DETERMINANTS OF HEALTH-CARE SEEKING BEHAVIOUR FOR UPPER RESPIRATORY TRACT INFECTIONS IN LATE CHILDHOOD IN NAKURU DISTRICT, KENYA

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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DEDICATION

To my husband James Mwathi and our daughters, Reena, Christine, Elizabeth and Caroline, for their support and encouragement.
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<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>ANOVA</td>
<td>Analysis of variance</td>
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<td>GoK</td>
<td>Government of Kenya</td>
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<td>HBM</td>
<td>Health Belief Model</td>
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<td>HIV</td>
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<td>IMCI</td>
<td>Integrated Management of Childhood Illness</td>
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<td>IPQ</td>
<td>Illness Perception Questionnaire</td>
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<td>KDHS</td>
<td>Kenya Demographic and Health Survey</td>
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<td>KEPH</td>
<td>Kenya Essential Package for Health</td>
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<td>MCH</td>
<td>Maternal Child Health</td>
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<td>MOH</td>
<td>Ministry of Health</td>
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<td>NHSSP</td>
<td>National Health Sector Strategic Plan</td>
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<td>OR</td>
<td>Odds Ratio</td>
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<td>RSV</td>
<td>Respiratory syncytial virus</td>
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<td>SC-IQ</td>
<td>Integrated Questionnaire for the Measurement of Social Capital</td>
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<td>SES</td>
<td>Socio-Economic Status</td>
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<td>Statistical Package for Social Sciences</td>
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<td>Theory of Planned Behaviour</td>
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<td>URTIs</td>
<td>Upper Respiratory Tract infections</td>
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<td>USA</td>
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DEFINITION OF TERMS

Cognitive Factors:
Refers to Opinions, perceptions and thoughts that people have concerning healthcare seeking. Examples include locus of control, perceptions of risk (susceptibility to disease), self confidence (self-efficacy) and beliefs (causes) about illness.

Disease:
Refers to a physiological or psychological dysfunction.

Health Care:
Refers to services provided to individuals or communities by agents of the health services or professions to promote, maintain, monitor, or restore health.

Healthcare Seeking Behaviour:
Refers to the remedial action undertaken by a person in response to abnormal body signals (symptoms)

Illness:
Is a subjective state, or experience, of a person with disease.

Infection:
Refers to the entry and development or multiplication of an infectious agent in the body.

Late Childhood:
Refers to children aged between 6 to 12 years.

Morbidity:
The condition of illness, injury, or disability (Sarafino, 2000)

Self-efficacy:
Refers to people’s belief that they can succeed at something they want to do.
Sickness:
Is a state of social dysfunction i.e. a role that the individual assumes when ill (Last, 1995).

Small Holder Farm:
A piece of land over one acre and not exceeding fifty acres that is sold or let someone for cultivation.

Social Capital:
Refers to the goodwill and resources that emanate from an individual’s network of social relationships, and its effects flow from the information, influence, and solidarity available to individuals.

Upper Respiratory Tract Infections:
Refers to illnesses caused by acute viral or bacterial infections which involves the upper respiratory tract i.e. the nasal passages, sinuses, pharynx, epiglottis and larynx. They are commonly characterized by Nasal congestion, sneezing, running nose, cough, sore throat or fever.
ABSTRACT

