HEALTH SEEKING BEHAVIOR AMONG NURSES WORKING IN PUBLIC HOSPITALS IN KAKAMEGA COUNTY, 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.

I dedicate this thesis to the humility of perseverance; To God for His love, and to my family at large, all good things in life are you. To Ijonah, Mugusi, Bronchiol, Darren, Arthur and Nelly, you wonderful people are my inspiration and strength to carry on each day.

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LIST OF ABBREVIATIONS.

BScN	Bachelor of Science in Nursing.
CCC	Comprehensive Care Clinic.
CH	County Hospital.
CI	Confidence interval.
CIC	Co-operative Insurance Company.
CNS	Central nervous system.
CRH	County referral hospital.
CVS	Cardiovascular system.
ECN	Enrolled Community Nurse.
GIT	Gastrointestinal tract.
GOK	Government of Kenya.
GUT	Genitourinary tract.
HIV	Human Immunodeficiency Virus.
HND	Higher National Diploma.
HSB	Health seeking behaviour.
IBM	International Business Machines.
KDHS	Kenya demographic health survey.
KIPPRA	Kenya Institute for Public Policy Research and Analysis.
KNBS	Kenya National Bureau of Statistics.
KRCHN	Kenya Registered Community Health Nurse.
KRN	Kenya Registered Nurse.
KRN/M	Kenya Registered Nurse/Midwife.

KUERC	Kenyatta University Ethics Review Committee.
MOH	Ministry of Health.
MSSD	Musculoskeletal system disorder.
NACOSTI	National Commission for Science, Technology and Innovation.
NHIF	National Hospital Insurance Fund.
OR	Odds ratio.
RTI	Respiratory tract infection.
SARAM	Service Availability and Readiness Assessment Mapping.
SBE	Self breast examination.
SCH	Sub-County Hospital.
SE	Standard Error.
SF-12v2	Short Form 12 item (*version 2*).
SPSS	Statistical Package for the Social Sciences.
UAP	Union des Assurances De Paris.
UK	United Kingdom.
US	United States.
USA	United States of America.
WHO	World Health Organisation.

DEFINITION OF TERMS.

Enabling factors: These are factors that facilitate and reinforce or impede help seeking based on their degree of availability e.g., health insurance coverage, social support.

Health behaviour: These are observable actions of individuals aimed at detecting or preventing disease and improving of well being.

Health seeking behaviour: Theses are actions that people resort to undertake in the setting of perceived ill heath for the purpose of finding an appropriate remedy. In this study, it refers to health care utilization.

Health: a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Ill-health: a body or mental state that is deemed undesirable, consequently intervention to remedy that condition is justified.

Illness behavior: the way in which symptoms are perceived, evaluated and acted upon by a person by going in search of a relief to fulfil a health need.

Illness: Subjective feeling of being unhealthy that may or may not be related to disease.

Need factors: Need factors that put a person in a service-requiring state and include a person's perception of his health.

Negative health behaviour: This is health behaviour that is not in tandem with the expected maintenance of health.

Predisposing factors: These are inherent motivational forces; tied to values and attitudes that provide reasons for an individual to seek help when ill.

ABSTRACT.

Health seeking behaviour refers to actions undertaken by a person who perceives self to be ill for the purpose of finding an appropriate remedy. Nurses as gate keepers of health are expected to seek formal treatment when they are taken ill because this is what they teach and expect of their patients. Their working conditions world over have been described as squalid with long working hours, often cited as accruing from workload and the general nature of nursing work, a scenario that predisposes them to occupational health hazards at the same time denying them time off to look after their own health. Nurses are knowledgeable about disease and its treatment, have access to health care and health insurance. However, there is evidence that nurses engage in self treatment and kerbside consultations, a complete contrast of what they expect of their patients. It is in this regard that health seeking behavior among nurses in Kakamega County was investigated. The main objective of the study was to explore health seeking behaviour among nurses working in public hospitals in Kakamega County. A cross-sectional study was carried out in Kakamega County. Data was collected using self administered questionnaires and subjected to univariate, bivariate and binary logistic regression analysis. The study found that 62% (n=116) of the nurses utilized formal health care when they were last ill, 33% (n=61)) engaged in voluntary screening services and 34.8% (n=65) said that they knew their health would be better if they engaged in health promotion activities. Majority, 70% (n=81) of the females utilized formal health services as opposed to 30% (n=35) of the males. Increasing nursing education seemed to drive informal treatment, as 79.3% (n=92) of those with a diploma and below utilized formal care as opposed to 20.7% (n=24) of the nurses with a higher diploma and above. Further, there was a significant association between predisposing factors of number of years worked as a nurse (χ^2 = 6.072, df= 1, p=0.014); and support nurses receive from the immediate supervisor (χ^2 = 5.068, df= 1, p=0.024) with health seeking behavior. There was also a significant association between enabling factors of satisfaction with health services accessible to nurses in the County (χ^2 = 8.548, df= 1, p=0.003) and the quality of health services in the County (χ^2 = 8.680, df= 1, p=0.003) with health seeking behavior. Finally, there was a significant association between the need factors of severity of illness (χ^2 = 8.628, df= 1, p=0.003) and current general health (χ^2 = 8.086, df= 1, p=0.004) with health seeking behavior of nurses. The study also found that nurses whose general health was good were less likely to use formal care (β= -0.822, OR= 0.439, p= 0.044, 95% CI= 0.197-0.979). The study concludes that the predisposing, enabling and need factors are significant in explaining the health seeking behavior of nurses in Kakamega County and recommends empowering young and male nurses to utilize formal care through education. It also recommends that the County involves nurses in investing in quality health care.

CHAPTER ONE: INTRODUCTION.

1.1 Background of the study.

Nurses form a fundamental part of the health workforce worldwide and their contribution is essential to delivering safe care. Health care is only safe to the extent that the person providing it is also of good health. There is growing interest in the health of the health care provider stemming from the realisation that a healthy population depends on a healthy workforce that leads as an example. This has stimulated countries like China to start programs aimed at improving their health professionals' health. With increasing morbidity in the health profession, the health of the nurse has to receive scrutiny by urgently seeking ways that enhance their utilization of health services if they have to make health seeking behaviour advice to patients realistic (Chen et al., 2008). An ill health nurse is incompetent to provide health care and therefore the quality of care provided to patients will be substandard; a serious public health concern (Carlson & Warne, 2007; Bradley, 2009; Blake *et al*., 2011; Helfand, 2013; Mbaisi *et al*., 2013). Nurses, like doctors think that they are omnipotent and invisible, but there is increased morbidity among them due to the demanding nature of their work (Department of health UK ,2010 ; Judkins, 2005; Wolf *et al*., 2006 ;Agaba *et al*., 2011; Anonymous, 2012; Tuckett *et al*., 2014). They often practice presenteeism which is made worse by a conspiracy of silence in the medical profession about the health of their peers. Their health needs are unmet, being cited as poor beneficiaries of the health services they offer due to a multitude of predisposing, enabling and need factors (Harrison, 2008; Landry & Miller, 2010; Naidoo, A. *et al*., 2013). This scenario is contrary to the advice they give to their patients, "*to immediately seek medical treatment when ill*". The link

between the health of the nurse and the health of the public is direct (Wakaba *et al.*, 2014*)*, with observation that their health seeking behaviours are likely to be emulated by patients, a situation that calls for them to consciously avoid perceived negative health behaviour. Propositions that increasing knowledge causes health behaviour change have been found to be implausible even among nurses; the masters of medical knowledge (Rush, Kee, & Rice, 2010 ; Blake *et al.*, 2011). There is an obvious negative impact on health not only for the individual nurse but also the public occasioned by inappropriate health seeking behaviour (Alvarez & van Leeuwen, 2011). Nurses are prosocial and altruistic (Weinstein & Ryan, 2010) making them most trusted, yet they neglect their own health because they believe that patients will suffer in their absence (Rush *et al.*, 2005; Urban, 2014). To be in tandem with efforts of other countries, Kenya needs to urgently address herself to the health care needs of her health profession, particularly the majority nurses, a reality that the Kenya health policy 2012-2030 does not adequately address itself to (Sousa *et al*., 2014). The Kenya health policy 2012-2013 is not explicit on the health of her health providers, (Harrison *et al.,* 2013), yet their working conditions are more demanding and unfavourable (van der Doef, Mbazzi, & Verhoeven, 2012;Wakaba *et al*., 2014). It would be proper for Kenya to adopt what other countries have started; improving the health of their health professionals (Chen *et al.*, 2008).This exercise will be preposterous without information on health seeking behavior of nurses: a feat this study sought to achieve

1.2 Problem statement.

Nurses make the majority healthcare providers and their health is important not only as members of the general public but also as providers of health care. In Kenya they formed

72% of all health professionals in 2010 (Luoma *et al*., 2010). They are the '*first line*' staff in health care. Their work is stressful and hazardous (Jimenez *et al*., 2010), predisposing them to work-related ill health not only in the scope of occupational hazards like Ebola (Hewlett, 2005) but also limits their ability to achieve a work-life balance (Fronteira *et al*., 2011; Letvak, 2013). While, (2014) observes that nurses lack self-care discipline, experience substantial role changes in their interpersonal relationships making them poor role models to their patients. Kakamega County is the second populous County yet it's nurse patient ratio of 34.87:100,000 is below the national average of 51.5:100,000. The most populous County, Nairobi with double the population has a nurse patient ratio of 88.74: 100,000 (MOH, 2012). This means the nurse in Kakamega County has a lot of work pressure to meet patient health care needs, a situation that could compromise not only the nurses health but also his/her engagement with health care when ill.

1.3 Justification.

The utilization of health services by Kenyans has been reported to be low (KNBS, 2010). The constitution of Kenya, in keeping with the WHO guarantees health to all individuals as a basic human right, while the Vision 2030 identifies universal health care as a preconditional pillar for transforming Kenya to a middle income economy. In this regard, universal health care initiatives must purposively target and benefit the nurses qualitatively and quantitatively for them to impact the public. Although health seeking behaviour studies dominated the 1990's to 2000's (Babitsch *et al.*, 2012), not much is known about health seeking behaviour among nurses in Kenya.

1.4 Research questions

1. What predisposing factors influence health seeking behavior of nurses in Kakamega County?
2. What enabling factors influence health seeking behavior of nurses in Kakamega County?
3. What need factors shape health seeking behavior of nurses in Kakamega County?

1.5 Null hypothesis.

1 Health seeking behavior among nurses in Kakamega County is not influenced by predisposing factors.

2 Health seeking behavior among nurses in Kakamega County is not influenced by enabling factors.

3 Health seeking behavior among nurses in Kakamega County is not influenced by need factors.

1.6 Broad objective

To establish the health seeking behaviour among nurses working in public hospitals in Kakamega County.

1.7 Specific objectives

1 To identify the predisposing factors influencing health seeking behavior of nurses in Kakamega County.

2 To determine the enabling factors influencing health seeking behavior of nurses in Kakamega County.

3 To investigate the need factors that shape health seeking behavior of nurses in Kakamega County.

1.8 Significance of the study.

The findings of this study not only makes the nursing profession in the County and the Country at large understand their own health habits therefore making their advice to patients realistic and effective, but also suggests designing and implementing effective programs aimed at enhancing access to quality health services by nurses, therefore ensuring that the public will be served with a work force that is willing to lead as an example in health care utilization and promotion. This is expected to have trickledown effect on the residents of Kakamega County who will not only be served by a healthy workforce, but will also draw inspiration from how their nurses engage with the healthcare system. The barriers that are in the help seeking pathways of nurses have also been uncovered and it is hoped if strategies to remove them are adopted, it will benefit the entire County population.

1.9 Limitations of the study.

The cross-sectional nature of this study could not infer causation of health seeking behaviour. This study also relied on self- reports for health care utilization and this may be subject to bias, given the nature of the respondents, as nurses they may have the compulsion to say socially acceptable thing, although self report use as a measure of health care utilization has been validated in other studies elsewhere.

1.10 Conceptual framework.

Health seeking behavior can occur for both actual and potential problems. When it occurs for actual problems, it is called illness behavior and when it occurs for potential problems, it is called health behavior (Babitsch *et al*., 2012). This study utilized the Andersen behavioural model, **figure 1** to explore health seeking behaviour of nurses in

Kakamega County. This conceptual framework best helps understand human behaviour in relation to health care utilization. The framework is comprised of one dependent variable, health seeking behaviour and three interrelated groups of independent variables: predisposing factors, enabling factors and need factors. The dependent variable; health seeking behaviour is the utilization of health services to avert negative health, thus called health behaviour or the utilization of health services to restore optimal health, thus called illness behaviour for the purpose of achieving constructive and purposeful engagement in life events of the nurse. The three independent variables interact in a complex way to create a triadic space within which health care utilization exists. This trust- psychosocial-geographic space is the continuum within which health is pursued, enjoyed and maintained through health seeking behaviour. Nurses as healthcare providers, have "*express physical access*" to health care and have the mandatory NHIF cover. Further, they are actively involved in appraising the health status of their patients, have knowledge on illness and are the major patient educators. Assessing the interaction of these factors in understanding their utilization of health care is justified.

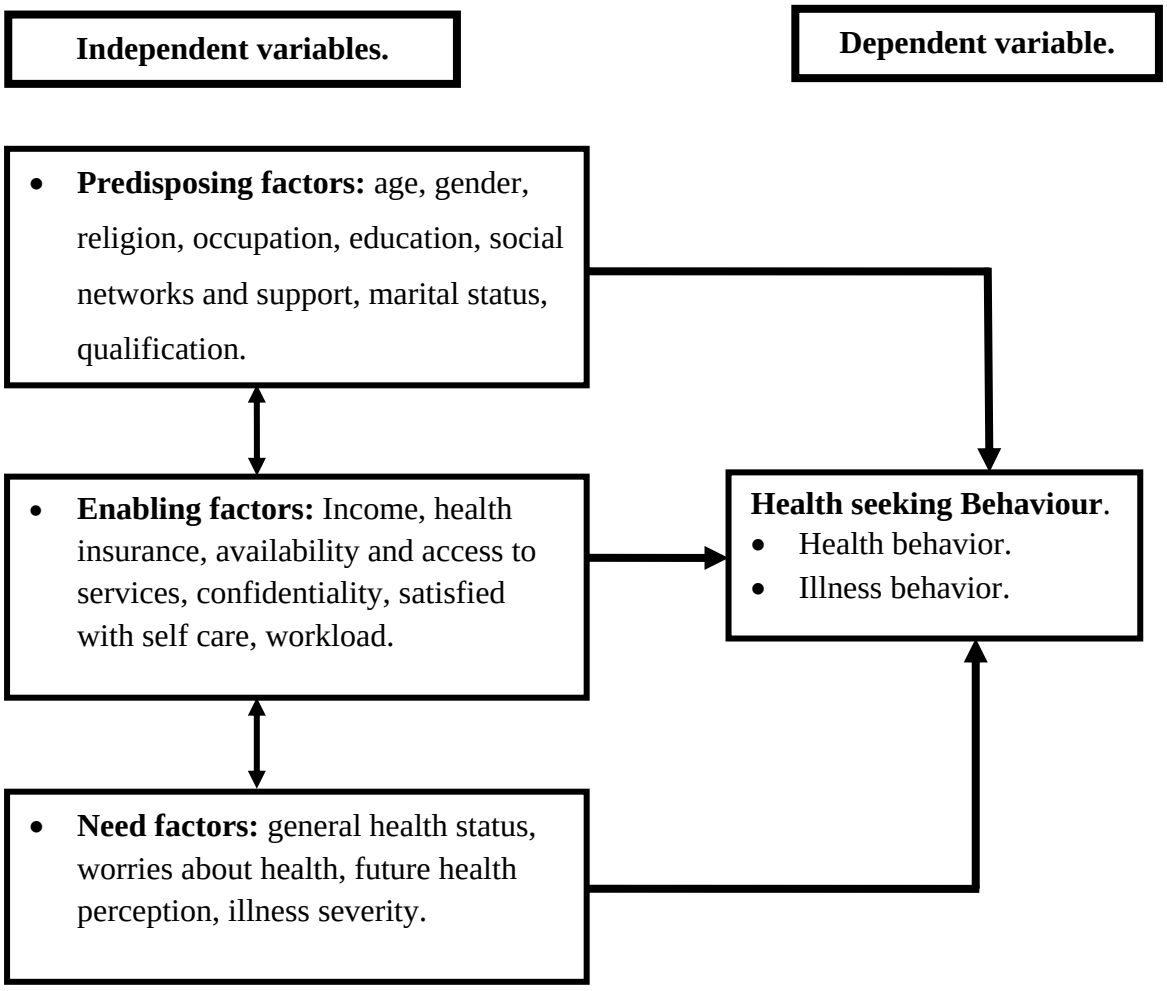

Figure 1 Conceptual framework; Source: Adapted from Andersen and Newman, (1995)

CHAPTER TWO: LITERATURE REVIEW.

2.0 Health seeking behaviour: Theoretical approaches.

Health seeking behaviour has been studied extensively. Several theories have been utilized in health seeking behaviour studies (Ricketts & Goldsmith, 2005; Hausmann *et al.*, 2012). An overview of the theories is presented here.

