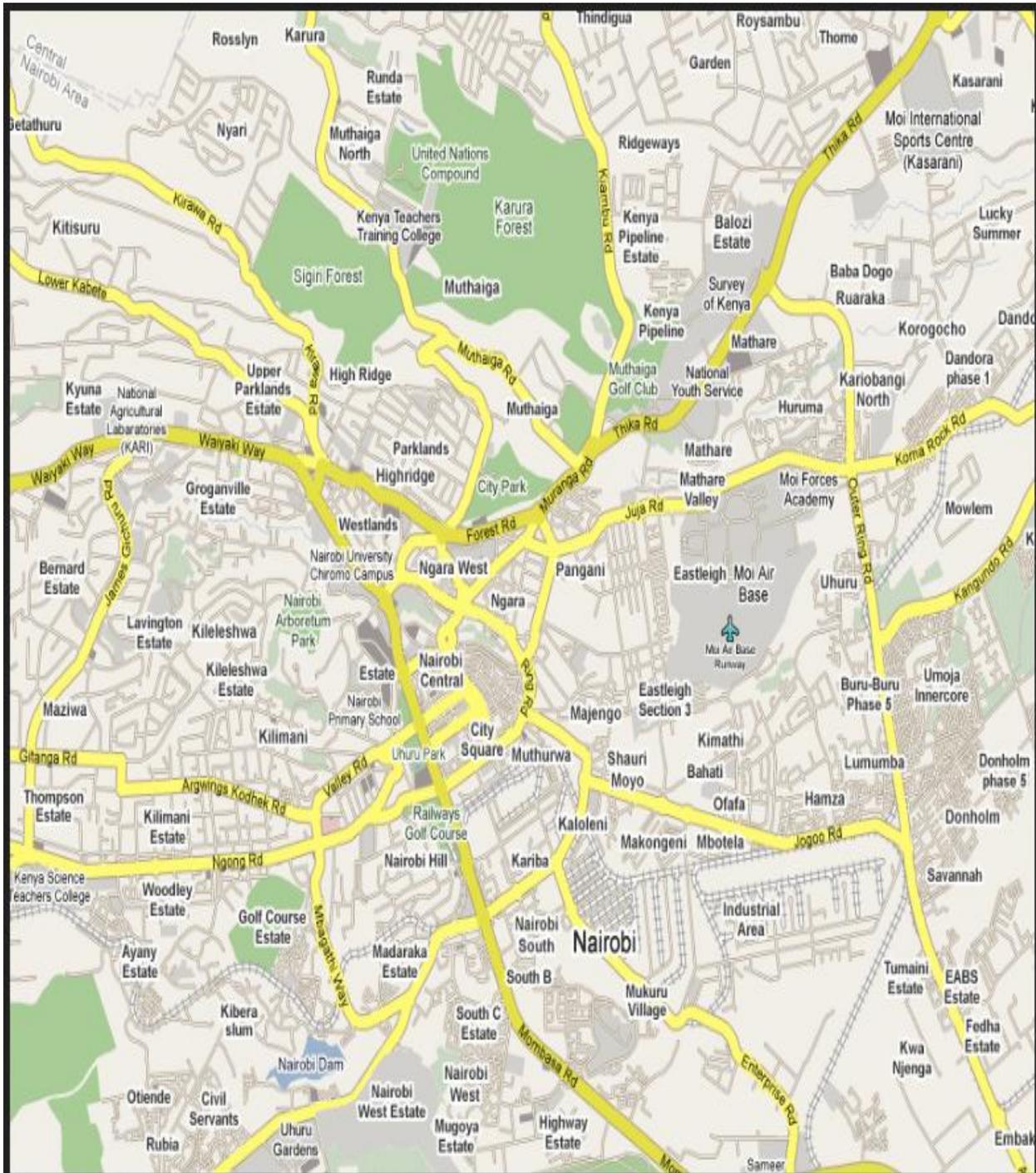
Cc. Senior Assistant Chief Nurse, Paediatrics

Vision: A world class patient-centered specialized care hospital



ISO 9001: 2008 CERTIFIED

APPENDIX 9: MAP OF NAIROBI COUNTY



<http://ictville.com/wp-content/uploads/2012/09/googlemaps-nairobi.gif>

APPENDIX 10: MAP OF KENYATTA NATIONAL HOSPITAL



Turnitin Originality Report

DETERMINANTS OF HEALTH SEEKING BEHAVIOR AMONG CAREGIVERS OF
INFANTS WITH ACUTE CHILDHOOD ILLNESSES IN KENYATTA NATIONAL HOSPITAL
Winfred Wambui



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