Health care seeking behaviour in late childhood has not received adequate policy and empirical attention in Kenya. This study, analyzed the key factors that influence health-care seeking behaviour of heads of households/ caretakers of children aged between 6-12 years with upper respiratory tract infections (URTIs) in Engashura farm, Nakuru District. A model that integrates social capital and cognitive representation of illness as determinants of healthcare seeking behaviour was used as a theoretical framework. A cross-sectional descriptive research design was adopted. A pre-tested, structured questionnaire was used to collect data. Data was collected using interviews with the respondents at the study site. Collected data was summarized using frequencies, percentages, means, and standard deviation, and presented using graphs, figures and tables. The relationships between social capital and cognition were tested using correlation analyses. The interactive effects of social capital and cognition in determining predictors of healthcare seeking were tested using a logistic regression. Data was analyzed using the Statistical Package for Social Sciences (SPSS) Version 13.0. Respondents had an average age of 33.9 years (SD =10.54 years). Descriptive results show that 70 percent of the respondents were of low socio-economic class and low educational attainment with high incidences of unemployment (43 percent). Forty nine percent of the respondents said their children had contracted URTIs in the two weeks prior to taking this survey. Thirty one percent of the respondents with children having URTIs took their children to hospital as is recommended. Structural social capital was positively associated with timeline (r = 0.16), personal control (r = 0.24) and understanding (r = 0.23). Relational social capital was negatively associated with personal control (r = -0.15) but positively with concern (r = 0.16) and emotional response (r = 0.26). Specific trust was significantly associated with healthcare seeking behaviour (χ² = 6.98, p = 0.03). Respondents who took their sick children to hospital believed that their neighbours were basically honest when compared to those who had not (t = -1.97, p = 0.05). All the other measures of social capital were not significant. Understanding was the only dimension of cognitive representation of illness that was associated with healthcare seeking behaviour (t = 3.63, p = 0.00). Estimation results using the logit model show that specific trust (OR = 2.48), general trust (OR = 0.15) and understanding (OR=0.64) predict healthcare seeking behaviour. This is an indication that some aspects of social capital and cognitive representation of illness determine healthcare seeking behaviour. It is therefore recommended that Behavioural communication change policies, strategies and programmes should be initiated to change illness perceptions of URTIs and healthcare seeking behaviour of caretakers of children aged between 6 and 12 years who contract URTIs.
CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Upper respiratory tract infections (URTIs) are illnesses caused by acute infections involving the upper respiratory tract which includes the nasal passages, sinuses, pharynx, epiglottis and the larynx, that serve as gateways to the trachea, bronchi and pulmonary alveolus spaces in the lungs. Upper respiratory tract infections represent the most common acute illnesses evaluated in the outpatient setting and ranges from the common cold, typically a mild, self-limited, catarrhal syndrome of the naso-pharynx to life threatening illnesses such as epiglottitis, due to sudden airway obstruction (Meneghetti, 2007). They are mainly caused by viruses or bacteria. They are transmitted from one person to another by directly inhaling respiratory droplets from an infected person or by direct hand-to-hand contact with a naso-secretion containing the pathogens and their subsequent transfer to the nose or eyes. Hand hygiene is known to prevent its spread. A naso-pharyngeal secretion may remain infectious for hours or days on the skin surface or on objects where it does not dry up quickly (Tirthankar, 1998). Exposure to cold, despite common belief, does not predispose to the development of the disease. Upper respiratory tract infections' symptoms and signs include nasal congestion, sneezing, running nose, cough, sore throat, and/or fever. The onset of symptoms begins in 1-3 days after exposure to the micro-organism and usually lasts for a duration of 7 – 10 days, but may sometimes persist longer (Innes and Reid, 2006). Despite their high morbidity, URTIs rarely causes permanent sequela or death, although may serve as a gateway to infection of adjacent structures and lower respiratory tract, resulting in otitis media, bronchitis, pneumonia and meningitis among others, if not adequately treated.
Most URTIs are self-diagnosed and self-limited or self-treated at home but those lasting more than 10 days may require special attention and antimicrobial therapy (Cotton et al., 2008). This is important because recognizing group A streptococcal bacterial throat infection early and administering adequate and efficient therapy may prevent the occurrence of acute rheumatic fever, rheumatic heart disease or acute glomerulonephritis (a kidney disease), later in a child’s life. In developing countries, acute rheumatic fever and glomerulonephritis are more common in late childhood and adolescence than in adults. In developed countries, the incidence of these diseases is reportedly very low. This is attributed to efficient early diagnosis and appropriate treatment of bacterial throat infections (Innes and Reid, 2006).

Upper respiratory tract infections (URTIs) are the most common cause of morbidity among children. In the United States of America (USA), adults have two to four URTIs per year while children have between six and eight URTIs a year (Cotton et al., 2008).