The health belief model, developed by G.M. Hochbaum in 1958, has four constructs; perceived seriousness of the disease, perceived susceptibility, perceived benefits, and perceived barriers (Taylor, D *et al.,* 2006), which in combination can be used to explain health seeking behaviour. The greater the seriousness of the disease, the more the person will change behaviour or will seek treatment (Cockerham *et al.*, 2014).

Theory of reasoned action developed in 1975 by Fishbein and Ajzen proposes that a person's health behaviour is determined by his intention to perform the health behaviour. This intention is itself determined by the person's beliefs, attitudes, norms, intentions and his perception of how significant others approve of or otherwise of the behaviour. The theory of "four A's" addresses the availability, acceptability, affordability and accessibility of health services (Glanz *et al*., 2008).

Abraham Maslow hierarchy of needs theory intimates that individuals always aim to attain a higher level of satisfaction other than their currency. In the continuum of health, people are always seeking to attain a higher level of well being by engaging in behaviour that does not threaten the comfort of good health. The motivation Hygiene theory by Frederick Herzberg identifies two factors that influence satisfaction. He observes that humans have needs that emphasize on avoidance of loss of life, hunger, pain and other

fears and those that compel the individual to realize his potential. It is in this quest to avoid life fears that people look for motivators for good health (Miner, 2005).

McClelland's theory of needs asserts that an individual's specific needs are a function of time and experience. He views needs as a function of achievement, affiliation and power. Individuals tend to avoid low and high risk situations that may destabilize them. McClelland did not look at hierarchy as a concept but saw the needs as occurring simultaneously. He placed emphasis on achieving needs positing that individuals with high need of achievement have five distinguishable characteristics; responsibility for finding solutions to difficulties, a preference for immediate feedback on performance, avoidance of easy attainable and highly difficult goals, enjoyment of challenging yet achievable tasks and preference for intangible e.g. knowledge or health as opposed to tangible e.g. money rewards (Friend, 2010).

The purpose of presenting the above theory review is to highlight the amount of research that has gone into theorizing health seeking behaviour. The Andersen's Health Care Utilization model suggests that predisposing factors, enabling or impeding to use factors and their need for care determine health care use.

2.1 Health seeking behaviour of nurses: Global situation.

Nurses form a large proportion of the health workforce globally. Their *first line* contact with patients has two pronged implications both for their health and practice and for public health and policy. One, they can be a source of health promotion to the patients they interact with if they are seen to be healthy role models (Helfand, 2013) and two, this *first line* contact can predispose them to contract infections form their patients particularly where these are highly infectious like Ebola (Hewlett, 2005). Nurses' health

has continued to generate a lot of interest. Dr. Frank Speizer (1976) and later Dr. Walter Willet (1989) designed an epidemiological cohort among nurses to assess the risk factors for cardiovascular diseases and Cancer. These studies dubbed the Nurses' Health Study have generated a lot of data on women health that has been used to shape health care policy of women particularly in the US (Khalili *et al*., 2013). Besides this, many other studies, mainly cross-sectional have been done to explore how nurses engage with health care systems in different settings that have recognizes the importance of the interconnectedness of the factors which determine the utilization of health services.

2.2 Predisposing factors influencing health seeking behaviour.

2.2.1 Age.

Age influences health, its perception and its pursuit either alone or in combination with other factors. Young people have good physical health and cope well with job related stress (Musshauser 2006; Misevičienė *et al*., 2013), but it may also be the age that is associated with high behavioural risks and drug use. However, mental health gradually increases with age (Fragar & Depczynski, 2011; Oyama & Fukahori, 2013). In a cross-sectional study in Taiwan the age group associated with highest role strain was 30-40 years (Lou *et al*., 2007). Cleary *et al*., (2012) found reduced health care utilization by younger nurses who preferred self treatment.

2.2.2 Gender

Gender is a social construct (*Principles of gender-specific medicine*, 2010). Nursing is female dominated and men in nursing face barriers to the extent that they are referred to as "*male nurses*" as opposed to "*nurse*" (Wolfenden, 2011; Emeghebo, 2012; MacWilliams, Schmidt, & Bleich, 2013; Valizadeh *et al*., 2014). In Kenya, male nurses

are called "*daktari*" which may enforces a culture of invincibility in them (Kouta & Kaite, 2011), akin to that observed in doctors (Harrison, 2008; Landry & Miller, 2010; Garelick, 2012).

A Jamaican study found that more female health workers were either not concerned about their health or reported poor health and at the same time they had the highest prevalence of probable mental ill health (Lindo *et al*., 2009). Female nurses have higher health problems because of the demands of their nurturing duties in the home, lack of job control compounded with inadequate social support from work, that aggravate declines in their physical health (Mojoyinola, 2008; Portela *et al*., 2013). A cross-sectional study in Kenya found that female nurses incurred percutaneous sharp injuries more than males (Mbaisi *et al*., 2013). Whereas women are more likely to report ill health, they are also more likely to seek treatment (Musshauser 2006; Lindo *et al*., 2009).

2.2.3 Religion.

Kenya is a multi-religious; with over 90% of Kenyans as Christians (KNBS, 2010). Nursing has been constructed as a calling from God to serve the sick (Nelson, 2001, Ch.1). A correlation study in the USA found that spirituality was related to well managed stress levels of the critical care nurses (Campbell, 2013). Similarly, a Brazilian and an Iranian study found a strong correlation between religiosity and quality of life among nurses (Lucchetti *et al*., 2013).

2.2.4 Occupation.

Nursing, like medicine is a demanding, stressful and hazardous career that lacks job satisfaction and has a high degree of burn out (Ravari *et al*., 2012; Urban, 2014; Munabi *et al*., 2014), that calls for resilience and hardiness. These factors have been associated

with reduced personal control over stress (Oyama & Fukahori, 2013), leading to burnout, less sleep at night, daytime exhaustion that causes impaired judgment (Henwood *et al*., 2012) in a profession where one is exposed to various blood-borne pathogens (Mbaisi *et al*., 2013). Suckling *et al*., (2006) found that 30% of nurse respondents had been exposed to a needle stick injury. Working conditions for nurses in Mathari National Teaching and Referral Hospital were reported to be up to expected standards (Ndetei *et al*., 2007), although (Barasa, 2012; Ojakaa *et al*., 2014) studying in different hospitals reports this to be contrary. This means nurses' work environments influence work health relationship.

2.2.5 Education.

The training of a nurse is a vigorous and meticulous endeavour that enables them to have vast medical knowledge on the benefits of health behavior (Blake *et al*., 2011). They are thus expected to have superior health seeking behaviors and be role models for their patients. However, like everyone else, they face uncertainty about the meaning of disease and adopt a wait and see approach (Wallace *et al*., 2009; Garelick, 2012). Given that they know the implications of illness on their functionality, they tend to trivialize the disease and rationalize both the symptoms and the treatment by delaying help seeking (Kouta & Kaite, 2011), engaging in informal consultations or resorting to self treatment (Kay & Clavarino, 2008).

2.2.6 Social networks and Social interactions.

Nursing is stressful, a construct that begins in early education (Jimenez *et al*., 2010), and accepted as a norm. Many studies have linked stress to burn out (Garrosa *et al*., 2010; McCann *et al*., 2013). Availability of social support correlates with better health and to

adequately handle stress, studies have identified social coping strategies to cope with stress. Social coping strategy refers to the sharing a problem with someone, either a relative or a colleague.

A Spanish study found that nurses who shared their difficulties with someone had low levels of stress (Garrosa *et al*., 2010). This finding is in agreement with other findings that showed that a nurses' wellness was better with good supervisor-employee relationship (McNeely, 2005; Brunetto *et al*., 2011), while a US study found that nurses lacked social support from their superiors, which impacted badly on their view of the profession (Emeghebo, 2012). Ojakaa *et al*., (2014) found that health professionals enjoyed a great social support from their supervisors.

2.2.7 Culture.

Health beliefs include the person's attitudes, values, and knowledge towards the health care system. The original Anderson model emphasised lay beliefs about causation (Hausmann *et al*., 2012). A Jordanian study found cultural beliefs as significant in determining the practice of SBE for cancer screening among female nurses (Alkhasawneh, 2007), findings that were identical to a Turkish population of nurses (Canbulat & Uzun, 2008).

2.3 Enabling and hindering factors influencing health seeking behaviour.

2.3.1 Cost and health insurance.

Universal coverage of health is aimed at ensuring that individuals use health services they need without being constrained by cost (WHO, 2010). People with higher incomes have better health because they can afford the cost of care. Nurses as civil servants are beneficiaries of the NHIF civil service health scheme that is provided by GOK. Nursing

is fairly well paying job, an important enabling factor to access and utilize health services (Babitsch *et al*., 2012).

2.3.2 Embarrassment.

There is stigma and a professional culture of discomfort in seeking help among health professionals (Garelick, 2012; Wallace *et al*., 2009; Iacono, 2010; Au, Gossage, & Bailey, 2008). They are deterred from seeking treatment because they fear being seen as weak when they concede ill health (Kay *et al*., 2012). They also struggle with the fear of burdening their colleagues with their health needs (George *et al*., 2014) reinforcing the "illness belongs to patients" perception (Au, Gossage, & Bailey, 2008; Moll, Eakin, Franche, & Strike, 2013).

2.3.3 Time.

Nursing is a time demanding profession in all parts of the world, creating a great sense of obligation to patients, colleagues and the organization (Wallace *et al*., 2009; McCann *et al*., 2013). This sense of obligation makes one feel powerful (Fox *et al*., 2009) to the extent that they believe illness is for patients, and that they are there for patients, thus relegating their own health (Nahm *et al*., 2012). A Norwegian study found that physicians were reluctant to attend screening programs due to forgetfulness, lack of time or due to belief that they knew their own health to the extent that they thought they were at low risk for the disease in question (Frank *et al*., 2009), factors that are cross-cutting in medical profession.

2.3.4 Satisfaction with self care.

Self care in the medical profession is common. In Nigeria, it was found that 98.6% of the respondents had ever self prescribed, with 68.3% of these having had self prescribed

within the last three months (Agaba *et al*., 2011). In China, 64% of doctors did not seek help from another physician (Chen *et al*., 2008).

2.3.5 Fear of confidentiality.

Medicine has the professional culture of discomfort in seeking help (Wallace *et al*., 2009; Garelick, 2012). Evidence shows existence of consultations that do not follow laid down protocols are rampant within the medical profession (Figley *et al*., 2013), This unfortunate scenario has been attributed to perceived trust one has in the physician they choose for fear of confidentiality breach if they follow laid down protocols (Fox *et al*., 2009; Anonymous, 2012). However, a Chinese study did not find confidentiality as the main reason as to why respondents chose informal consultation (Chen *et al*., 2008). Health providers determine the confidentiality of health information, a key issue that has been identified as a barrier to health care seeking (Kay & Clavarino, 2008). Confidentiality dilemma reinforces what Wallace *et al*., (2009) call "a conspiracy of silence" within the profession.

2.3.6 Work load.

Workload predisposes health workers to occupational hazards and also hinders them from attending to their own health needs (Myers, 2008, ch.1; Frank *et al*., 2009; Lemaire & Wallace, 2010; Skinner *et al*., 2011). Health professionals are forced by work demands to resume working even when sick (Fox *et al.*, 2009). Studies in Canada found that physicians spent an average of 38 hours per week on patient care and an extra 11 hours on other professional activities (Frank *et al*., 2009), findings that are consistent with longer than 40 hours per week in China (Wu *et al*., 2013). Long working hours, common in health profession, predispose them to ill health (Trinkoff *et al*., 2011*; Bogossian et*

al.,2014). Due to endemic shortages of health care providers world over; nurses are and will continue to be exposed to risks that predispose them to poor health as a result of increased workloads and long working hours that lead to burnout (Frank *et al*., 2009; Chankova *et al*., 2009; Collier, 2012; Karanikola & Kaite, 2013). These factors have been linked to higher intentions of nurses leaving the profession, which may further aggravate shortage (Li, 2012). Though most works on workload have emphasized on physicians, nurses too experience huge workloads like them, given that they share working environments.

2.4 Need factors influencing health seeking behaviour.

The concept "need" describes those states of a person which create requirements for health care, putting him in a '*service-requiring state*' (Jahangir, Irazola, & Rubinstein, 2012). Need is the capacity to benefit from care, which largely is hinged on what the individual demands for. It is expected that individuals who perceive self as ill, should have a great demand for health care (Folland, 2007). Need factors include the one's perceived health status, self reported number of symptoms, in the setting of life limiting illness and a restriction in activities of daily living in this category of illness . It can stem from actual morbidity whose fear may be mortality or from the risk of morbidity for which prevention is the goal. Literature cites need as the major driver for health care use (Jahangir *et al*., 2012). This need is hinged on a person's health perception of his or her general health status.

2.5 General health status.

The vast medical knowledge nurses have makes them averse to need (Kay *et al*., 2012, Garelick *et al*.,2007) making it difficult for them to seek appropriate care. Health

problems in nurses have numerously been reported (Oyama *et.al,* 2013; Fronteira *et al,* 2011). While studying the health profile of pre-registration nurses, it was found that their health profile was very poor (Blake *et al*., 2011). A study on Self-rated health among Greek nurses found only 10.2% as having excellent health (Pappas *et al*., 2005). An Australian study found that nurses had good practices in regard to physical wellbeing (Happell *et al*., 2014), an observation that is encouraging because when nurses are involved in healthy lifestyles, they have a greater impact on their patients (Frank *et al*., 2013), because healthier nurses are better health promoters (Carlson & Warne, 2007).

2.6 Health Perception.

Theories that explain health seeking behaviour allude to health perception as a driver of help seeking. Health perception refers to a person's beliefs about his health; this belief may not be in tandem with objective assessment (Jahangir *et al*., 2012), a factor that distinguishes subjective illness report from the objective illness assessment. For example, the Health belief model explores an individual's self appraisal of health threat as a motivator to health behaviours (Cockerham *et al*., 2014). The Andersen model identifies health perception as one of the determinants of need (Folland 2007). People who have poor health perception tend to be dependent on the health care system (Frostholm *et al*., 2005; Holm & Severinsson, 2013). This dependency can be seen as a pointer to worthlessness and a precipice for possible violation of privacy. It is the first part that may be the boundary between taking on the patient role, that in nurses is in itself a barrier because of the belief that illness belongs to patients (Hoving *et al*., 2010).

2.7 Health seeking behaviour.

Health seeking behaviour refers to actions that people resort to undertake for the purpose of finding an appropriate remedy that can occur for both actual and potential problems. When it occurs for actual problems, it is called illness behavior and when it occurs for potential problems, it is called health behavior. Illness behavior defines any act of going in search of a relief to fulfil a health need. While health behaviour refer to observable actions of individuals aimed at detecting or preventing disease and improving of well being (Babitsch *et al*., 2012). Though nurses, and other health professionals are limited by a utilitarian society to seek treatment from another health professional because this is what they expect of their patients (Helfand, 2013), study findings are contrary. A polish study found self prescription was rampant among nurses (Binkowska-Bury *et al*., 2013). In Nigeria, it was found that 98.6% of the respondents had ever self prescribed, with 68.3% of these having had self prescribed within the last three months (Agaba *et al*., 2011). In a survey to determine doctors' personal choices in Hong Kong, China; 64% of the respondents did not seek help from another physician (Chen *et al*., 2008), findings that are consistent with a Nigerian study that found that only 46.9% of the respondents consulted another physician when last ill (Agaba *et al*, 2011). An Israeli study found that though doctors had strong belief in screening tests, only 27.5% of the respondents had undergone the tests with 55.6% blaming it on lack of time (Peleg *et al*., 2013). Further, a Baltimore study found more than half of the participants as not having a regular meal schedule leading to poor eating habits and obesity (Nahm *et al*., 2012). In Kenya, Taegtmeyer *et al*., (2008), found that health care providers who had had a needle stick injury did not seek treatment because of the fear HIV testing.

2.8 Summary of the literature review.

Health seeking behaviour has been extensively studied and factors that influence health seeking behaviour are numerous. The literature recognizes the importance of the interconnectedness of the factors which determine the utilization of health services and contextualizes a person's health in its economic, cultural and psychosocial dimensions as a product of complex interaction between predisposing factors, enabling factors and need factors. Kenya, through Chapter 43 (1a) of the constitution recognizes the importance of health as resourceful fulcrum on which the socioeconomic development of Kenya envisaged in the vision 2030 is hinged. The Country recons that health services should meet the basic needs of the population, and that there should be a focus on all levels of disease control (KDHS, 2014). Conspicuously missing from the policy framework is a deliberate effort to address "*the fitness"* of health workers, in particular the nurse to provide health services to the population. The KDHS 2014 explores health service utilization among Kenyans, but does not narrow to a specific population. Nationally, there is paucity of information regarding how health professionals and in particular nurses engage with the health care systems when they take the patient role. Many of the studies on nurses health have focused on workforce (Wakaba *et al*., 2014), percutaneous injuries (Mbaisi *et al*., 2013), occupational safety (Taegtmeyer *et al.*, 2008; Suckling *et al.*, 2006) and motivation (Ojakaa *et al*., 2014). This study sought to explore the health seeking behaviour among nurses, the largest proportion of health care workers; a special population that is a gatekeeper of population health utilization and to use the information to improve the health situation of the nurses in Kakamega County and in Kenya at large.