There is little data on morbidity of URTI from developing countries. In a cross-sectional study from rural Uganda where data was collected from 300 women with children under two years of age, 37 percent of children had a current URTI (Mbonye, 2004). A recent study in the rural Kilifi District, Kenya, in early childhood demonstrated that almost 67 percent of Respiratory syncytial virus (RSV) infections were of the upper respiratory tract with no seasonality (Cotton et al., 2008). Out of 14,267 sick child visits in Bondo, Kenya, 33 percent were diagnosed with upper respiratory tract infections (Phillips-Howard et al., 2003). Community verbal autopsy in Murang’a, Kenya found that 45 percent of deaths in children were related to acute respiratory tract infections (Mirza et al., 1990). The above mentioned studies contribute significantly to the understanding of the burden of URTI in Kenya. However, all are hospital based studies whose focus is on children aged below five years and do not tell much about healthcare seeking
behaviour. Thus the burden of URTI outside the hospital is not known and the lack of data is worse among children aged between 6-12 years. Hospital based studies are known to be seriously compromised by selection biases and epidemiologists have recommended interview surveys as the best vehicle for analysing treatment behaviour (Goldman and Heuveline, 2000). There is need therefore, to address this gap in knowledge. This study addresses this challenge using population-based data from Engashura farm, a rural-based settlement scheme in Nakuru district.

At least two policy initiatives offer guidance to the management of childhood illnesses in Kenya. Implementation of integrated management of childhood illness (IMCI) has been recommended to strengthen primary health care services in rural Africa (World Health Organisation [WHO], 1997). This programme seeks to improve health workers’ case management skills as well as educating the mother/care giver on home care management of the child during illness and after recovery. The caregivers are also taught on how to identify signs of severe illness for which the child should be immediately taken to the health worker. The second policy attempt is the Kenya Essential Package for Health (KEPH) which provides a defined package of health service delivery in Kenya. It is based on the concept of addressing the health requirements of the population by focusing healthcare services on six distinct cohorts or stages of the human life cycle. The second National Health Sector Strategic Plan 2005 – 2010 (NHSSP II) identifies these six cohorts as: cohort 1 (pregnancy, delivery and the newborn upto 2 weeks), cohort 2 (early childhood or >2 weeks - ≤5 years of age), Cohort 3 (late childhood or 6 – 12 years of age), cohort 4 (youth and adolescence or 13 – 24 years), cohort 5 (adulthood or 25 – 59 years) and cohort 6 (elderly or ≥60 years). It is envisioned that focusing on these cohorts will help reverse the decline in health status of Kenyans.
Measurement of the impact of IMCI and KEPH depends on routine surveillance data through active and passive case finding. Data from routine health surveillance may best represent the local disease burden, and may thus be used to adapt local services to local needs. While national programmes are attempting to strengthen district level surveillance systems, the quality of the data so generated is questionable (WHO, 1999). A clear understanding of the burden of disease and associated healthcare seeking behaviour of defined age cohorts is needed in order to evaluate existing health policy initiatives in Kenya.

Another source of concern is that the NHSSP II has presumed that the health challenges at the late childhood phase (cohort 3) are more or less similar to those that affect adults, although their outcomes can sometimes be life threatening (Ministry of Health, 2006). Even with this acknowledgement, not much has been done to address cohort 3 as a special group with unique needs and problems. For example, curative healthcare services to these children are charged as for adults (although the government has heavily subsidized the cost of all health services in public health institutions). For preventive care, KEPH has recommended a school health policy that will promote school health physical activities, but is yet to be implemented. Regular physical activities are associated with increased fitness and immunity against diseases. The effectiveness of these strategies is not clearly documented. Population based studies on common childhood illnesses such as URTs can provide baseline data that can be used to assess the effectiveness of health programmes in Kenya.

1.2 Problem Statement

Upper respiratory tract infections (URTs) are an important cause of morbidity in Kenya (Wafula, 1995; GoK, 2003; Ministry of Health, 2003). They are infectious and can be
transmitted to other members of the family/public. They have a high cost to society, being responsible for absenteeism from school and work, and unnecessary medical care. If unchecked, URTI may occasionally progress to serious sequelae, such as, hearing impairment, lower respiratory tract infection (pneumonia), Rheumatic heart disease and emotional strain, among others, that lower the quality of life of patients (Cotton et al., 2008, Njoroge and Bussmann, 2006). The increased survival of children with significant respiratory tract diseases and associated respiratory impairment is producing a growing number of adults with increased susceptibilities to environmental hazards, hence, the public health concern. Consequently, the healthcare seeking behaviour of caretakers of children with URTI warrants attention.

The practice of appropriate health care seeking has a great potential to reduce the morbidity and mortality of children associated with URTI. Infants (cohort 1) and young children (cohorts 2 and 3) are particularly prone to URTI but fortunately, most are mild infections and self-limited lasting less than 10 days (Tirthankar, 1998, Menengetti, 2007). For those that are severe and more serious the Ministry of Health in Kenya, in collaboration with the WHO, has tried to curb them by providing free medical services (for children under 5 years, that is, cohorts 1 and 2), both preventive and curative. These include: treatment of all illnesses (both inpatient and outpatient services) and immunizations which protects them against diphtheria, pertussis (whooping cough) and haemophilus influenza type B virus. In addition, there is application of the IMCI approach in health facilities. Though this may seem to be a move in the right direction, health care seeking behavior for late childhood illnesses has not received the policy attention it deserves.

Despite a high incidence of URTI in Kenya, data on the burden of the disease, and associated healthcare seeking behaviour is lacking. Nonetheless, there is limited data available concerning
prevalence of respiratory infections in children aged below 5 years and adults in population-based studies (Diero et al., 2006; Ministry of Health, 2003; Norberg and Oranga, 1996), and also for children below 5 years of age cared for in rural clinics (Nokes et al., 2008; Phillips-Howard et al., 2003) and urban clinics (Ayaya and Esamai, 2001). There is no community based study on URTIs in children above 5 years. Community based studies are important in understanding human behaviour, which is a prerequisite to change of behaviour and improvement of health practices (Hausmann-Muela et al., 2003).

1.3 Justification

Upper respiratory tract infections are highly prevalent and may progress to serious sequelae especially in late childhood. Improving the quality of the management of URTI in late childhood is therefore a priority. Lack of data compromises the development of appropriate policies and practical guidance that can be used to enhance health in the late childhood cohort. Need therefore exists to analyze the key factors that influence health-care seeking behaviour of caretakers of children aged between 6-12 years who contract URTIs. This study seeks to establish the prevalence of URTIs in late childhood in Nakuru district, assess the utilization of the healthcare facilities and the associated healthcare seeking behaviour in relation to both social capital and cognitive factors of caretakers of children aged 6-12 years when they contract URTIs. This would be helpful in planning health policy interventions that will ensure that the gains made in early childhood are not lost in late childhood.

1.4 Research Questions

a) What type of health-care services do heads of households/ caretakers seek for children aged between 6 -12 years when they contract URTIs?
b) How does the social capital of heads of households/ caretakers influence the health-care seeking behaviour for URTIs in children aged between 6 and 12 years?

c) How do the cognitive factors of heads of households/ caretakers influence the health-care seeking behavior for URTI in children aged between 6 and 12 years?

d) Are there interactive effects between cognitive representation of URTI and social capital in explaining the health-care seeking behavior of heads of households/ caretakers of children aged between 6 and 12 years?

1.5 Null Hypotheses

**Hypothesis 1:** Heads of households/caretakers of children aged between 6-12 years do not visit healthcare facilities when their children contract URTI.

**Hypothesis 2:** There is no significant relationship between social capital and health-care seeking behavior of heads of households/ caretakers of children aged between 6 and 12 years who contract URTIs.

**Hypothesis 3:** There is no significant relationship between cognitive representation of URTI and health-care seeking behavior of heads of households/ caretakers of children aged between 6 and 12 years who contract URTIs.

**Hypothesis 4:** There are no interactive effects between social capital and cognitive factors in explaining health-care seeking behavior of heads of households/ caretakers of children aged between 6 and 12 years who contract URTIs.
1.6  Study Objectives

1.6.1  General Objective

To determine factors that influence health care seeking behaviour for URTIs in late childhood, in
Engashura farm, Nakuru district.

1.6.2  Specific Objectives

a) To establish whether heads of households/ caretakers seek health-care services for children aged
between 6-12 years who contract URTIs;

b) To establish the relationship between social capital and health-care seeking behavior of heads of
househeads/ caretakers of children aged between 6-12 years who contract URTIs;

c) To establish the relationship between cognitive factors and health-care seeking behavior of heads
of households/ caretakers of children aged between 6-12 years who contract URTIs;

d) To establish the interactive effects between cognitive factors and social capital in explaining
health-care seeking behavior of heads of households/ caretakers of children aged between 6-12
years who contract URTIs.