CHAPTER THREE: MATERIALS AND METHODS.

3.0 Research design.

The study design was descriptive cross-sectional, that utilized quantitative method. The design was chosen because the data collected on health seeking behavior is a product of temporal and spacial factors. It was a prevalence study to evaluate factors that explain health seeking behavior among Nurses in Kakamega County. Several studies on health seeking behavior have found the design robust (Kay *et al*., 2012; Canbulat & Uzun, 2008; Garelick *et al*., 2007). The study was not expected to measure changes in status of health or health seeking behavior at different points in time, further logistical, time and cost issues also influenced the design choice.

3.1 Dependent variable.

The dependent variable in the study was health seeking behaviour operationalized as actions taken by the respondent to promote optimum wellness or recovery. The dependent variable was self reported health care utilization, that was dichotomized as **yes=1**; if respondent had consulted a health professional the last time one was ill and **No= 0;** for otherwise. The utility of the phrase "*when was the last time you were ill physically or emotionally*" was designed to tap respondent's subjective perception of being ill. This was intended to encourage respondent consideration of both emotional and physical illness when answering the question. The respondent's illness whether severe or not was such that they felt they needed to exhibit the reported health seeking behaviour. For those who chose to self-medicate when they were last ill, their perception of being ill did not warrant using formal care, but considered themselves ill enough to take action.

Self report is a common way of assessing health care utilization (Kjellsson, Clarke, & Gerdtham, 2014; Bhandari, 2006). The validity of self-reported health data depends on complex mental processes of recalling information that depend on the cognitive competence of the respondent, level of education and age (Short *et al*., 2009), a precondition that is satisfactorily met among the respondents in this study. Although the gold standard for health care utilization is medical records, their utility in this study was not possible because medical records come with inherent logistical problems like privacy and security, plus the fact that not all records of health care utilization are updated and centralized (Ritter *et al*., 2001). Despite the shortcomings of self reported health behaviour, studies have shown a high concordance between self report of physician use with medical records, with a Kappa of 0.8 (Reijneveld, 2001), further the trade-off between loss of data and length of recall determines the length of recall (Clarke *et al.*, 2008) . This study sought to examine the respondent's response to a single and salient health event in the respondent's health continuum within the year of study that is easy to be recalled. Further, due to the growing interest in the patient's perspective in health care, self-reported health reflects aspects of health such as disease severity and "non-hospital" diseases that are not captured in the more objective measures of health status and utilization.

3.2 Independent variables.

The independent variables were the predisposing factors, enabling factors and the need factors. The predisposing factors were individual factors like age, gender, religion; the enabling factors were the health system access factors like insurance cover, income, quality of health services and adequacy of the health services; while need factors were

self appraised premiums that an individual attached to his/her physical, mental and social well-being. These three factors are individually necessary but not sufficient in determining health care utilization. The factors interact in a complex way to create an environment within which health seeking behaviour is experienced.

3.3 Study location.

The study was conducted in Kakamega County (appendix 3), located in Western Kenya. Kakamega County has 132 government run health facilities ranging from a County Referral hospital to a dispensary distributed in six districts: Kakamega North (Malava), Kakamega Central (Lurambi), Kakamega South (Ikolomani), Kakamega East (Shinyalu) and Butere/Mumias. Numerous private and faith based facilities also provide health care services to the population in this County. The choice of Kakamega County is based on the fact that it is the second most populous County in Kenya but with a nurse patient ratio of 34.87 per 100,000 people less than the national average of 51.5 per 100,000 people (MOH, 2012); this means increased workload for the nurse in this County, which limits the nurses' work life balance.

3.4 Study population.

The study population was nurses working in public hospitals in Kakamega County. Nurses working in seven (7) health facilities were studied. These facilities were four (4) Sub-County hospitals, two (2) County hospitals and one (1) County referral hospital as listed in **table 3.1.** Kakamega County has one (1) County referral hospital, four (4) County hospitals, Seven (7) Sub-County hospitals, 34 Health centres and 86 dispensaries run by the government and several health facilities run by faith based organizations and Non-governmental organizations.

Table 3. 1 Distribution of nurses in the selected facilities in Kakamega County (source, County Chief Officer of Health, 2013).

District.	Name of facility	No. of nurses
Kakamega central	Kakamega County Referral Hospital.	241
Malava.	Malava Sub-County Hospital.	31
Butere/Mumias	Butere Sub-County Hospital.	31
	Matungu Sub-County Hospital.	25
Lugari	Lumakanda County Hospital	25
Likuyani	Likuyani County Hospital.	17
Ikolomani	Iguhu Sub-County Hospital.	16
Total		**386**

3.4 Sampling.

The County referral hospital, two County hospitals and four Sub-County hospitals were purposively selected because these facilities have higher service availability and readiness assessment index (GOK, 2014). The service availably readiness assessment mapping (SARAM) is a measure of the availability of basic inputs available in a health facility necessary to provide different optimal health services and the readiness of such a health facility to provide basic healthcare interventions to persons in need of healthcare. A sampling frame of nurses from each of the facilities was drawn and simple random sampling used to select nurse respondents.

3.5 Sample size.

The sample size was calculated using the following formula (Daniel, 1999):

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

Where:

n = required sample size,

z = confidence level at 95% (standard value of 1.96),

p= estimated prevalence of not seeking health care at all in Kenya was 38% (KNBS, 2010)

1-p = estimated prevalence of seeking health care in Kenya, estimated at 62% and;

e = the margin of error at 5% (standard value of 0.05).

This gave a sample size of 362 respondents. This sample was adjusted using the formula below (Yamane, 1967);

$$ns = \frac{n}{1+\frac{n}{N}} = ns = \frac{362}{1+\frac{362}{386}}$$

Where;

ns= new sample size.

n= sample size from Daniel's formulae calculation.

N=Study population.

The new sample size was 187 nurses.

Proportionate sampling was used to get the number of respondents from each facility as shown in **Table 3.2** below.

Table 3. 2 Number of respondents studied per facility in Kakamega County.

Facility	**Proportional calculation**	**No. Of respondents.**
Kakamega CRH	$^{187}/_{386}\,x241$	117 respondents.
Malava SCH	$^{187}/_{386}\,x31$	15 respondents.
Butere SCH	$^{187}/_{386}\,x31$	15 respondents.
Matungu SCH	$^{187}/_{386}\,x25$	12 respondents.
Lumakanda CH	$^{187}/_{386}\,x25$	12 respondents.
Likuyani CH	$^{187}/_{386}\,x17$	8 respondents.
Iguhu SCH	$^{187}/_{386}\,x16$	8 respondents.
Total		**187**

3.6 Data collection techniques.

Data was collected using self administered questionnaires. Need factors in the questionnaire tool were assessed using modifications of the SF-12v2 (McDowell, 2006). Other independent variables were assessed using adaptations from a questionnaire used by Chen *et al*., (2008). The problem of potential recall bias regarding health care utilization was controlled for by keeping the questions as unambiguous as possible, asking only one salient health event, "*when were you last ill?*"

3.7 Inclusion criteria.

Nurses who consented to participate in the study and had been working in the County for at least six months were included in the study because they are more familiar with the help seeking channels available in the County.

3.8 Exclusion Criteria.

Nurses who were on leave at the time of study and could not be reached easily were excluded from the study. Nurses who were reluctant to participate in the study were followed up three days later to see if they had changed their mind with regards to participation. A nurse who was still reluctant after this time was replaced with the next available respondent in the sampling frame. Nurses on attachment or internship were also excluded from the study because they do not form the core workforce of the County.

3.9 Pre-test.

The questionnaire tool was pretested at Navakholo Sub-County hospital in Lurambi constituency of Kakamega County where reliability coefficient of 0.85 was established; as observed by Bowden, (2002), that this exercise minimises collecting invalid data; similarly the integrity and validity of the tools were ascertained. The selection of the facility was convenient as it is a public hospital that has respondents with similar

characteristics like the study area. Navakholo Sub-County hospital has a total of 12 nurses, and all the 7 nurses who were on duty during the day of pre-test were included.

3.10 Validity and reliability.

The validity of the tool was established through expert opinion from experts in health seeking behaviour. Reliability was tested through test-retest method where the tool was given to the same respondents at an interval of four day and reliability coefficient of 0.85 was established. Although the appropriate time period between the repeated administrations of a questionnaire is at least a week (Terwee et. al., 2006), the choice of four days interval between the administrations of the questionnaires in this study was principally logistical.

3.11 Data collection and entry.

The data was collected using pre-coded self administered questionnaires. It was done over a two weeks period as it was not easy to get nurses who had been selected in the sampling frame at once. The response rate for completeness was 98.4% (n=184). Three respondents 1.6% (n=3) failed to attempt a single question each in the questionnaire tool, but these questionnaire met the threshold for completeness. The high response rate was attributed to the fact that the investigator issued the questionnaires directly to the respondents and therefore was in a position to follow up on completeness of the questionnaires when collecting them. Respondents selected in the sampling frame and were on night duty were given the questionnaires at night so that they could be collected the following morning. In the study period, there was a "*surgical camp*" at the Kakamega County referral hospital which necessitated recalling of all nurses on leave to come and

assist with the increased work, a coincidence that boosted the chances of getting the selected yet on leave respondents.

3.12 Data analysis.

After checking for completeness of the questionnaires the data was entered into the computer software IBM SPPS version 20 for windows. Univariate analysis was used to describe the distribution of each of the variables. Bivariate analysis was used to investigate the strength of the association between the outcome variable and the predisposing, enabling and need factors. Binary logistic regression was used to investigate the strength of the relationship between health seeking behavior and the independent variables. Logistic regression was used because this was prevalent data and that regression estimates can be transformed into odds ratio estimates. Level of significance was set at $p \leq 0.05$ (95% confidence interval).

3.13 Ethical considerations.

Approval to conduct the study was sought from Graduate School, Kenyatta University (appendix 7). Ethical clearance was obtained from Kenyatta University Ethics and Review Committee KU/359/1333(appendix 8). A Permit to carry out the study in Kakamega County was obtained from the National Commission for Science, Technology and Innovation permit no: NACOSTI/P/15/33439/8057 (appendix 6).

The Chief Officer of health services for Kakamega County government gave clearance to collect data from the County health facilities CGH/MOH/CIR/VOL1/5/89 (appendix 9), which was communicated to the Nursing officers' in charge of the facilities. Consent from the nurses was obtained with confidentiality and anonymity being guaranteed.

CHAPTER FOUR: RESULTS AND DISCUSSION.

4.1 Introduction.

This chapter presents the findings of the study. The predisposing, enabling and need factors that influence health seeking behaviour and their relationships are presented. Presentation of data analysis and the discussion of the findings of the study was based on the objectives of the study.

4.2 Findings by independent variables.

Using univariate analysis, the findings of the objectives of the study are presented.

4.2.1 Predisposing factors influencing health seeking behaviour.

As shown in **table 4.1**, majority of the respondents were female accounting for 65.8% (n=123) while males accounted for 34.2% (n=64) of the respondents. Concerning age of the respondents majority, 29.4% (n=55) belonged to age bracket of 30-39 years followed by age group of 40-49 years and above 50 years both at 28.9% (n= 108) and the least were below 30 years accounting for 12.8% (n=24). The modal age of the respondents was 40 years while the median and mean age was 41 years respectively. Majority, 78.6% (n=147) of the respondents were protestants, followed by Catholics accounting for 20.3% (n= 38) while the Muslim accounted for only 1.1% (n=2) of the respondents. Regarding the highest level of nursing qualification, majority 56.1% (n=105) were KRCHN, 13.9% (n=26) were BscN, 7% (n=13) had Higher Diploma in Nursing, 17.1% (n=32) were ECN nurses, 2.7% (n=5) were qualified at postgraduate level while 3.2% (n=6) were KRN and KRN/M. Majority of the respondents 76.5% (n=143) were married, 16.0% (n=30) were single while 8.5% (n=14) were separated or widowed. With regards to the number of years worked in the County, those who had worked for more than 10 years were the

majority, 48.1% (n=90) , followed by 1-5 years at 22% 9 (n=41) , 6-10 years at 18.7% (n=35) and the least were 6 months to 1 year at 11.2% (n=21). Majority of the respondents, 34.8% (n-65) said their support from immediate supervisors was moderate, 33.7% (n=63) said it was high, 12.8% (n=24) said it was very high, 9.6% (n=18) said it was very low while the least, 9.1 % (n= 17) said it was low.

Table 4. 1 Univariate analysis of predisposing factors that influence health seeking behaviour.

Characteristics		Frequency (n)	Percent
Age (years)	Below 30	24	12.8
	30-39	55	29.4
	40-49	54	28.9
	50 and above	54	28.9
	Total	**187**	**100.0**
Gender	Male	64	34.2
	Female	123	65.8
	Total	**187**	**100.0**
Marital Status	Married	143	76.5
	Single	30	16.0
	Separated/Widowed	14	8.5
	Total	**187**	**100.0**
Religion	Protestant	147	78.6
	Muslim	2	1.1
	Catholic	38	20.3
	Total	**187**	**100.0**
Highest level of nursing qualification	Post-graduate level.	5	2.7
	BscN	26	13.9
	Higher diploma in nursing	13	7.0
	KRCHN	105	56.1
	ECN	32	17.1
	KRN/ KRN/M	6	3.2
	Total	**187**	**100.0**
Years nurses have worked in the county	6 months-1year	21	11.2
	1 year-5 years	41	22
	6 years-10 years	35	18.7
	More than 10 years	90	48.1
	Total	**187**	**100.0**
Support from immediate supervisor.	Very low	18	9.6
	Low	17	9.1
	Moderate	65	34.8
	High	63	33.7
	Very high	24	12.8
	Total	**187**	**100.0**

4.2.2 Enabling factors influencing health seeking behaviour.

As shown in **table 4.2**, the net monthly income of the respondents was categorised into five; those nurses whose estimated net monthly household income was less than 30,000 Ksh. were the majority accounting for 42.8% (n=80), those whose estimated net monthly household income was between 31,000-50,000 Ksh. accounted for 39.6% (n=74), those whose estimated net monthly household income was 51,000-70,000 Ksh. were 9.6% (n=18) while whose income was above 90,000 accounted for 4.8% (n=9) of the respondents while the least, 3.2% (n=6) had estimated net monthly household income of 71,000-90,000 Ksh. Asked what they spent most of the household income on, majority 56.7% (n=106) cited school fees, 36.9% (n=69) cited food, 5.3% (n=10) cited health care while 1.1% (n=2) cited leisure as the great consumer of their monthly income. Further, majority of the respondents 96.3% (n=180) possessed NHIF as their insurance cover while 3.7% (n=7) had other covers like CIC, Jubilee and UAP, although majority of the respondents, 80.2% (n=103) were not satisfied with the adequacy of NHIF in catering for their health care needs. Those who decried inadequacy of NHIF cited lack of drugs in the facilities, inability to be served on NHIF based payment over the weekends and public holidays and the inability of NHIF to cover for specialized services like ophthalmic and dental procedures. With regards to the number of hours they worked per week, majority 66.3% (n=124) said that they worked between 40-50 hours, 30% (n=56) worked more than 50 hours and 3.7% (n=7) worked less than 40 hours. On work load; majority 62.6% (n=117) said work load was very high, 27.8% (n=52) cited workload as high while 9.6% (n=16) said it was moderate to low. With regards to satisfaction with the health services accessible to them in the county, majority 83.1% (n=153) said they were dissatisfied,

while 16.9% (n=31) said they were satisfied. Those who were dissatisfied cited lack of adequate personnel, inadequate health equipment and long queues when seeking consultation. Regarding the quality of health services that are available to them in the County, 78.8% (n=145) said they were dissatisfied while 21.2% (n=39) said they were satisfied. Asked if they were satisfied with the quality of health services they offer to their patients, majority 59.4% (n=111) said they were satisfied while 40.6% (n=76) said they were dissatisfied. Regarding where their preferred source of treatment would be in the event they took ill, majority 51.9% (n=97) said they would prefer public facility, 45.4% (n=85)cited private facility while 2.7% (n=5) would self treat.

Table 4. 2 Univariate analysis of enabling factors that influence health seeking behaviour.