1.7  Limitations of the Study

One limitation of this study relates to its nature of being cross-sectional. Data were collected
during the first two weeks of August, 2008. This means that it is not possible to arrive at the
causal relationship between social capital, cognitive representation of illness and healthcare
seeking behaviour empirically. Any such conclusions were therefore made using theoretical
arguments.
1.8 Theoretical Framework

The traditional biomedical approach to illness defines it in terms of physical symptoms underlying physical pathology. Contemporary approaches have broadened the concept of illness to include popular beliefs about illness (Marks, 2005). Two theoretical frameworks have been used to investigate popular beliefs about illness. The first is the cognitive perspective while the second is the social perspective.

The cognitive perspective analyzes the way individuals think about health and illness as processes (Hausmann-Muela et al., 2003). The social perspective considers the wider context in which beliefs about illness emerge and are modified and presented as a more dynamic and broader representation of illness and health (Marks, 2005). Both perspectives have been theorized and validated independently. MacKian (2003) suggests that a framework that integrates both the social and the cognitive perspectives may have greater predictive potential for healthcare seeking behaviour. Consequently, this study proposes a model that examines the interaction between social capital and cognition to predict healthcare seeking behaviour. The model relies on the ideas behind social cognitive theory to explain how healthcare seeking behavior is the result of the interplay between the environment (a network’s social capital) and personal factors (cognitive properties).

Social cognitive theory suggests that social environments play a pivotal role in shaping individuals’ cognition and, ultimately, behavior. That is, individual cognition originates in social life, human interaction, and communication. Therefore, social capital derived from being embedded in a network, shapes individuals’ cognitive processes and ultimately their behavior. Consequently, examining both social capital and cognition simultaneously (Figure 1), should
provide a fuller understanding of healthcare seeking behaviours than examining either alone. The model was tested among a sample of children who reside in a rural farm in Nakuru district.

Figure 1: Theoretical Framework
CHAPTER TWO
LITERATURE REVIEW

2.1 Perception of Illness

Before the rise of modern medicine, disease was attributed to a variety of spiritual or mechanical forces. It was interpreted as a punishment by God for sinful behavior or a consequence of witchcraft. Many infectious diseases were however attributed to a life of vice or a weak moral character, or believed to be due to miasma, that is, bad air arising out of dirt and decaying organic matter. Later, the ancient Greeks rejected the notion that disease was a punishment for sin or a consequence of witchcraft and saw it as being related to the natural environment or the way in which human populations lived and worked (Marks et al., 2005). The idea that disease could be passed from person to person arose in the Middle Ages (mid nineteenth century) and co-existed with the belief that disease was linked to evil behaviour (Graham, 2003).

In the second half of the nineteenth century, the work of three scientists namely Ehrlich, Koch and Pasteur, revealed that the prevailing health problems of the time were the product of living organisms that entered the body via food, water, air or by the bites of insects or animals. For example, in 1882 Koch identified and isolated the bacillus causing tuberculosis. Between 1897 and 1900, other organisms responsible for 22 infectious diseases were identified. This work gave rise to the idea that each disease had a single and specific cause. Later, this became doubtful because not all those exposed to the pathogens became ill and it was therefore concluded that an organism or other noxious agent was necessary but not sufficient cause of disease (Graham, 2003).
The epidemiological triad approach sees the disease as the product of an interaction of the human host, an infectious or other type of agent, and the environment that promotes the exposure (Gordis, 2009). Agents are biological, chemical or physical factors whose presence is necessary for a disease to occur. Examples are bacteria, viruses, chemical poison, trauma, nutrition deficiency or excess. Host factors include personal characteristics and behaviors, genetic endowment and predisposition, immunological status and other factors that influence susceptibility. Examples are; age, sex, occupation, immune status and customs. Environmental factors are external conditions, other than the agent, that influence the onset of disease (Marks et al., 2005). They can be physical, biological or social in nature. Examples include temperature, altitude, water, air pollution, crowding, housing and food.

In the late 1980s, a socio-environmental approach to disease was formulated. This approach is not so much concerned with the causes of disease, but rather seeks to identify the broad factors that make and keep people healthy. It’s concerned with populations rather than individuals. The factors that are said to improve population health are:

1. The Social and economic environment for example, income, social hierarchy, support from family and friends.

2. The physical environment for example, quality of air, water and housing.

3. Personal health practices for example, healthy lifestyles, personal hygiene.

4. Individual capacity and coping skills, that is, stress.

5. Health services for example, their availability and access.
This completely overturns the doctrine of specific aetiology/cause of diseases for broad non-specific social and psychological factors that are seen to be associated with a variety of disease outcomes and ultimately the health and well-being of the population.

Illness is a subjective state or experience of a person with disease. Illness behaviour refers to those activities undertaken by individuals in response to symptoms experience. They include; mental debate about the significance and seriousness of these symptoms, and lay consultations and decisions about action and possible contact with health professionals. These result in attainment of secondary prevention goals (Tones, 2002).

2.2 Health-Care Seeking Behaviour

Healthcare seeking behaviour refers to the remedial action undertaken by a person in response to abnormal body signals (symptoms). This action does not necessarily mean medical care by a health professional but may include self care (Last, 1995).

People suffering from URTIs tend to delay treatment due to the frequency and the nature of the symptoms which are often regarded as not serious, for example, a running nose (Meneghetti, 2007). Though treatment delay is sometimes necessary in case of self-limited viral diseases, it is a risky behaviour in some infections, especially bacterial.

Treatment delay refers to the time that elapses between when a person first notices a symptom and when he or she enters medical care. There are three stages of treatment delay: (1) appraisal delay, (2) illness delay and (3) utilization delay (Sarafino, 2000). Appraisal delay refers to the time a person takes to interpret a symptom as an indication of illness. This is generally
influenced by the sensory experience of a symptom, for example, severe pain is recognized as an indication of illness more quickly than other symptoms that present without pain.

Illness delay refers to the time taken between recognizing one is ill and deciding to seek medical attention. Individuals seek medical attention more quickly if the symptom was new than if it had been experienced many times before. Utilization delay refers to the time after deciding to seek medical care until actually going to use that health service. This depends on the perceptions of benefits and barriers.

Although many of the symptoms people experience are recognized as indicating disease processes, it is not necessarily the case that treatment will be sought. There are other factors that determine the timing of decisions to seek medical care. Some of these factors as quoted by Zola (1973) are: (1) “Sanctioning” (pressure from others to consult or alternative care), (2) perceived interference with vocational or physical activity, for example, absence from work or school, (3) a kind of ‘temporalizing of symptomatology’ (the setting of a deadline such as ‘if I don’t feel better by Monday,…’). Other factors are individuals’ perceptions of costs and benefits, and the access to health care facilities.

2.3 Health Seeking Behaviour Models

To explain healthcare seeking behaviour, three different categories of factors namely socio-demographic variables, perceptual variables and social capital are examined in the literature (Marks et al., 2005). Socio-demographic variables include; sex, age, education, maternal occupation, ethnicity, religion, marital status and the social-economic status of women, type of illness, household resources, access to services and perceived quality of service (Taffa and Chepngen, 2005). A number of social cognitive theories and conceptual models have been
developed to explain how perceptual variables influence healthcare seeking behaviour of people. Some of these are summarized below;

2.3.1 The Health Belief Model

The Health Belief Model (Janz and Becker, 1984) is one of the most widely applied models of healthcare seeking. It describes a person's health behaviour as an expression of health beliefs. It was designed to predict health behaviour, including use of health services, and to justify intervention. In this model, the likelihood that individuals will take preventive action (or seek health care) depends directly on the outcome of two assessments they make. One of these evaluations pertains to the perceived threat of a health problem, and the other to the perceived benefits and barriers of taking the action. The perceived threat of illness or injury may be influenced by several factors. These include:

1) Perceived susceptibility to the health problem or illness, that is, the more vulnerable they perceive themselves to be, the more likely they are to perceive it as a threat and take action,

2) Perceived severity of the health problem or illness, that is, the more serious they believe its effect will be, the more likely they are to perceive it as a threat and take preventive care,

3) Health motivation or readiness to be concerned about health matters.

4) Perceived benefits of preventive or therapeutic practices.

5) Perceived barriers, both material and psychological with regard to a certain health practice.