Characteristics		Frequency (n)	Percent
Monthly household income	≤ 30,000	80	42.8
	31,000-50,000	74	39.6
	51000-70000	18	9.6
	71000-90000	6	3.2
	Above 90000	9	4.8
	Total	**187**	**100.0**
Preferred treatment source	Public facility.	97	51.9
	Private facility	85	45.4
	Self treatment	5	2.7
	Total	**187**	**100.0**
Insurance cover possessed by nurses	NHIF	180	96.3
	UAP	2	1.1
	Jubilee	4	2.1
	CIC	1	.5
	Total	**187**	**100.0**
Satisfaction with the adequacy of insurance cover	No	103	55.1
	Yes	84	44.9
	Total	**187**	**100.0**
Number of hours that nurses in Kakamega County spend working per week	Less than 40 hours	7	3.7
	40-50 hours	124	66.3
	More than 50 hours	56	30
	Total	**187**	**100.0**
Work load of nurses in Kakamega County	Low	1	0.5
	Moderate	17	9.1
	High	52	27.8
	Very high	117	62.6
	Total	**187**	**100.0**
Satisfaction with the health services that you have access to in this County	No	153	83.1
	Yes	31	16.9
	Total	**184**	**100**
Satisfied with the quality of health services that are available to you	No	145	78.8
	Yes	39	21.2
	Total	**184**	**100.0**

4.2.3 Need factors influencing health seeking behaviour.

As **table 4.3** shows; majority, 44.9% (n=84) rated their current health at the time of study as good, 31.0% (n=58) rated it as fair, 13.4% (n=25) rated it as very good, 8.6% (n=16) rated it as excellent and 2.1% (n=4) rated it as poor. Majority of the respondents, 31.6% (n=59) described their health as being about the same state as compared to a year prior to the study, 31.0% (n=58) described it as being good, 18.2% (n=34) described it as fairer, 15.0% (n=28) described it as very good while 4.3% (n=8) described it as worse compared to the preceding year. Regarding how nurses rated their physical health in comparison with that of other individuals of same age and gender, the majority,37.4% (n=70) rated it as being better; 34.8%, (n=65) rated it as being about the same 15.5% (n= 29) rated it as being as much better, 9.6% (n=18) rated it as being somewhat worse while 2.7% (n=5) rated it as being much worse. Regarding how nurses rated their psychological health in comparison with that of other individuals of their same age and gender, majority, 38.5% (n=72) rated their psychological health as better, 28.3% (n=53) rated it as about the same, 16.0% (n=30) rated it as much better, 13.4% (n=25) rated it as somewhat worse while 3.7% (n=7) as much worse. Regarding how nurses rated their health concerns 12 months preceding the study, majority, 34.2% (n=64) said they were extremely concerned about their health, 25.1% (n=47) were moderately concerned about their health, 15.5% (n=29) were somewhat concerned, 12.8% (n=24) of nurses slightly concerned while only 12.3% (n=23) were not concerned at all. Regarding the rating of how nurses expected their health to be in 2 years from the time of study a majority 34.8% (n=65) rated it to be good, 32.1% (n=60) rated it to be very good, 15.5% (n=29) rated it to be about the same, 10.2% (n=19) rated it be fairer while only 7.5% (n=14) rated it to be worse.

Table 4. 3 Univariate analysis of need factors that influence health seeking behaviour.

Characteristics		Frequency (n)	Percent
Rating current health	Poor	4	2.1
	Fair	58	31.0
	Good	84	44.9
	Very good	25	13.4
	Excellent	16	8.6
	Total	**187**	**100.0**
Rating of nurses' general heath in comparison to last year	Worse	8	4.3
	Fairer	34	18.2
	About the same	59	31.6
	Good	58	31.0
	Very good	28	15.0
	Total	**187**	**100.0**
Rating nurses' comparison of their physical health with that of other individuals of same age and gender.	Much worse than theirs	5	2.7
	Somewhat worse than theirs	18	9.6
	About the same as theirs	65	34.8
	Better than theirs	70	37.4
	Much better than theirs	29	15.5
	Total	**187**	**100.0**
Rating nurses' comparison of their psychological health with that of other individuals of same age and gender.	Much worse than theirs	7	3.7
	Somewhat worse than theirs	25	13.4
	About the same as theirs	53	28.3
	Better than theirs	72	38.5
	Much better than theirs	30	16.0
	Total	**187**	**100.0**
Rating nurses health concerns about their health in the preceding 12 months.	Not concerned at all	23	12.3
	Slightly concerned	24	12.8
	Somewhat concerned	29	15.5
	Moderately concerned	47	25.1
	Extremely concerned	64	34.2
	Total	**187**	**100.0**
Rating how nurses projected their health in 2 years after the study.	Worse	14	7.5
	Fairer	19	10.2
	About the same	29	15.5
	Good	65	34.8
	Very good	60	32.1
	Total	**187**	**100.0**

Asked for the reason as to why they said their health would be as forecasted, **figure 4.1** shows that most respondents 34.8% (n=65) cited that they intended to start engaging in health promotion activities like stress reduction, eating healthy and exercising, 27.2% (n=51) said they were trusting in God for good health. Those who did not have positive prospects about the future outlook of their health cited age related factors and poor economic returns for the future as barriers to achieving their ideal health status.

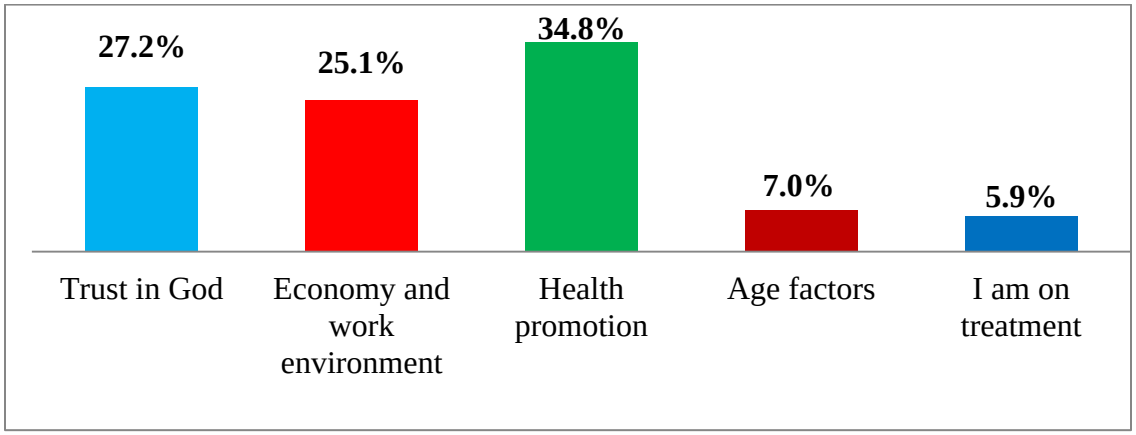

Figure 4. 1 Factors that will influence nurses' health outlook in 2 years.

4.2.4 Health seeking behaviour of nurses in Kakamega County.

Health seeking behaviour referred to actions that respondents resorted to undertake in the setting of perceived ill heath for the purpose of finding an appropriate remedy. Two components of health seeking behaviour were investigated in this study; health behaviour and illness behaviour. This section presents the findings of the outcome variable, health seeking behaviour.

4.2.4.1 Health behaviour of the nurses.

Health behaviour investigated self reported voluntary actions of the respondents aimed at detecting or preventing disease and improving well being. This component of the

outcome variable investigated if nurses engaged in voluntary screening services for the purpose of detecting disease

4.2.4.1.1 Voluntary screening undertaken by the nurses.

When asked about voluntary screening services, independent of a request from a health provider in the last 12 months, **Figure 4.2** shows that majority of the respondents, 67% (n=126) said they had never undertaken any voluntary screening service in the year preceding the study, while 33% (n=61) said they had undertaken one or more voluntary screening services. Of these, majority 66% (n= 40) were female while 34% (n=20) were male.

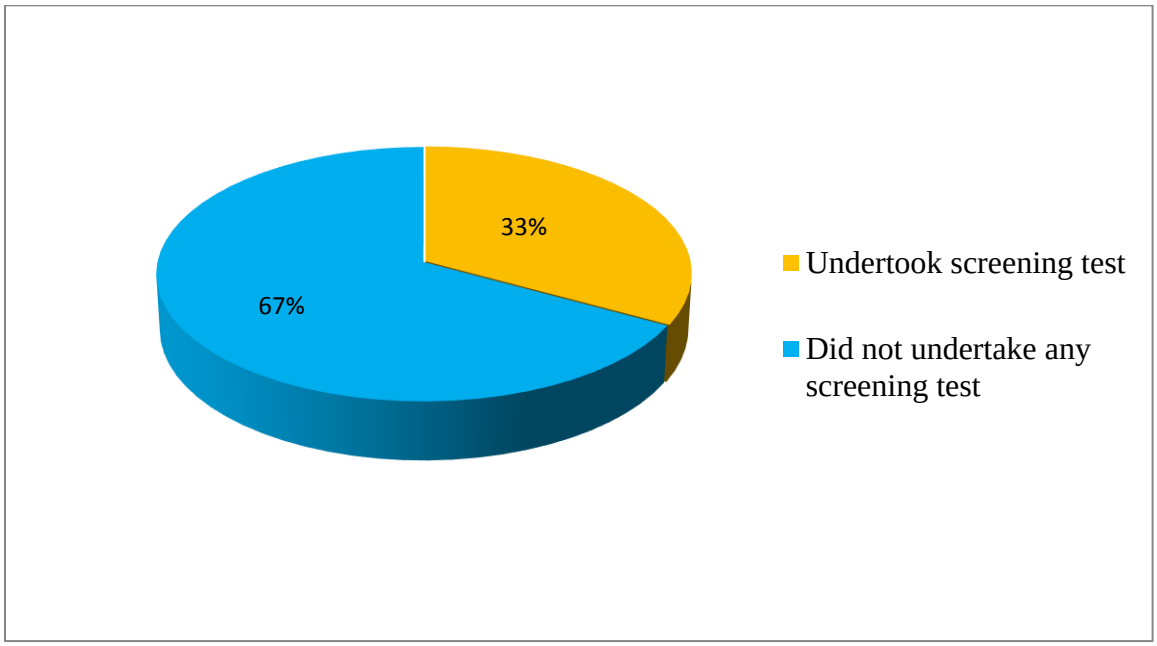

Figure 4. 2 Voluntary screening services undertaken by nurses.

Some of the voluntary screening services reported to have been undertaken included HIV screening, cervical cancer screening, breast cancer screening and screening for hypertension.

4.2.4.1.2 Reasons for undertaking voluntary screening services by the nurses.

Figure 4.3 shows that for those who undertook voluntary screening services (n=61), majority 46.0% said they wanted to be in control of their health, 20.0% said they knew they were at risk of disease, 16.0% said they were worried about their health, 10.0% said the test was offered for free, while 8.0% said they were concerned about their health.

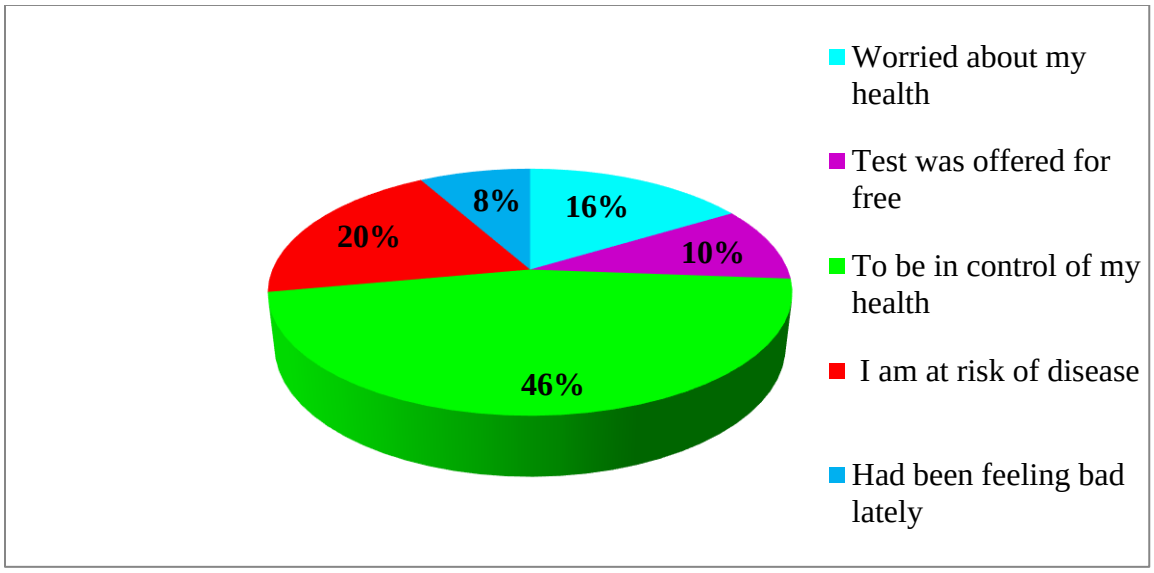

Figure 4. 3 Reasons for undertaking screening tests by the nurses.

4.2.4.1.3 Reasons for not undertaking voluntary screening services by the nurses.

Figure 4.4 shows that for those who had never undertaken any voluntary screening tests in the said period (n=126), majority 35.7% said they saw nothing wrong with themselves, 15.1% said they feared finding something worse, 14.3% said they lacked time to do the tests, 12.7% said they did not have a reason, 19% said lack of both money and the test they wanted prevented them while 3.2% attributed it to fear for their confidentiality not being guaranteed.

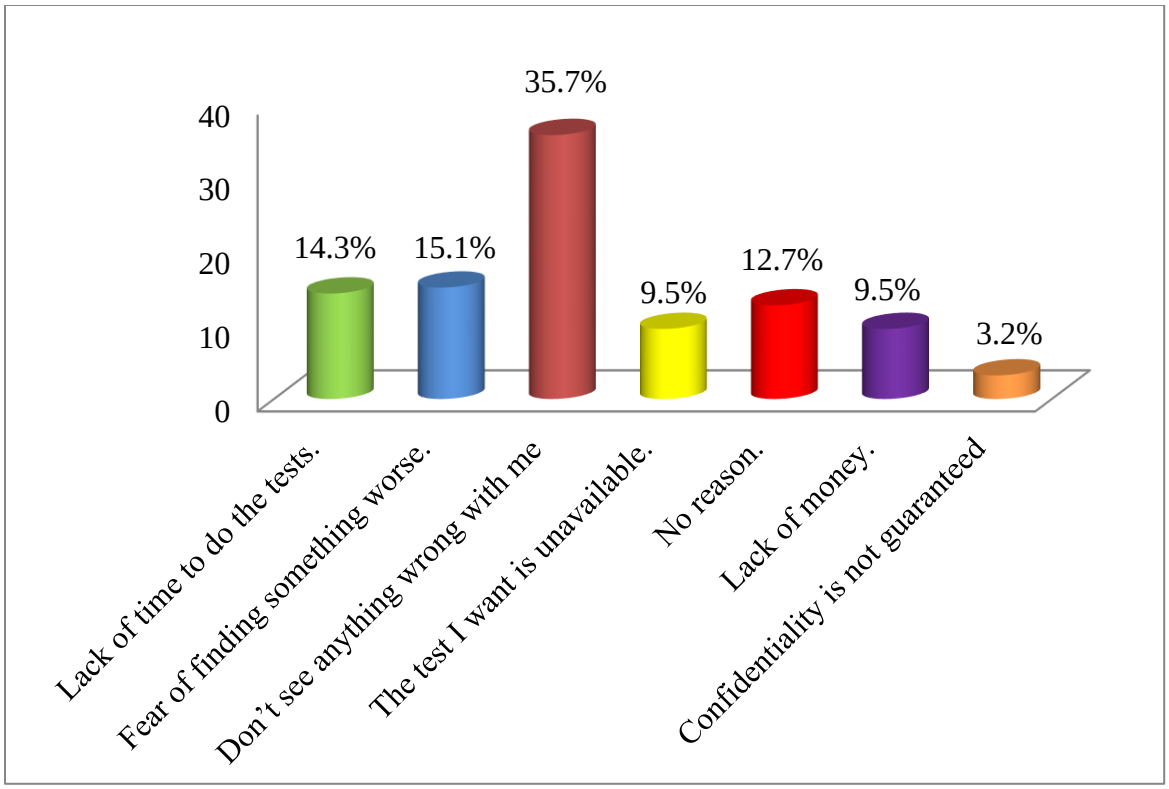

Figure 4. 4 Reasons for not undertaking screening tests by the nurses.

4.2.4.2 Illness behaviour of the nurses.

Illness behavior defined any act of searching for a relief in response to illness that the respondent suffered and considered self ill enough to seek treatment.

4.2.4.2.1 Time when the nurse was last ill.

As shown in **figure 4.5**, majority, 36.4% (n=68) of the respondents said the last time they were ill was more than 6 months prior to the study, 16.6% (n=62) were sick within 7 to 30 days prior to the study or more than one month but less than 3 months prior respectively, 16.0% (n=30) were sick within 7 days prior, while 14.4% (n=27) reported being sick in 3 months but less than 6 months prior to the study.

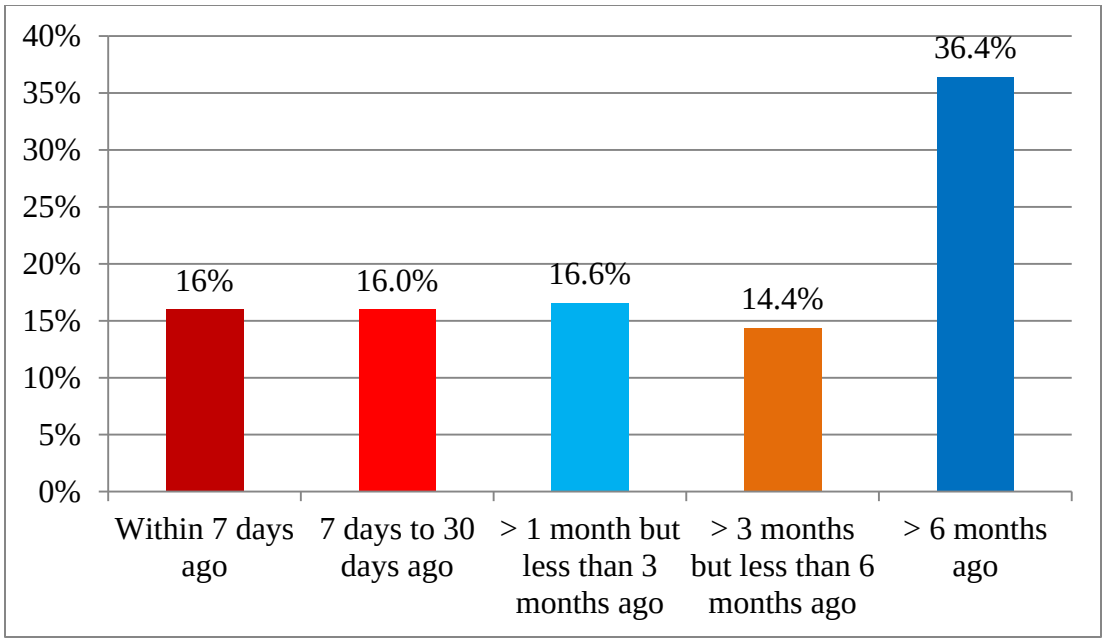

Figure 4. 5 Last time the nurses reported they were ill (Physically or emotionally).

4.2.4.2.2 How nurses' illness was diagnosed.

Asked how they knew what was making them ill, **Figure 4.6** shows that majority of the nurses, 57% (n=107) said the illness was diagnosed at the hospital while 43% (n=80) had self diagnosed their illness.

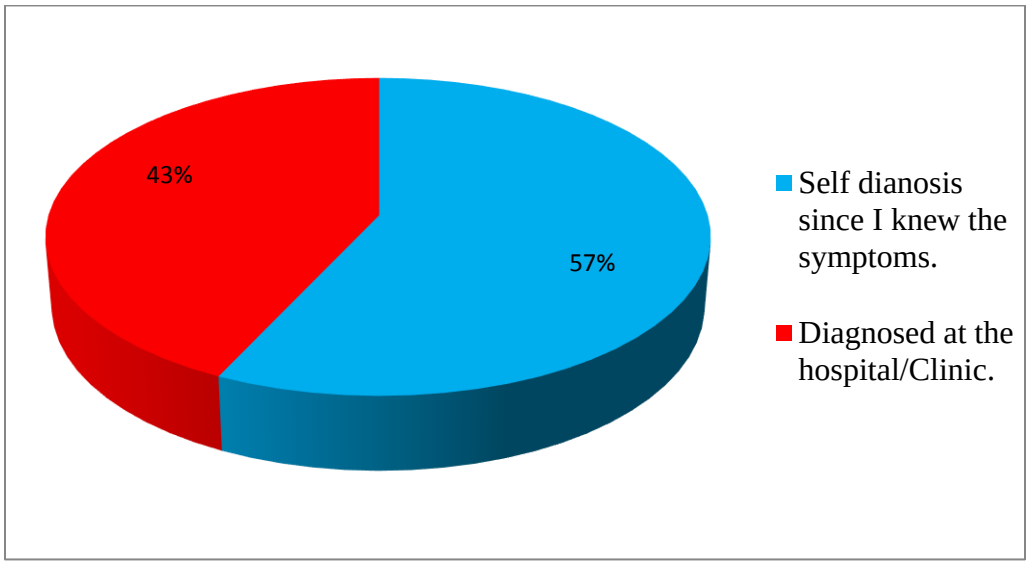

Figure 4. 6 How nurses knew what was making them ill.

4.2.4.2.3 Morbidities suffered by the nurses.

Asked about the illnesses that had necessitated that they utilize the help seeking pathways they employed, **Figure 4.7** shows that majority, 52.4% had suffered malaria, 14.4% respiratory tract infections, 11.8% musculoskeletal problems, 8% gastrointestinal problems among others like lifestyles diseases (diabetes, hypertension and stress).

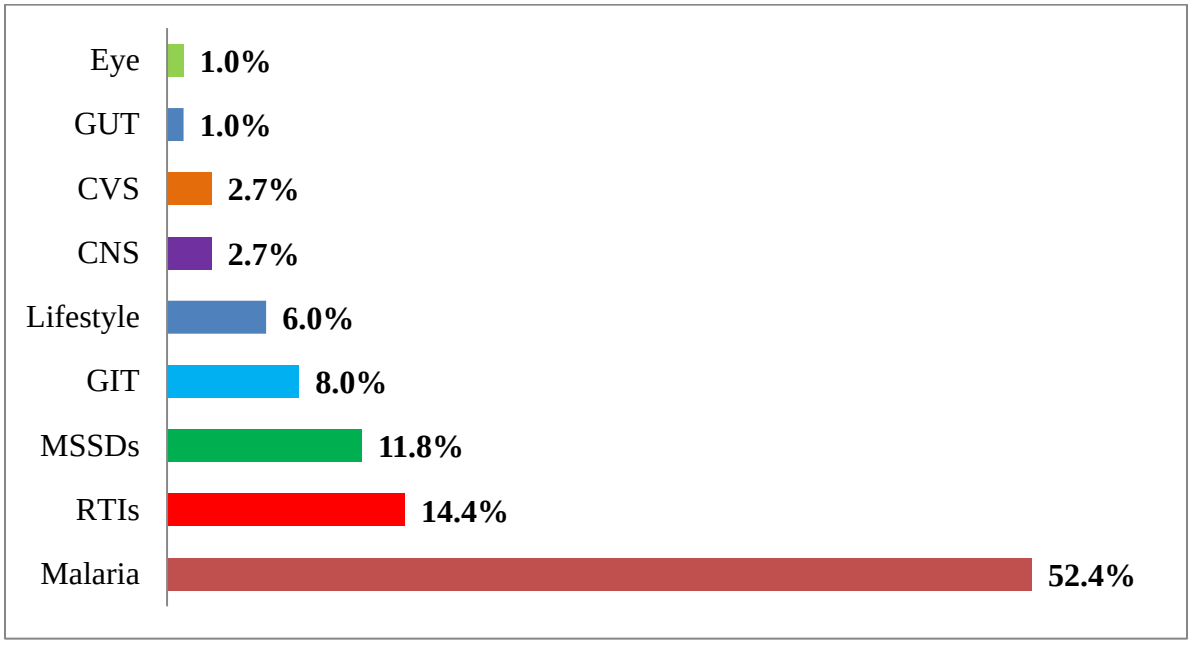

Figure 4. 7 Frequencies of the type of illness last suffered by nurses.

4.2.4.2.4 Severity of the illness suffered by the nurses and help seeking.

Asked whether the illness last suffered was severe or not, majority, 71% (n=132) said that the illness was not severe while 29% (n=55) felt the illness was severe. From **figure 4.8** it can be established that 62% (n=116) of the respondents sought formal treatment when they were last ill, whereas 38% (n=71) indicated they utilized informal help seeking pathways when they were last ill.

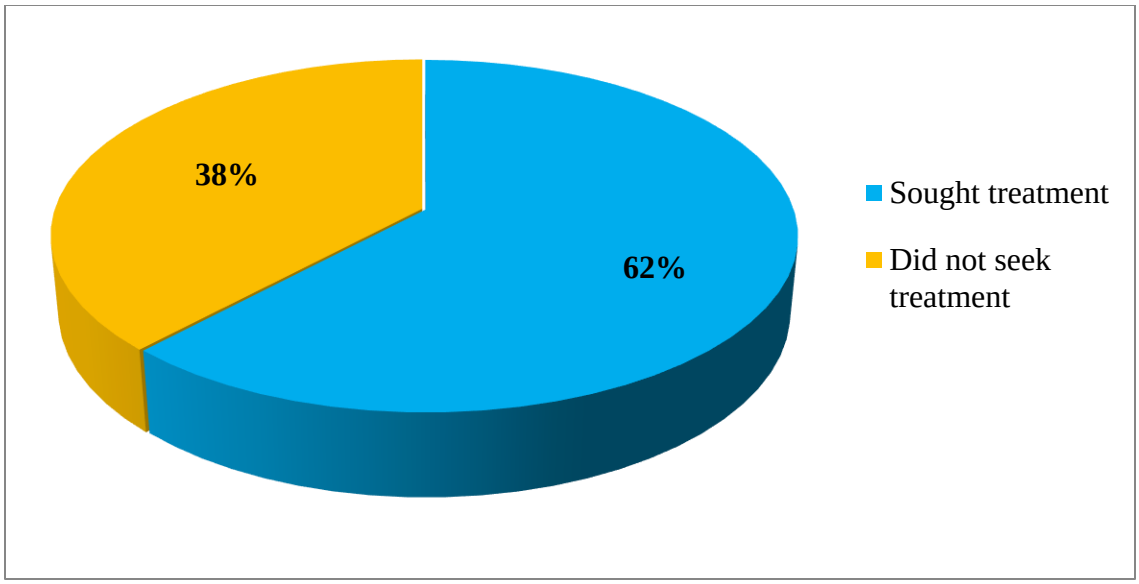

Figure 4. 8 Treatment sought by the nurses last time they were ill.

4.2.4.2.5 Person that nurses consulted for treatment.

It can be observed from **table 4.4** that amongst the respondents who sought treatment when ill (n=116) majority, 62.1% (n=72) consulted a medical doctor, 31.9% (n=37) consulted a clinical officer while only 6% (n=7) consulted a fellow nurse.

Table 4. 4 Persons that Nurses in Kakamega consulted when ill.

Cadre consulted	Frequency	Percent
Medical doctor	72	62.1
Clinical officer	37	31.9
Nurse	7	6.0
Total	**116**	**100.0**

4.2.4.2.6 Reasons why nurses chose to consult a health care provider.

Concerning how the respondents decided on the person to consult when they were ill, **table 4.5** shows the main reason was the provider specialty, 43.1%, (n=50) followed by

30.2% (n=35) who preferred the provider's clinical experience, 22.4% (n=26) mentioned that it did not matter and 4.3 % (n=5) mentioned they consulted on friendship basis.

Table 4. 5 How nurses decided on the Person to Consult.

Reasons for choosing the preferred provider	Frequency	Percent
His/her speciality	50	43.1
His/her clinical experience	35	30.2
It did not matter	26	22.4
He/she is a personal friend	5	4.3
Total	**116**	**100.0**

Concerning the type of consultation, 84.3% (n=98) sought treatment in public facilities while 15.7% (18) sought help in private facilities.

4.2.4.2.7 Unmet needs reported by the nurses.

Asked if they got all the treatment they sought from the health provider, **figure 4.9** shows that 57% (n=66) of the respondents said they got all the treatment, while 43% (n=50) reported that they did not get all the treatment they sought.

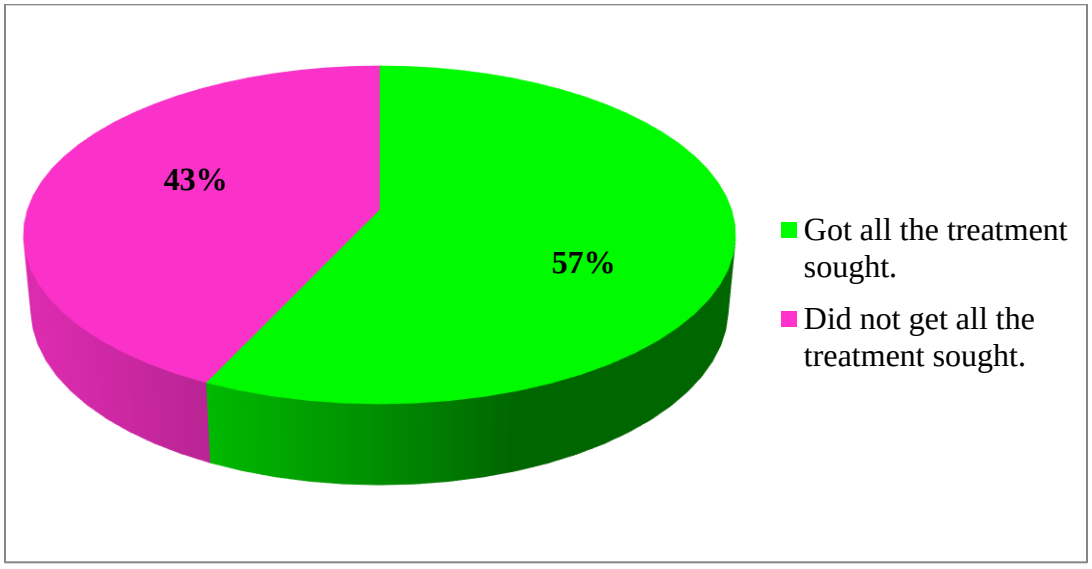

Figure 4. 9 Got all treatment sought last time the nurse was ill.

4.2.4.2.8 Reasons for the unmet health needs of the nurses.

Amongst those who did not get all the treatment they sought; those who sought treatment in public facilities reported that drugs were not available in the pharmacy and therefore they had to buy the drugs while those who sought treatment in private facilities said the cost was too high, which forced them to consult only for diagnosis then proceed to buy the drugs from a chemist.

4.2.4.2.9 Reasons for not utilizing formal health care.

For those who did not seek formal treatment (n=71), **table 4.6** shows the reasons they gave for not using formal treatment. Majority, 39.4% (n=28) said that they were comfortable with self treatment, 36.6% (n=26) said they did not have time to go to the hospital, 12.7% (n=9) said they did not have money while 11.3% (n=8) said they knew the illness was not serious.

Table 4. 6 Reason for not consulting health professionals.

Reason for not seeking formal treatment.	Frequency	Percent
I dint have time to go to the hospital	26	36.6
I am comfortable with self treatment	28	39.4
Money problems prevented me	9	12.7
I knew it was not serious and I would get well	8	11.3
Total	**71**	**100.0**

4.2.4.2.10 Actions taken by nurses who did not seek formal care.

Figure 4.10 shows that majority, 82% (n=58) of those who did not seek formal treatment took over the counter medication, 13% (n=9) took prescription medicine while 5% (n= 4)

did nothing. The most common utilized self medication that was reported was anti-malarial at 52.4%.

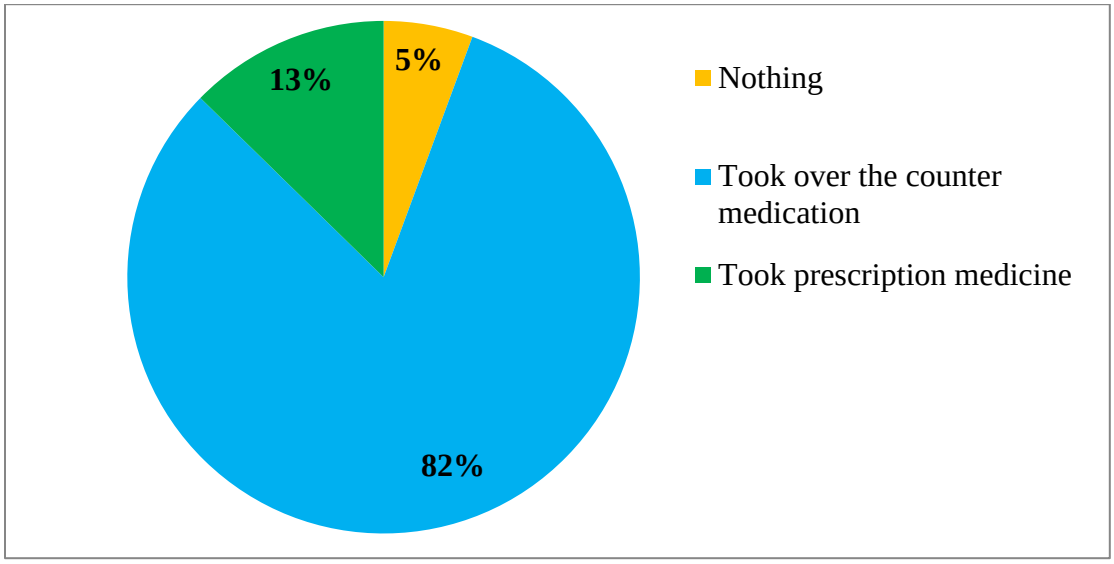

Figure 4. 10 Strategies the respondents who did not seek formal treatment used to manage illness.

4.2.5 Bivariate analysis of health seeking behaviour and predisposing, enabling and need factors.

Bivariate analysis Chi-square test was used to test the association between predisposing, enabling and need factors and health seeking behaviour among nurses working in Kakamega County.

4.2.5.1 Bivariate analysis for health seeking behaviour and predisposing factors.

Bivariate analysis, of the variation in health seeking behaviour by predisposing factors influencing health seeking behaviour among nurses in Kakamega County is presented in **table 4.7**.

Table 4. 7 Bivariate analysis for health seeking behaviour and predisposing factors.