6) Cues to action, that is, being reminded or alerted about a potential health problem increases the likelihood of perceiving it as a threat and taking action. For example, education on the nature and
intensity of illness symptoms through mass media campaigns or advice from ‘significant other’ (family, friend or health staff).

Beliefs and health motivation are conditioned by socio-demographic variables and by the psychological characteristics of the person (figure 2). In weighing the pros and cons of taking preventive action, individuals arrive at a decision as to whether perceived benefits of the action exceed its perceived barriers or costs both direct and indirect. The outcome of weighing the benefits against the barriers is an assessed sum, of which taking the action is more beneficial for them than not taking the action.

**Figure 2: The Health Belief Model**

Adapted from Hausmann-Muela (2003)

### 2.3.2 The Theory of Reasoned Action

The Theory of Reasoned Action (TRA) indicates that people decide their intention in advance of most voluntary behaviours and suggests that the person’s intention is determined by attitudes regarding the behaviour (whether the behaviour is a good thing or not) and/or attitude about a
subjective norm (that is the behaviour acceptability or appropriateness in the society). These two attitudes combine to produce an intention which leads to performance of the behaviour.

2.3.3 The Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) is an extension or modification of the Theory of Reasoned Action. In the TPB (Figure 3), behavioural intention is determined by: attitudes towards the behaviour (belief that a specific behaviour will have a concrete consequence), subjective norms (doubtful whether significant others will approve one’s behaviour, plus, personal motivation to fulfill the expectation), and perceived control (determined by the belief about access and effectiveness of the resources needed in order to act successfully). These are also conditioned by socio-demographic variables and personality traits as in HBM. TPB recognizes the influence of social network support and encourages the feelings of self control. Its limitations are however, overemphasis on psychological factors, and under-valuing of structural factors like limited access or availability of resources.
2.3.4 The Socio-behavioural or Andersen Model

This is a Healthcare utilization Model. It was specifically developed to investigate the use of biomedical healthcare services but have been extended to include other health care sectors (Kroeger, 1983). The important factors that are said to influence Treatment actions are grouped as Predisposing factors, Perception of the disorder, and Enabling factors. Predisposing factors include demographic and psycho-social factors such as age, gender, prior experiences with illness, formal education, general attitude towards health services, and knowledge about the illness. Perception of the disorder include perception of severity of illness, for example, total number of sick days for a reported illness, days missed from work or school and help from outside for care. Enabling factors include availability of services, financial resources to purchase services, and social network support. Treatment actions include medical facilities, home remedies (herbal, Pharmaceuticals), over the counter drugs from shops and traditional healers.
This model puts emphasis on the link of healthcare seeking behaviour with structural levels of healthcare service provision (Figure 4):

**Figure 4: The Andersen model**
Adapted from Kroeger, (1983)

### 2.3.5 The Model of the "Four As"

The "Four As" is another Healthcare utilization model which has been widely used by medical geographers, anthropologists and epidemiologists who mainly emphasize distance (both social and geographical) and economic aspects as key factors for access to treatment. The "Four As" stand for; Availability, Accessibility, Affordability, and Acceptability. Availability refers to the geographic distribution of health facilities and pharmaceutical products among others. Accessibility refers to transport, roads and so on. Affordability refers to treatment costs for the individual, household or family, and may be direct, indirect or opportunity costs. Acceptability refers to cultural and social distance, that is, characteristics of healthcare providers behaviour, gender aspects (non acceptance of being treated by the opposite sex) and use of excessive
bureaucracy in health care facilities (Good, 1987). The advantage of the “Four As” is the easy identification of key potential ‘barriers’ for adequate treatment.

2.3.6 The Pathway Model or the “Decision Making Model”

This model focuses on the path that people follow until they use different healthcare services. Starting with the perception of illness, it stresses on the importance of ‘significant others’ in the decision-making process (Good, 1987). Unlike others, this Model helps to appreciate the pivotal role of ‘significant others’ in illness negotiation and management (Figure 5).

![Figure 5: Good’s Model](Adapted from Good (1987))

Overall, these models indicate that four cognitive factors namely causality and control, risk, confidence (or self-efficacy), and beliefs about illness are important predictors of healthcare seeking behaviour. Causality and control refers to what has contributed to ill health and whether these factors are controllable. This variable is also referred to as locus of control. Individuals differ in the extent to which they can make changes in their lives. Some people believe that what they do and what happens to them is up to them and regard events as personally controllable.
(internal locus of control). In contrast, other individuals believe that events are largely not controlled by them but by outside forces (external locus of control).