Predisposing Factors		Health seeking behaviour.					
		Yes		**No**			
		n	**%**	**n**	**%**	**N**	**P=≤ 0.05**
Gender	Male	35	30.2	29	40.8	64	χ^2=2.229, df=1, p=0.135
	Female	81	69.8	42	59.2	123	
	n	**116**	**100**	**71**	**100**	**187**	
Age	< 30 Years	14	12.1	10	14.1	24	χ^2=2.590, df=3, p=0.459
	30-39 Years	30	25.8	25	35.2	55	
	40-49 Years	37	31.9	17	23.9	54	
	≥50 Years	35	30.2	19	26.8	54	
	n	**116**	**100**	**71**	**100**	**187**	
Marital status	Married	89	76.7	54	76.1	143	χ^2=2.229, df=2, p=0.566
	Single	20	17.2	10	14.1	30	
	Others	7	6.1	7	9.8	14	
	n	**116**	**62**	**71**	**100**	**187**	
Religion	Protestant	92	79.3	55	77.5	147	χ^2=0.190, df=1, p=0.663
	Catholic/Muslim	24	20.7	16	22.5	40	
	n	**116**	**100**	**71**	**100**	**187**	
Highest level of training as a nurse.	BscN/HND/ Postgraduate	24	20.7	13	18.3	44	χ^2=0.157, df=1, p=0.692
	KRN/KRCHN/ECN/KRN/M	92	79.3	58	81.7	143	
	n	**116**	**100**	**71**	**100**	**187**	
Time working as a nurse	6 Mo-5 Years	32	27.6	30	46.4	97	χ^2=6.072, df=1, **p=0.014**
	Above 5 Years	84	72.4	41	28.9	90	
	n	**116**	**100**	**71**	**100**	**187**	
Support from supervisor.	Low	17	14.7	20	28.2	**37**	χ^2=5.068, df=1, **p=0.024**
	High	99	85.3	51	71.8	**150**	
	n	**116**	**100**	**71**	**100**	**187**	

The finding show that there were more female nurses, 69.8% utilizing formal healthcare services compared to 30.2% of the male nurses although the observed difference was not statistically significant at (χ^2=2.229, df=1, p=0.135), similarly 62.1% of respondents aged above 40 years reported utilizing formal care compared to 37.9% of respondents aged below 40 years age. This difference was not statistically significant at (χ^2=2.590,

df=3,p=0.459). With regards to marital status, there was no significant difference in the health seeking behaviours of married ,singles, divorced or widowed nurses at (χ^2=1.137, df=2,p=0.566).The same is seen concerning religious background of the respondents at (χ^2=1.285, df=2,p=0.526). The findings also indicate that 79.3% of the nurses with a diploma and below reported using formal care compared to only 20.7% of respondents with higher diploma, BscN and Postgraduate. This difference was however not statistically significant at (χ^2=0.157, df=1,p=0.692), similarly 72.4% of nurses with working experience of more than 5 years in the County reported using formal care as compared to 27.6% of nurses who had worked for less than 5 years in the County. This difference was statistically significant (χ^2=6.072, df=1, p=0.014). The study also established that 85.3% of nurses who reported high support from their supervisors reported formal care use compared to 14.7% who reported poor supervisor support. This difference was statistically significant at (χ^2=5.068, df=1, p=0.024).

4.2.5.2 Bivariate analysis for health seeking behaviour and enabling factors.

Bivariate analysis, of the variation in health seeking behaviour by enabling factors is presented in **table 4.8**. The study established that 71.6% of the respondents with average monthly household income of less than Ksh. 50,000 compared to 28.4% of respondents with an average monthly household income of above Ksh. 50,000 reported utilization of formal care .This difference was statistically significant at (χ^2=6.291, df=1, p=0.012). Further, 38.8% of respondents who were satisfied with adequacy of insurance cover compared to 61.2% of respondents who were not satisfied with adequacy of insurance cover reported utilization of formal care. This difference was statistically significant at

(χ^2=4.635, df=1, p=0.031), indicating that nurses utilized formal health care despite the reported inadequacy of health insurance cover. Further, 89.5% the nurses who reported dissatisfaction with the health services accessible to them in the County reported utilization of formal care as opposed to 10.5% who reported satisfaction with the health services accessible to them in the County. This difference was statistically significant at (χ^2=8.548, df=1, p=0.003). With regards to quality, 14.2% of nurses who reported satisfaction with the quality of healthcare services available to them in the County reported utilization of formal care compared to 85.8% who were not satisfied with the quality of healthcare services available to them in the County. This also indicates that despite the quality of services being unsatisfactory, nurses still were able to utilize the available services. This difference was significant at (χ^2=8.680, df=1, p=0.003).

Table 4. 8 Bivariate analysis for health seeking behaviour and enabling factors.

Enabling Factors		Health seeking behaviour.					
		Yes		**No**			
		n	**%**	**n**	**%**	**N**	**p≤ 0.05**
Average monthly household income.	< 50,000 Ksh.	83	71.6	62	87.3	145	χ^2=6.291, df=1, **p=0.012**
	≥ 50,000 Ksh.	33	28.4	9	12.7	42	
	n	**116**	**100**	**71**	**100**	**187**	
Satisfaction with Insurance cover.	Yes	45	38.8	32	45.1	77	χ^2=4.635, df=1, **p=0.031**
	No	71	61.2	39	54.9	110	
	n	**116**	**100**	**71**	**100**	**187**	
Satisfaction with health services access.	No	102	89.5	51	72.9	153	χ^2=8.548, df=1, **p=0.003**
	Yes	12	10.5	19	27.1	34	
	n	**114**	**100**	**70**	**100**	**184**	
Satisfaction with quality of services in the County.	Yes	16	14.2	23	32.4	39	χ^2=8.680, df=1, **p=0.003**
	No	97	85.8	48	67.6	145	
	n	**113**	**100**	**71**	**100**	**184**	

4.2.5.3 Bivariate analysis for health seeking behaviour and need factors.

Bivariate analysis, of the variation in health seeking behaviour by need factors is presented in **table 4.9.** The study established that 58.6% of the nurses who reported excellent general health to reported utilization of formal care as opposed to 41.4% who reported poor general health. This difference was statistically significant at (χ^2=8.086, df=1, p=0.004). Further 67.2% of respondents who reported being concerned about their health compared to 32.8% who were not concerned about their health reported using formal care. This difference was statistically significant at (χ^2=7.870, df=1, p=0.005). 69.2% of respondents who reported the illness suffered was not severe utilized formal care as opposed to 30.8% of respondents who said the illness was severe. This difference was statistically significant at (χ^2=8.628, df=1, p=0.003).

Table 4. 9 Bivariate analysis for health seeking behaviour and need factors.

Need factors.		Health seeking behaviour.					
		Yes.		**No.**			
		n	**%**	**n**	**%**	**N**	**p≤ 0.05**
Nurses rating of general health now.	Poor	48	41.4	15	21.1	63	χ^2=8.086, df=1, **p=0.004.**
	Good	68	58.6	56	78.9	124	
	Total	**116**	**100**	**71**	**100**	**187**	
Nurses concerns about general health status.	Not concerned	38	32.8	38	53.5	76	χ^2=7.870, df=1, **p=0.005.**
	Concerned	78	67.2	33	46.5	111	
	Total	**116**	**100**	**71**	**100**	**187**	
Rating the severity of illness last suffered.	Yes	43	37.1	12	16.9	102	χ^2=8.628, df=1, **p=0.003.**
	No	73	62.9	59	83.1	85	
	Total	**116**	**100**	**71**	**100**	**187**	

4.2.6 Binary logistic regression analysis.

To investigate the odds of the predisposing, enabling and need factors contributing to explaining the predictive variability in health seeking behavior among nurses in Kakamega County, a binary logistic regression model was constructed. Chi-square tests were first performed with "*If nurses sought treatment for illness*" as the dependent variable and the predisposing, enabling and need factors as independent variables. Independent variables that were asymptotically significant at p=≤ 0.05 were selected, subjected to multicollinearity diagnostics before inclusion in to the logistic regression model. The default "enter" method for variable entry was chosen with the aim of finding the best model to fit the data.

Table 4. 10 Binary regression model.

Model Fitting Information				
	Intercept	**Model**	**df**	**Sig.**
-2 Log Likelihood	241.551	197.967		
Model Chi-square test		43.584	9	<0.001
Cox and Snell		0.214		
Nagelkerke R square		0.290		
Hosmer Lemeshow Chi-square test.		5.776	8	0.672

To test model fit, the Omnibus tests, -2log likelihood, Cox & Snell and Hosmer Lemeshow chi-square test were determined as shown in **table 4.10,** the omnibus tests based on the chi-square statistic, which measures the difference between the model as it currently stands and the model when only the constant is included was significant at (χ^2 = 43.584, df=8, p= < 0.001). The best fitting model was selected based on the smallest -2 Log Likelihood. When only the intercept was included, the -2 Log Likelihood was

241.551, reducing to 197.967 in the final model. Finally, P value for the Hosmer Lemeshow test was not significant at (χ^2=5.776, df=8, p=0.672). The model had a sensitivity of 81.1% and a specificity of 55.7%. The conservatively small sample size (n= 187) may account for the wide confidence intervals observed. Table 4.11 shows the results of the final regression model.

Table 4. 11 Binary logistic regression coefficients.

Explanatory variable	β	S.E.	Wald	Sig.	OR	95% C.I
> 5 years working as a nurse.	0.566	0.370	2.341	0.126	1.762	0.853- 3.639
Adequate supervisor support.	0.740	0.423	3.061	0.080	2.095	0.915-4.797
High monthly income.	0.975	0.478	4.158	**0.041**	2.652	1.039-6.774
Good general health now.	-0.822	0.409	4.050	**0.044**	0.439	0.197-0.979
Concerned about health.	0.453	0.355	1.628	0.202	1.572	0.785-3.151
Illness is severe.	1.160	0.442	6.902	**0.009**	3.190	1.343-7.581
Not satisfied with access.	-0.689	0.473	2.118	0.146	0.502	0.199-1.270
Not satisfied with health services quality.	-0.813	0.470	2.995	0.084	0.443	0.177-1.114
Not satisfied with insurance cover adequacy.	-0.149	0.387	0.149	0.699	0.861	0.404-1.837
Constant.	-0.168	0.560	.090	0.764	0.845	

In bivariate models, years of working as nurse, support from supervisor, income, satisfaction with insurance cover, satisfaction with health services accessible, satisfaction with the quality of health services available, severity of illness, general health status and concerns about health were significant at p=≤ 0.05. However, in the logistic regression model only three explanatory variables remained significant; namely, net monthly household income (p=0.041), rating general health status (p=0.044) and severity of illness (p=0.009).

Nurses who reported the illness last suffered as being severe were three times likely to seek formal health care compared to nurses who reported illness as not severe (β=1.169, OR= 3.190, p=0.009, 95% CI=1.343-7.581). Similarly nurses who had higher average monthly incomes were twice likely to seek formal health care compared to those with lower average monthly incomes (β= 0.975, OR= 2.652, p= 0.041, 95% CI= 1.039-6.774). Nurses who considered their general health as good were less likely to use formal health care as opposed to those who rated their health as bad (β= -0.822, OR= 0.439, p= 0.044, 95% CI= 0.197-0.979). Nurses who had worked for more than five years in the County, though not significant in the model were more likely to utilize formal care as opposed to those who had worked less than five years in the County (β= 0.566, OR= 1.762, p= 0.370, 95% CI= 0.853- 3.639). Nurses who reported adequate supervisor support were twice likely to utilize formal care as opposed to those who reported inadequate supervisor support, though this was not statistically significant in the model (β= 0.740, OR= 2.095, p= 0.080, 95% CI= 0.915-4.797). Those reporting dissatisfaction with health services access, quality and adequacy of insurance cover were less likely to use formal care.

4.3 Discussion of the findings.

4.3.1 Summary of the findings.

This study found that increasing years of working as nurse in the County, adequate support from supervisor, income, satisfaction with insurance cover, satisfaction with health services access, satisfaction with the quality of health services, increasing severity of illness, good general health status and concerns about future health were the major factors that explained health seeking behaviour among nurses in Kakamega County.

The practice of health behaviour was low, with only 33% respondents reporting to have undertaken some type of voluntary screening test one year prior to the study. Majority of respondents (35.7%) who had not undertaken screening tests said that they did not see the need for screening tests because they saw nothing wrong with their health. A substantial proportion (15.1%) also said they did not undertake screening tests because of fear of finding something worse. On illness behaviour (62%) of the respondents had used formal care the last time they were ill. For those who had used formal care (n=116), 43% reported that they did not get all the treatment they sought due to either unavailability of drugs in the hospital pharmacy for public or the treatment not being affordable in the private facility sourced care. The most common reported illness that necessitated help seeking among the nurses was malaria at 52.4%. Further, the most utilized over the counter drug was anti-malarial.

4.3.2 Predisposing, enabling and need factors of health seeking behaviour.

Individual characteristic differences have been shown to influence how people perceive and respond to illness (Myers 2008). With regards to age, majority of the nurses belonged to age bracket of 30-39 years and their mean age was 41 years. This finding is consistent with MOH, (2012) report that showed that majority of Kenyan nurses were in 31-40 years age bracket. Similarly, Wakaba *et al.*, (2014), while investigating the public sector nursing workforce in Kenya found the mean age of nurses to be 44 years. Although nursing is an ageing profession in Kenya, the entry of new younger nurses in the public workforce in response to the demands of expanding devolution may explain the observed reducing mean of age. Age has been known to influence health outlook and response to ill health. Though there was no statistical difference in health care utilization in relation

to age differences of the nurses in this study, bivariate analysis showed that older nurses were seeking formal treatment more than the younger nurses.

Literature is rich in explaining how age influences the utilization of health services (Musshauser 2006). Oyama & Fukahori, (2013) observed that increasing age contributed to worsening physical health, an observation that can be said to be at play in this study. In a study to evaluate mental health behaviors among undergraduate nursing students in Australia, it was found that young nurses did not seek treatment for their illness because of ignorance of symptoms (Cleary *et al.,* 2012). Self treatment among younger nurses may be attributed to the self perceived good heath and invincibility as opposed to older nurses who have poor personal health perception and therefore become dependent on the health care system. This observation has an important policy implication because County health services should be tailored to be friendly to younger nurses, plus younger nurses need to be empowered to be in control of their health by being more proactive towards their health care needs.

With regards to gender, majority of the respondents were female. Although it is not disputed that gender affects health and health seeking behaviour, how it exactly does is unclear on the threshold of the data of this study. Past studies have presented women as disadvantaged socio-economically, which disfavours them in the health continuum and in the economic power to afford formal care. Although gender differences were not significant in explaining health seeking behaviour in this study, bivariate analysis showed that females reported using formal health services more than male nurses. This finding is not unexpected because studies have found that women are more likely than men to report ill health, express catastrophic perceptions about health events and further seek

treatment for their ill health (Musshauser 2006; Lindo *et al*., 2009). The observed increased utilization of formal care among females in this study may be due to the fact that majority of the respondents were female as nursing is a female dominated profession. The observed reduced formal care among the men shows that there still exists the macho mentality among male nurses even in health care utilization. This is an important gap because given that the society is patriarchal, male nurses' attitudes and behaviour could be transferred to their families and society at large which, if not corrected would be negative for the goals of universal health access and utilization.

Regarding highest level of nursing qualification, majority of the respondents were diploma holders a finding consistent with Wakaba *et al*., (2014) and MOH, (2012). Nurses in Kenya are segregated into Certificate, Diploma, Bachelor's degree and Higher Diploma in nursing holders. The training of nurses at Post-graduate level is gaining momentum (MOH, 2012). It is evident that nurses are increasingly enrolling into upgrading programs to better their academic standing within the profession. Majority of the nurses cited school fees as the greatest consumer of their monthly income. The study found that nurses with at least a Diploma as the highest level of nursing qualification reported utilizing formal care more than those with higher levels of nursing qualification. This finding concurs with a Brazilian study to evaluate Self-medication among nursing workers from public hospitals which found that nurses with Bachelor's degree and higher were more likely to self medicate (Barros *et al*., 2009). This observation could be due to the fact that nurses trained at a higher level have a high sense of prestige and to some extent; self equate their knowledge to superior health knowledge akin to that possessed by doctors, which then may imply better understanding of disease, increased autonomy

and lack faith in the physician, all factors that hinder formal care utilization. From a public health perspective, it can be argued that increasing nursing knowledge reinforces a culture of invincibility and at the same time enhances medical ignorance. It has been presupposed that better knowledge empowers people to make better health choices, but from the threshold of the evidence from this study, this is not the case. A situation that calls for enhanced health education even among those who are expected to know better about appropriate health behaviour.

The nature of nursing is stressful and requires that one has adequate social support to remain balanced and retain health locus control. The availability of social support is significant in explaining health seeking behaviour of nurses in this study. This study found that majority of the nurses reported satisfactory levels of support from their immediate supervisors, which agrees with other studies. Nurses report adequate support from their colleagues because of the prosocial nature of the profession. A similar finding by Weinstein & Ryan, (2010) reported that helpers enjoyed more psychological satisfaction from the act of helping others, a key ingredient of health and its maintenance. Further, while investigating factors affecting motivation and retention of primary health care workers in Kenya, Ojakaa *et al*., (2014) found that nurses enjoyed great support from their supervisors. In binary logistic regression, the results showed that nurses who reported adequate supervisor support were twice likely to utilize formal health service than those who reported inadequate supervisor support. This finding is consistent with literature because greater support promotes wellness, good general health and trust in the health care system (McNeely, 2005; Brunetto *et al*., 2011). Further, as observed by Oyama & Fukahori, (2013) nurses who exhibit stress coping have better health and good

control over job related stress. It is imperative that nurses get supported in their work so as to develop confidence in the wider health care system.