Health seeking behaviour models have several advantages and recognize the role of an individual in healthcare seeking. However, their greatest disadvantage is in their view of the individual as a rational decision maker, systematically reviewing available information and forming behaviour intentions from these.

2.4 Social Capital and Healthcare Seeking Behaviour

Social capital has been variously defined as the social resources, norms and networks or processes and conditions within society that allow for the development of human and material capital. It is also described as the goodwill available to individuals or groups which includes feelings of gratitude, reciprocity, respect, and friendship. In the context of healthcare seeking behaviour, social capital is described as the goodwill and resources that emanate from an individual’s network of social relationships that includes information, influence, and solidarity available to individuals (Adler and Kwon, 2002).

There are two forms of social capital namely “bonding” and “bridging” (World Bank, 2004). The bonding social capital links members of a particular group. It is described as the impact of a collective’s internal ties and the substance of the network relationships within that collective (Adler and Kwon, 2002). For example, dense connections between parties within a group facilitate the development of self-enforcing norms and trust within a collective allowing the group to more easily attain communal goals. Bridging social capital are cross-cutting ties that bring different groups with unequal access to power, resources and influence together in a way that helps those with less power to benefit from the tie, either directly or indirectly. Compared
with the bonding social capital, bridging social capital’s focus is on an individual’s external social ties and how the social capital, as a resource within this network, is used for the individual’s private benefit (World Bank, 2004).

Two direct benefits of social capital that are relevant to healthcare seeking behaviours are information and influence. First, social capital may facilitate access to information and its timing which is a critical component of health. For example, individuals with access to medical personnel either directly or through associations may have a cutting edge of health information before others. Thus, they may be poised to act upon this before it becomes public knowledge.

The second benefit of social capital consists of influence. Individuals accumulate obligations from others in the network and leverage these commitments at a later time. Such individuals may be in a favorable position during healthcare seeking endeavors (Burt, 2000).

To measure social capital, researchers adopt a multidimensional perspective. This is due to its complex concept that is not likely to be represented by any single measure (Claridge, 2004). Two dimensions of social capital: structural dimension and relational dimension (Harpham et al., 2002) are adopted in this study. The structural dimension refers to the network structure’s overall pattern of connections between actors, that is, types of groups and networks and the extent of their contributions to other members of these networks (World Bank, 2004). The relational dimension refers to the nature of the personal relationship that develops between specific people (Nahapiet and Ghoshal, 1998). It is the less tangible side of social capital that refers to values, beliefs, attitudes, behaviour and social norms (extent to which neighbours can be called upon to provide social support). These values include the trust, solidarity and reciprocity that are shared among members of a community and that create the conditions under which communities can work together for a common good (Krishna and Shrader, 1999).
While many factors make relational social capital weak or strong, trust plays a pivotal role. Trust has been conceptualized as a willingness to be vulnerable—placing one’s welfare in the hands of others—and a feeling of positive expectations—an individual’s confident beliefs that another will behave in a beneficial manner (World Bank, 2004). Being embedded in a network gives rise to a form of trust known as relational trust (Nahapiet and Ghoshal, 1998). Relational trust therefore refers to a trustor’s confident beliefs that a trustee will act beneficially because the trustee cares about the trustor’s welfare which emerges from repeated interactions between individuals over time resulting in feelings of reliability and positive expectations. Relational trust is based on continual reciprocity—the notion that “I’ll do this for you now, but you will do something for me later” (Adler and Kwon, 2002).

Social capital serves an extremely useful purpose in healthcare seeking behaviour as it provides a means of shifting the focus from individuals to social groups and the social embeddedness of the actions of individuals. In relation to the health of individuals, there is growing evidence that high levels of social capital have a positive effect, that is, the benefit (health) is attributed to social structures and not on individuals alone as most healthcare seeking studies attempt to do (Mckian, 2003).

While it is explicitly acknowledged that social capital enables healthcare seeking, there is a gap in the literature regarding how social capital and personal factors such as cognitive properties interplay and influence healthcare seeking behavior.