Many enabling factors were not significant in explaining health care use in this study. With regard to income, bivariate analysis found that increasing income was associated with preponderance to informal care and the difference with their lower income counterparts was significant in logistic regression model. Literature discusses the strong correlation between heath care utilization and ability to purchase health care (KNBS, 2010), while WHO (2013), decries the negative impact of lack of financial risk protection for illness that increases the ratio of out-of-pocket payments to total health expenditure. The distinction between the influence of health insurance cover and increasing income on health care utilization is not clear on the basis of this study's findings because all nurses are mandatory members of NHIF. The nurses in the County were not satisfied with the adequacy of health insurance cover in meeting their health needs, citing various system barriers like drug stock-outs. Despite these setbacks; demonstrated by the paradoxical finding in the Chi-square analysis, it is true that the observed increased utilization of care even in the setting of inadequate cover may be a pointer to helplessness nurses have in the face of this barrier. It is important that this gap of lack of drugs be addressed, so as not only to make NHIF adequate but also reduce unmet health care needs for the nurses.

This study found that majority of the nurses were not satisfied with the quality and accessibility they had to health services in the County. Availability and access to quality health services is a fundamental goal for health policy world over. The Kenyan constitution sets the framework upon which health goals of the Country and by extension the County are hinged. Nurses who reported dissatisfaction with quality and access of

health service are less likely to utilize formal health services. Investing resources into providing accessible and quality health services to nurses will increase utilization when financial barriers, which were to be addressed by NHIF have been overcome. The intertwining relationship between adequate health insurance cover and quality of health services comprise the bigger concept of access to health services; all necessary ingredients for realising the vision 2030 because healthy nurses are safer and better role models for the public. Although the study was not designed to examine this component of health seeking behaviour in Kakamega County in totality, respondents felt that the County is less endowed in infrastructural terms to meet their health demands. They cited lack of specialists and lack of drugs as basic hindrances to health care utilization. The devolution of health services meant that Counties were mandated to put in place strategies to be self sufficient when it comes to health care in line with the recommendations of the SARAM report (MOH 2012). This though seems to be a slow process that Kakamega County need to address. Kakamega County will not realize the health goals for its citizens when the nurses who are expected to offer the health services feel their health needs are inadequately met.

Need has been identified as the main driver for health care use. It is hinged on a person's health perception of his or her general health status. The study found out that over 2/3 of the nurses rated their health as good to excellent. In logistic regression analysis, favourable rating of current health status was associated with decreased formal healthcare use. Nurses who rated their current health as "good" were less likely to use formal care because they are healthy in from personal health appraisal. Poor health rating is associated with increased need for health care. In a cross-sectional study to investigate

Self-rated health, work characteristics and health related behaviors among nurses in Greece, it was found that females, married and having worked longer were more likely to report poor health (Pappas *et al*., 2005). Misevičienė *et al.,* (2013) also found poor health rating with increasing age, which was associated increasing morbidity. This finding is similar to the current study which finds that majority of those who sought formal care were female and had worked longer in the County. Further, concerns about health were also found to influence health seeking behavior. The study found that those who reported being concerned about their health were more likely to utilize formal care. The study finds that health concerns increase with age, a finding that is consistent with Lindo *et al*., (2009).

4.3.3 Health seeking behaviour of nurses.

The study found that most of the respondents sought some form of help in response to their illness. The majority were able to seek formal help for their illness. Although this is commendable, it is a worrisome observation that a significant portion of the respondents did not seek formal treatment rather preferring self treatment. This is contrary to expectations of a profession that is expected to take the lead in seeking formal care. This finding is however not unique in the health profession. There is a great deal of informal treatment in the health care profession (Chen *et al*., 2008; Kay & Clavarino, 2008), which has been attributed to varied individual factors. A cross-sectional survey carried out among physicians at the Jos University Teaching Hospital in Nigeria found that 98.6% of doctors had self prescribed (Agaba *et al*., 2011), a bigger statistic than the current study's. The high rate of informal care observed in Nigeria could be due to several factors. First, the two populations are different both in setting and in cadres. Second, there is the

potential for recall and reporting bias in the data of this study. It is possible that many nurses did not report use of informal health care services because the study might have been viewed as part of County surveillance and so respondents may have been uncomfortable reporting informal health practices they engage in. Thirdly, the Nigerian study asked "have you ever self medicated?" a question that in any estimation is not so clear.

This study found that nurses who were younger, male and with at most a diploma in nursing as the highest level of qualification were more likely to self medicate. These findings are in agreement with a cross-sectional study done in Brazil to investigate the prevalence of poor self-rated health and its association with working conditions among primary health care workers which found poor self-rated health was positively associated with female gender, higher age, lowest education, more time working for the city administration, higher workload score and poor working environment (Garcia et.al.,2010), all factors that are associated with formal health care even in the current study.

Although majority of the nurses sought treatment, the results show that a significant proportion, 57% of those who consulted a health professional did not g*et al*l the treatment they needed, and resorted to auxiliary self medication. This study's finding concurs with Naidoo *et al*, (2013) who reported that health workers have unmet care needs and suffer in silence. This supplemental medication could be due to the fact that facilities have inadequate drug supplies in the County and the only reprieve lies in over the counter medication. The nurses who self treated cited lack of time and having confidence in self treatment as the main reasons as to why they did not seek formal treatment, a finding that

is in agreement with Garelick, (2012) who found that doctors self medicate because of unmet health needs. Self medication by nurses must not only be viewed as a pointer to nurses' negative health seeking behaviour, but also a symptom of poor health-care availability for the nurses in Kakamega County. Poor health quality affects everyone adversely but beyond this, health care costs increase partly due to partial management of diseases and due to poor disease management.

With regards to screening services, only a few respondents said they had undertaken one or more voluntary screening services. The fear of finding something worse hinders nurses from undertaking screening services. This finding is similar to the works of Frank *et al*., (2009), who found that health professionals did not undertake screening tests because of fear, while Lindo *et al*, (2009) found the barrier to be related to confidentiality. Another barrier to screening tests was the fact that nurses saw nothing wrong with their health. One expects that a profession that is the gate keeper of health should be in the frontline not only advocating for, but also undertaking screening tests knowing that they are at risk of disease, but that is contrary. This can be attributed to the fact that nurses feel invincible and believe that illness belongs to patients. Although nursing is a calling to serve humanity, not actively taking the lead in engaging in health preventive behaviour and leaving the future health prospect to "the will of God" is in itself a barrier that nurses in Kakamega County must overcome in the pathway to personal health locus of control because the realisation of vision 2030 is hinged on health (KIPPRA, 2013), which must first start with that of the care givers; the nurses.

Regarding the prevalence of life limiting illness, majority suffer from hypertension, followed by those who suffer diabetes, with 0.5% of the respondents volunteering their

HIV positive status. The finding is consistent with that of Canbulat & Uzun, (2008) who found that the screening practices of health workers were low, which contributed to the perceived low levels of life limiting illnesses in health workers. The low level of screening tests undertaken accrue from the fact that majority of the respondents see nothing wrong with themselves and therefore have not undertaken screening tests, yet it is known that life limiting illnesses in their infancy are asymptomatic. Peleg *et al*., (2013) found that doctors had strong beliefs in screening tests but these beliefs did not translate to personal uptake. The fear, invincibility and belief that the nurses are the barometer for publics' health status is misleading and must be addressed if nurses have to be better role models for the public.

It is evident from the study that the culture of self medication in the health sector is old and rampant. Despite the documented detriments of the practice, nurses are involved in orthodox methods of help seeking; a situation that should be arrested because treatments for illnesses that may rise perceived concerns over their social acceptability can be used silently to the detriment of the profession and the entire health care system.

CHAPTER V: SUMMARY, CONCLUSION AND RECOMMENDATIONS.

5.0 Introduction.

This chapter presents the summary, conclusions and recommendations for this study. Seeking health care from a qualified health professional was considered in the context of formal care, where self treatment was considered informal and therefore not only contrary to expectation but also negative.

5.1 Summary of the findings.

Healthcare is a market that conforms to all the laws of economic model, which implies that predisposing, enabling and need factors interact to form a complex space where individuals' engagement with the health system resides. Although many of these factors are similar across populations and have been subject of intense inquiry, exactly how they interact in shaping the actions of people is unique to a specific population in the context of its socio-cultural environment. This study, a population-based cross sectional survey studied a unique population; the nurses, who act as the gate keepers of health, the directors of help seeking channels and masters of medical knowledge. Society expects that nurses and medical practitioners in general lead by example in advocating for and utilizing formal health care for their illness and also participate actively in health behaviour so that their advise to patients is not only realistic but also in tandem with socio-economic environment realities. The moderately high level of formal health care utilization uncovered by this study among nurses is commendable, but not at acceptable levels. Concerted effort is required both at the individual and policy level to make formal treatment the first and only choice for addressing the heath concerns of nurses in Kakamega County.

5.2 Conclusions.

This study has a new implication for the health sector in Kakamega County and Kenya. The study revealed high proportion of nurses that used formal health care for their illness. Being nurses, it is expected that they have good knowledge of and should advocate for the benefits of formal healthcare utilization as compared with any form of informal healthcare.

1. Concerning predisposing factors that influence health seeking behavior, it was women who predominantly utilized formal health care services not withstanding this is a predominantly female profession, bivariate analysis demonstrated this variation in relation to gender. Increasing education seems to negate the use of formal service and promotes the perception of invincibility evident in this study because, as can be seen "more educated" nurses consider themselves self sufficient in responding to illness. Further, it is evident that younger nurses reported resorting to informal health care utilization.
2. Regarding the enabling factors, the study was also able to highlight the influence of health services access and availability of quality health services that nurses access in the County on health care use. These factors included the adequacy of health staffs who offer services to the nurses, the adequacy of NHIF as the insurance cover and availability of drugs. Despite access and quality barriers reported in the study, nurses did not seem to be stopped from engaging with formal health care, although the barriers promoted out of pocket expenditure for health care, with respondents saying that they did not get all the treatment because of unavailability of drugs in the pharmacy, or if private facility was used, cost of care was reported to be prohibitive

for complete dependence on health care; factors that promoted self-medication post formal engagement. The study found that most nurses would self diagnose their illness and subsequently use formal care because they were capable of self diagnosis. Although nurses are trained to evaluate health needs for patients, evaluating their own needs can be mired in bias and ultimately lead to dependence on and legitimization of curbside consultations, which in itself is not only un-professional, but also typifies the global nature of unmet health care needs in the County. More than half of the nurses felt that they got all the treatment they sought, indicating the level of health needs met. A significant portion of the respondents felt they had an unmet health need; that is they did not get all the treatment they sought. The inadequacy of NHIF, poor quality health services, lack of satisfaction with the health services nurses have access to, were all associate with unmet needs.

3. This study highlights that the utilization of any form of care, formal or otherwise is a function of need factors such, how one rates his/her general health, how one is concerned or worried about health as well as the severity of illness. The study finds that while nurses are the caregivers, their engagement with health care is not different from the general population and therefore common assumption that increasing knowledge has positive effect on health behavior may not be linear because the nurses have the means and motivation to use care but this study finds their utilization of formal care subpar.

5.3 Recommendations.

To develop long term solutions to the problems of self medication in the nursing profession, emphasizing formal health utilization is invaluable, the study recommends that;

1. Reorientation of health towards the individual needs to be emphasized so that predisposing factors to health care use does not seem to hinder the nurses, particularly the young and male to utilize health care services when ill, this may mean more education.
2. Nurses build trust in the health care providers and not depend on a concoction of both prescription and over the counter medication for their health problems which is a potential source of drug resistance, poorly managed diseases, worsening health states, and possibility of labeling medication as less efficacious on the basis of wrong utility, which may be the same information that they may share with the general public. To effectively achieve this, accessibility to quality health care services need to be availed to the nurses by the County government. Indeed this is not a new proposal but since it is completely addressing the very health care provider, it deserves deliberate urgent attention because being knowledgeable about disease and knowing the implications of its severity may in itself be tempting to self-diagnose and self treat or adopt a wait and see attitude, rather than spend resources on something that may just cure itself, a practice that is not only negative, but also highly likely among the nurses in the setting of poor health access.
3. Nurses be sensitized to undertake screening tests for both communicable and non communicable diseases for the purpose of not only leading from the front but also so

that the Kakamega County population is served by a healthy work force, from which they draw inspiration. The prioritization of scarce resources for health care in Kakamega County be addressed so that nurses lead from the front in utilization of health care services if they have to make advice to patients realistic. This requires information regarding how nurses engage with the health system themselves so as to identify barriers that they face which may reflect general population barriers to health care use, a feat that has been the objective of this study.

5.4 Areas of further research.

1. Investigate health seeking behavior of all nurses using a nationwide sample so that there is a national reference point.
2. Investigate, through qualitative designs the decision making processes underlying health seeking behavior of nurses so as to uncover factors that enhance use the reported health seeking channel.
3. Investigate, validate and utilize self-rated health tools to form a continuous process of evaluating possible changes in the need for health services by nurses in the County.
4. Investigate the determinants of access to quality health services to the nurses.

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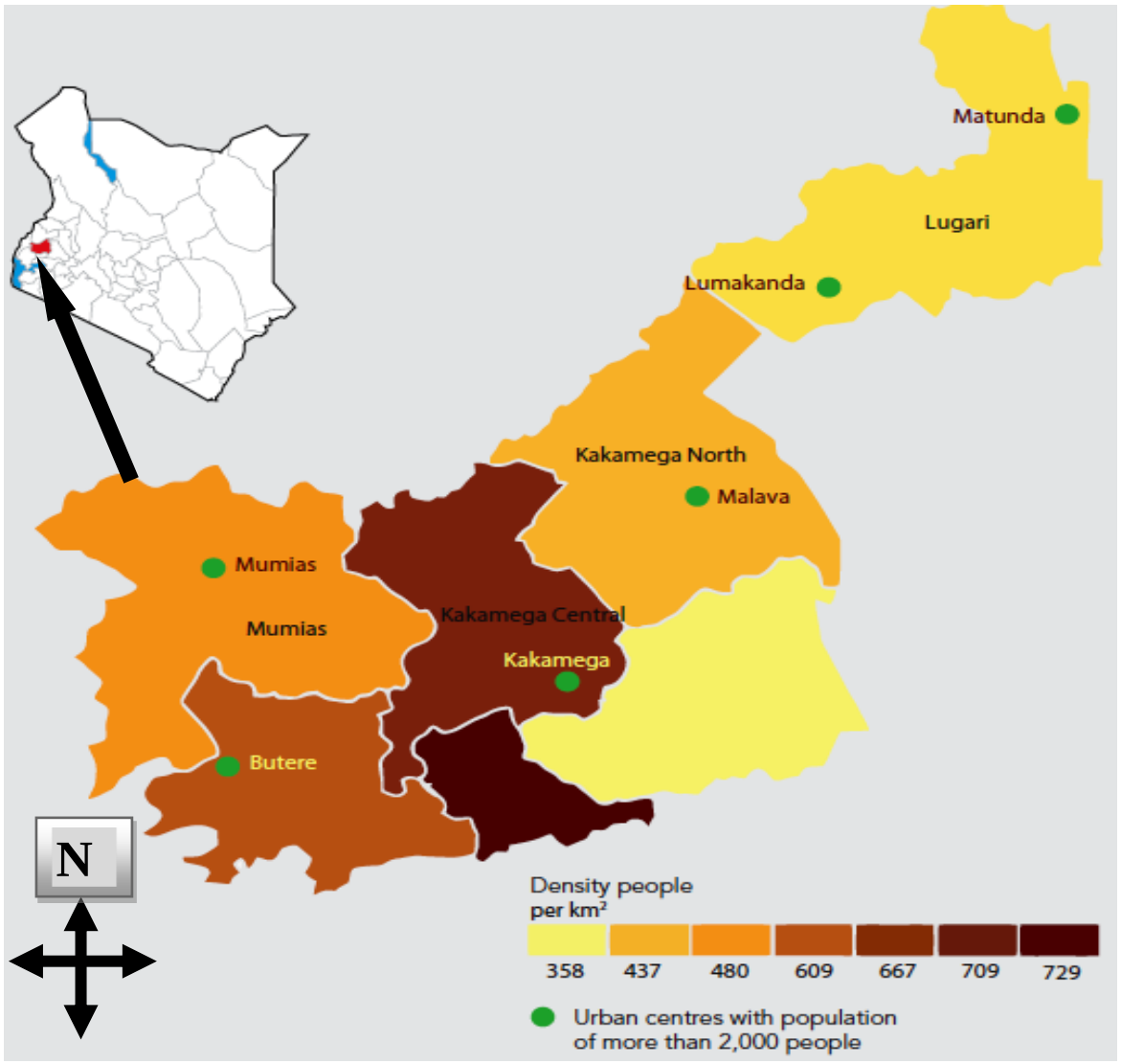
APPENDICES.

Appendix 1: Kakamega county map.



Source: *Kenya National Bureau of Statistics (KNBS) and Society for International Development (SID) (2013):* Exploring Kenya's Inequality, pooling apart or pulling together.

Appendix 2: Informed consent

INTRODUCTION:

My name is *Nebert Mchidi*, a Master of Public health student from Kenyatta University. I am gathering information on the **Health seeking behaviour among Nurses working in Kakamega County**. The information you give me will help understand how nurses utilize health services in this County. I am going to ask you some questions regarding your career as a nurse and how you take care of yourself when you take ill.

RISKS AND BENEFITS.

The research poses no harm both physically and psychosocially. It does not involve experimentation about any of the operations of your daily life. The benefits that will accrue from this study are that the information generated will help in understanding how you utilize health services in this County and will be used to look for ways of promoting health care utilization at the same time engaging in efforts towards mitigating any barriers to nurses 'health care utilization that the study will uncover.

Your name will not be written on the questionnaire, and will never be used in connection with any of the information you tell me. You do not have to answer any question(s) that you do not wish to answer, and you may end this interview at any time you want. However, your honest answers to these questions will help better understand the Health seeking behaviour among Nurses working in Kakamega County. I greatly appreciate your help in responding to this survey. The interview will take **about 30 minutes.** Would you be willing to participate?

Yes ☐ No ☐

Signature of Respondent: _____.

(Certifying that informed consent has been given)

Appendix 3: Questionnaire.

Name of Facility: _____Questionnaire number _____ Day __ /10/ 2015.

Type of Facility: □ County referral □ Sub-County □ County ***(check as appropriate)***

Kakamega County: District _____

A. PREDISPOSING FACTORS.	
1. What is your age **IN COMPLETED** years? (*Please write)*	_____
2. What is your **GENDER**? (*Tick **one box** only)*	1 ☐ Male 2 ☐ Female
3. What is your **MARITAL STATUS**? (*Tick **one box** only)*	1 ☐ Married. 2 ☐ Single. 3 ☐ Separated 4 ☐ Divorced 5 ☐ Widowed
4. What is your **RELIGION?** (*Tick **one box** only)*	1 ☐ Protestant. 2 ☐ Muslim. 3 ☐ Catholic. 4 ☐ Other (Specify)_____
5. What is **THE HIGHEST LEVEL** of nursing qualification have you **ATTAINED**? (*Tick **one box** only)*	1 ☐ Postgraduate degree. 2 ☐ BscN 3 ☐ Higher Diploma in Nursing. 4 ☐ KRCHN 5 ☐ KRN 6 ☐ KRN/M 7 ☐ ECN
6. How long have you been working as a nurse **IN THIS COUNTY**? (*Tick **one box** only)*	1 ☐ 6months - 1year. 2 ☐ 1 year to 5 years. 3 ☐ 6 years to 10 years. 4 ☐ More than10 years.
7. On a scale of **VERY LOW TO VERY HIGH**, how would you rate the support you get from your immediate supervisor in your work? (***Tick only one box***)	1 ☐ Very low. 2 ☐ Low. 3 ☐ Moderate. 4 ☐ High. 5 ☐ Very high.
8. Who is your greatest source of **EMOTIONAL SUPPORT** when you need it? (***Tick only one box***)	1 ☐ Spouse 2 ☐ Parent. 3 ☐ Friend. 4 ☐ colleague at work 5 ☐ I am self sufficient.
B. ENABLING FACTORS.	
9. What is your estimated net monthly **HOUSEHOLD INCOME** from all sources in Ksh? (*Please write)*	_____

10. On what do you **NORMALLY SPEND MOST** money? (*Tick **one box** only)*	1 ☐ Food 2 ☐ Clothing. 3 ☐ Healthcare. 4 ☐ School fees. 5 ☐ Leisure 6☐Other(***Specify***) _____
11. Which **HEATH INSURANCE COVER** do you have? (*Tick **all that** apply)*	1 ☐ NHIF 3 ☐ Heritage 4 ☐ UAP 5 ☐ Jubilee. 6☐ Other (***Specify***) _____.
12. **ARE YOU SATISFIED** with your health insurance cover in catering for your health needs? (*Tick **one box** only)*	1 ☐ No 2 ☐ Yes
13. Please **EXPLAIN** your answer above. (***Please write***)	_____ _____ _____
14. On average **HOW MANY HOURS** do you work per week? (*Tick **one box** only).*	1 ☐ Less than 40 hours 2 ☐ 40 - 50 hours. 3 ☐ More than 50 hours.
15. On a scale of **VERY LOW TO VERY HIGH**, how would you rate the work load that you handle in your work now? (*Tick **one box** only.*	1 ☐ Very low. 2 ☐ Low. 3 ☐ Moderate. 4 ☐ High. 5 ☐ Very high.
16. Are you **SATISFIED WITH THE HEALTH** services you have **ACCESS** to in this County?	1 ☐ No. 2 ☐ Yes.
17. Please **EXPLAIN** your answer above. (***Please write***)	_____ _____ _____
18. Are you satisfied with the **QUALITY OF HEALTH** services that are available to you? (*Tick **one box** only*).	1 ☐ No. 2 ☐ Yes.
19. Please **EXPLAIN** your answer above. (***Please write***)	_____ _____
20. What in your opinion *can be done about* **THE QUALITY OF HEALTH SERVICE(S)** that **is accessible to you** to in this County? (***Please write***).	_____ _____ _____ _____
21. If you were ill and had a **CHOICE, WHERE WOULD YOU** seek treatment from? (*Tick **one box** only*).	1 ☐ This facility that I work in. 2 ☐ Private facility. 3 ☐ Self treatment. 4 ☐ Other_____
C. NEED FACTORS.	
22. Overall, how do you rate your **CURRENT HEALTH**? (*Tick **one box** only)*	1 ☐ Poor 2 ☐ Fair 3 ☐ Good 4 ☐ Very good 5 ☐ Excellent.

23. In comparison to **ONE YEAR AGO**, how would you rate your **GENERAL HEALTH** now? (*Tick **one box** only).*	1 ☐ Worse. 2 ☐ Fairer. 3 ☐ About the same. 4 ☐ Good. 5 ☐ Very good.
24. If you compare your **PHYSICAL HEALTH** with ***other individuals of your age and gender***, you would say it is: (*Tick **one box** only)*	1 ☐ Much worse than theirs. 2 ☐ somewhat worse than theirs. 3 ☐ About the same as theirs. 4 ☐ Better than theirs. 5 ☐ Much better than theirs.
25. Comparing your **PSYCHOLOGICAL HEALTH** with ***other individuals of your age and gender***, you would say it is: (*Tick **one box** only)*	1 ☐ Much worse than theirs. 2 ☐ somewhat worse than theirs. 3 ☐ About the same as theirs. 4 ☐ Better than theirs. 5 ☐ Much better than theirs.
26. How **CONCERNED OR WORRIED** about your health have you been in the **last 12** months? (*Tick **one box** only)*	1 ☐ Not concerned at all. 2 ☐ Slightly concerned. 3 ☐ Somewhat concerned. 4 ☐ Moderately concerned. 5 ☐ Extremely concerned.
27. How do you expect your **HEALTH** to be in two years? (*Tick **one box** only)*	1 ☐ Worse. 2 ☐ Fairer. 3 ☐ About the same. 4 ☐ Good 5 ☐ Very good.
28. Why is this so? (***please Write***)	_____ _____ _____
29. Do you suffer from any of these chronic illnesses? (*Tick **all that** apply*)	1 ☐ Diabetes mellitus. 2 ☐ Hypertension. 3 ☐ HIV. 4 ☐ Mental illness. 5 ☐ Cancer (***specify)***_____ 6 ☐ Rheumatism 7 ☐ Asthma 8 ☐ Epilepsy. 9☐Other(***specify***)_____ 10 ☐ No.
30. Where do you receive your **CHRONIC DISEASE** treatment/ management from? (*Tick **one box** only).*	1 ☐ This facility. 2 ☐ Private facility. 3☐Other (specify)_____
31. When receiving care from your provider, **HOW OFTEN ARE YOU ASKED** for your ideas when making a treatment plan? (*Tick **one box** only).*	1 ☐ Almost never 2 ☐ Generally not 3 ☐ Sometimes 4 ☐ Most of the time 5 ☐ Almost always
32. In the last **12 months**, have you ever gone to hospital **OR** to the doctor voluntarily (without illness) **JUST FOR MEDICAL CHECKUP**?	1 ☐ No 2 ☐ Yes

33. If **YES,** what was the reason for you to do the check-up? (Tick ***one box***).	1 ☐ I was worried about my health. 2 ☐ The test was offered for free. 3 ☐ I wanted to be in control of my health. 4 ☐ I know I am at risk of disease. 5 ☐ I had been feeling bad lately. 6 ☐ Not applicable.
34. If **YES**, what check-up (s) did you undertake? (*Please **list** all*).	_____ _____ _____.
35. If **YES**, how did you pay for the said check-up? (Tick ***one box***).	1 ☐ Through insurance. 2 ☐ The test was offered for free. 3 ☐ Out of pocket.
36. If ***No in (32) above***, what would be your explanation for this? ***(****Tick **one box** only**)***	1 ☐ I have not gotten adequate time. 2 ☐ I fear finding something worse. 3 ☐ I don't see anything wrong with me. 4 ☐ I can't get the test I want around 5 ☐ (Other, specify)..... 6 ☐ Not applicable. 7 ☐ Money problems have prevented me. 8 ☐ I fear my confidentiality is not guaranteed.
E: ILLNESS BEHAVIOUR.	
37. When is **THE LAST TIME YOU** were ill (physically or mentally)? (*Tick **one box** only)*	1 ☐ Within 7 days ago. 2 ☐ 7 to 30 days ago 3 ☐ > 1 month but less than 3 months ago 4 ☐ > 3 months but less than 6 months ago 5 ☐ > six months ago.
38. What type of illness did you suffer in **38** above? (***Please write***)	_____
39. How did you know what was making you ill? (*Tick **one box** only*).	1☐Self diagnosis since I know the symptoms. 2 ☐ Diagnosed in the hospital/clinic by a doctor. 3 ☐ A colleague at work told me the diagnosis. 4 ☐ A friend/ Neighbour told me the diagnosis.
40. Was this ILLNESS **THAT** you last suffered severe? (*Tick **one box** only)*	1 ☐ No. 2 ☐ Yes.
41. Did you **SEEK TREATMENT THIS** time you were ill? (Tick ***one box*** only)	1 ☐ No.(***Go to question 48***) 2 ☐ Yes
42. **IF YES**, whom did you consult? (Tick ***one box*** only).	1 ☐ Medical doctor. 2 ☐ Nurse. 3 ☐ Clinical officer. 4 ☐ Not applicable. 5 ☐ Other (specify) _____.
43. How best can you describe the practice of the person you consulted above:	1 ☐ Private practitioner. 2 ☐ Public practitioner.

44. How did you decide on the person to consult in **42** above? (Tick ***one box*** only)	1 ☐ His/her speciality 2 ☐ His/ Her clinical experience. 3 ☐ He/ she is a personal friend. 4 ☐ My spouse advised. 5 ☐ It did not matter. 6 ☐ Not applicable.
45. Were you able to *get all* **TREATMENT** you needed this time?	1 ☐ Yes. 2 ☐ No.
46. If no, why not? (**Please explain**)	_____ _____
47. If you **DID NOT SEEK HELP IN 42** above, what did you do? (Tick ***one box*** only).	1 ☐ Nothing. 2 ☐ Took over the counter medication. 3 ☐ Took prescription medicine. 4 ☐ Took herbal medicine. 5 ☐ Not applicable. 6 ☐ Other _____.
48. What is the name/ type of drug (s) you self medicated? (*Please list all*)	_____
49. What would be your reason for not consulting a health professional? (Tick ***all that apply*** only)	1 ☐ I didn't have time to go to hospital. 2 ☐ I am comfortable with self treatment. 3 ☐ Money problems prevented me. 4 ☐ I could not get the service I wanted 5 ☐ Not applicable. 6 ☐ My confidentiality was not guaranteed. 7 ☐ Other (***specify***)_____

END OF QUESTIONNAIRE.

Thank you for participating.

Appendix 4: Permit by NACOSTI.

NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471, 2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

Date:

16th September, 2015

NACOSTI/P/15/33439/8057

Nebert Kiguhe Mchidi
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Health seeking behavior among nurses working in public hospitals in Kakamega County in Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Kakamega County** for a period ending **17th September, 2016.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Coordinator of Health, Kakamega County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. S. K. LANGAT, OGW
FOR: DIRECTOR GENERAL/CEO

Copy to:

The County Commissioner
Kakamega County.

The County Director of Education
Kakamega County.

National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified

Appendix 5: Authority from Graduate school, Kenyatta University.

KENYATTA UNIVERSITY
GRADUATE SCHOOL

KENYATTA UNIVERSITY OFFICE OF DEAN 5 MAY 2015 GRADUATE SCHOOL P.O. Box 43844-00100 NAIROBI

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: Q57/CTY/PT/20559/12

Date: 18th April, 2015

The Principal Secretary,
Higher Education, Science & Technology,
P.O. Box 30040,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MR. NEBERT K. MCHIDI - REG. NO. Q57/CTY/PT/20559/12

I write to introduce Mr. Mchidi who is a Postgraduate Student of this University. He is registered for a M.P.H. degree programme in the Department Community Health in the School of Public Health.

Mr. Mchidi intends to conduct research for a thesis Proposal entitled, "Health Seeking Behaviour among Nurses Working in Public Hospitals in Kakamega County in Kenya".

Any assistance given will be highly appreciated.

Yours faithfully,

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

ST/cao

Appendix 6: Ethical clearance from KUERC.

KENYATTA UNIVERSITY
ETHICS REVIEW COMMITTEE

Email: chairman.kuerc@ku.ac.ke
secretary.kuerc@ku.ac.ke
ercku2008@gmail.com
Website: www.ku.ac.ke

P. O. Box 43844 - 00100 Nairobi
Tel: 8710901/12
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Our Ref: KU/R/COMM/51/524

Date: 19th August, 2015

Nebert K. Mchindi
Kenyatta University,
P.O Box 43844, Nairobi

Dear Mchindi

RE APPLICATION NUMBER PKU/359/1333– "HEALTH SEEKING BEHAVIOR AMONG NURSES WORKING IN PUBLIC HOSPITAL IN KAKAMEGA COUNTY IN KENYA" – VERSION 2

1. IDENTIFICATION OF PROTOCOL
The application before the committee is with a research topic **"Health seeking behavior among Nurses working in public Hospital in Kakamega County in Kenya – Version 2** dated 14th August, 2015.

2. APPLICANT
Nebert K. Mchidi, Department of Community Health

3. STUDY SITE
Kakamega County, Kenya.

4. DECISION
The committee has considered the research protocol in accordance with the Kenyatta University Research Policy (section 7.2.1.3) and the Kenyatta University Ethics Review Committee Guidelines **AND APPROVED that the research may proceed for a period of ONE year from 19th August, 2015.**

5. ADVICE/CONDITIONS
i. Progress reports are submitted to the KU-ERC every six months and a full report is submitted at the end of the study.
ii. Serious and unexpected adverse events related to the conduct of the study are reported to this board immediately they occur.
iii. Notify the Kenyatta University Ethics Committee of any amendments to the protocol.
iv. Submit an electronic copy of the protocol to KUERC.

When replying, kindly quote the application number above.
If you accept the decision reached and advice and conditions given please sign in the space provided below and return to KU-ERC a copy of the letter.

PROF. NICHOLAS K. GIKONYO
CHAIRMAN ETHICS REVIEW COMMITTEE

I NEBERT MCHDI accept the advice given and will fulfill the conditions therein.

Signature..... Dated this day of 26/8 2015.

cc. Vice-Chancellor

Appendix 7: Clearance by Kakamega County Chief Officer of health services.

REPUBLIC OF KENYA

Telegrams: "PROVMED", KAKAMEGA
Telephone: 056 31125
Fax: 056 31125
E-mail: pdmswestern@gmail.com
When replying please quote

KAKAMEGA COUNTY
P O BOX 2309
KAKAMEGA
G.P.O. 50100

Ref : CGK/MOH/CIR/VOL1/ 5/89

2nd September, 2015

COUNTY GOVERNMENT OF KAKAMEGA
OFFICE OF THE CHIEF OFFICER HEALTH SERVICES

THE SCMOH

- MALAVA
- BUTERE
- MATUNGU
- IGUHU

Med Sup:

- CGH
- LIKUYANI CH
- LUMAKANDA CH

Dear all,

RE: CLEARANCE TO COLLECT DATA FROM YOUR FACILITIES: NEBERT MCHIDI.

The above named is a student at Kenyatta University, pursuing Masters of Public Health.

He wishes to carry out a study on Health seeking behavior among nurses working in Public hospitals in Kakamega County.

Kindly allow him to collect data from Nurses in your Health Facilities. He has copies of the ethical clearance.

Thank you.

Dr. David Oluoch,
For: CHIEF OFFICER FOR HEALTH /
COUNTY DIRECTOR OF HEALTH
KAKAMEGA COUNTY.