Perceptions and Demand for Health Insurance services offered under National Health Insurance Fund (NHIF) Scheme among Civil Servants in Tanzania

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Abstract
This paper examines the perceptions and demand for health insurance services offered under NHIF scheme in Tanzania. It examines the perceptions of civil servants, the factors influencing perceptions and their implications to the demand for health insurance services. The study used a cross sectional survey design which allowed collection of data in a particular place at once and within a short time. A sample of 250 civil servants from two strata (secondary school teachers and National Audit Office of Tanzania (NAOT) employees constituting 117 and 133 respectively) was obtained using stratified random sampling technique. The study used descriptive and econometric techniques to analyse the data. The results indicate that age, marital status and education have an influence on the perceptions of the quality of health services. Furthermore, sex, education and distance were found to influence the perceptions on the availability of health services. For the demand for health insurance services, age, sex, education, waiting time and perception on the quality of health services were found to be significant. Moreover, the findings show that most of the respondents (75.6 percent) reported poor health services offered under NHIF scheme. This means majority of the civil servants in Tanzania receive relatively poor health services at the accredited health facilities. The study recommends a review of the Act 8 of 1999 that established NHIF scheme in order to make civil servants enjoy the freedom of choosing the health insurance scheme of their test. It is imperative for the scheme to improve the quality of health services rendered in order to encourage new entrants and preserve customers' royalty. The services offered should be not only inviting and attractive but also should meet the customers' needs. To achieve this, the scheme should allow all accredited health facilities with the capacity (in terms of both material and human resources) to offer the services to NHIF customers.

Keywords: Health Insurance Services, civil servants, quality of health services, employees' perceptions, demand for health insurance service

1.0 Introduction

Financing health services have been provided by governments in a number of countries in the World. However, constrained governments' budgets for health, low economic growth and low organisational capacity are serious challenges in many developing countries (Carrin, 2003). To address challenges many low and middle income countries have reformed their health care systems to provide the effective financial risk protection for all by introducing health insurance (Dalinjong and Laar, 2012). National health care insurance programs differ both in terms of how the money is collected, and in ways the services are provided. In countries such as Canada, payment is made by the government directly from tax revenue. The collection is administered by government. In France a similar system of compulsory contributions are made, but the collection is administered by non-profit organisations set up for the purpose. This is known in the United States as single-payer health care. The provision of services may be through either publicly or privately owned health care providers (Bärnighausen and Sauerborn, 2002). Other countries are largely funded by contributions by employers and employees to sickness funds. With these programs, funds come from neither the government nor direct private payments. This system operates in countries such as German and Belgium. These funds are usually not for profit institutions run solely for the benefit of their members. Usually characterization is a matter of degree: systems are mixes of these three sources of funds (private, employer-employee contributions, and national/sub-national taxes) (Bärnighausen and Sauerborn, 2002).

African experience explores the different financing arrangements tried in Ghana, Tanzania, and Uganda. It introduces new scholarship on post-colonial health care strategies in Africa, especially during a decade of market-oriented healthcare reforms. Specifically, it attempts to explain why in nearly all African countries, "Demands from international donors for increased efficiency and competition are leading governments to play a smaller role in providing health care" (Quaye, 2010). The 1990s have accurately been described as the decade of

market reforms in health care in the West and East Africa. As for Africa, in the first decade of the 21st century, a confluence of forces has changed the nature of healthcare financing in unprecedented ways. While one form of cost sharing (user fees), has been used extensively in Africa, the nature of its use and its type of healthcare financing have differed across the continent. Some African countries have depended on community health care financing schemes such as those in Tanzania and Kenya, but relatively little is known about the history of this or other social health care insurance as a financing strategy in Africa. Both Tanzania and Ghana have relatively short history of using social government health insurance as a financing option. As for Uganda, it does not currently have any social health insurance in place, although its feasibility is being explored (Quaye, 2010).

In Tanzania, National Health Insurance Fund (NHIF) is a scheme that provides for health services to civil servants and other customers. The scheme was established when the Parliament passed a bill that resulted into the National health insurance Act (Act 8 of 1999) (URT, 1999). Kutzin (1997) said that, health insurance is the provision of health services which guarantees quality health care to its members. It is a self financing social insurance which provides security backup in case of sickness risk of her members. The health insurance provides two basic things, namely access to effective health care services when needed and effective protection of family income and assets from the financial costs of expensive medical care. The system aims at protecting the welfare of individuals who fall sick having no cash to pay for treatments. The connotation as to why NHIF was to be established in Tanzania can be reflected from the country's economic position in the 1993 in which case the Government introduced cost sharing at district hospitals. Moreover, in most African countries, health insurance received much attention over the past decades due to the stagnant economies to finance health care. Governments could no longer honour their commitment to provide free health care for all by relying on general taxation and donor support (Chomi, 2007). Social health insurance is usually financed through taxes or by contributions from both employer and employees (Carrin and James, 2004). In Tanzania, the establishment of the National health insurance Act No 8 of 1999 made it mandatory for all civil servants to join the fund. Furthermore, employees were required to contribute 3% of their basic salary and the employer to contribute 3% of the employees' basic salary to the fund each month, making a total contribution of 6% of the employees' basic salary. The deduction is mandatory regardless of whether the customer and his family members get the health services from the fund. Contributions of social health services are based on the ability to pay and access to services depends on need (Chomi, 2007).

Since NHIF is a mandatory scheme for civil servants though some of them would not be ready to join it if they were at liberty to decide joining or not. This is particularly due to the challenges of double payments and other challenges the fund faces. The Gurdian Newspaper-January 2005 Pg. 6 reported that some teachers were threatened to take the NHIF to the court if it would continue deducting their salaries while they were not getting health services from the fund. A report from Chama cha Walimu Tanzania (CWT) in Kwimba district said the teachers wanted to withdraw from contributing to the fund because it had not benefited them. Kwimba District CWT report reveals that, a total of 1320 teachers signed to oppose further contributions. The teachers reached this decision having realized that NHIF has had proved failure to offer to them proper treatment when they visited the hospitals, health centres, and dispensaries accredited by NHIF. ''This is a gross injustice, our salaries are being deducted but we don't get proper treatment'' the report revealed (Kaumbwa, 2008).

The Daily News Paper-May 5th, 2003 reported NHIF members from Singida and Dodoma regions claiming of doctors assigned to attend workers under NHIF scheme as being rarely available. Clamours are also common for nurses and other medical personnel embarrassing patients, workers in remote areas despite monthly deduction of cash to cater for medical requirements. Moreover, the workers had reported the matter to the relevant authorities but the situation did not change (Kaumbwa, 2008). Majira Newspaper-February, 2005 reported that, the Chief Medical Officer from the Ministry of Health revealed that they understood there was shortage of heath facilities to serve NHIF members. The officer added that deliberate efforts must be taken by the relevant authorities to ensure there is adequate supply of drugs. There is also problems of bad attitude among some health service providers towards the members as they use bad language when providing health services to them (Kaumbwa, 2008). Although NHIF scheme do not offer freedom for the customers to claim for the money spent in other non-accredited health facilities in an attempt to save life, still barriers of health facilities where civil servants should be treated exist. This has an impact on the civil servants perceptions towards the scheme services.

1.2 Statement of the Problem
Customers do have some feelings about the good/service prior to consumption and after consuming it. The feelings can be in the form of perceptions. Understanding civil servants perceptions on the health services offered under health insurance scheme and the socio-economic factors influencing the perception is of great importance to customer and policy makers. For instance, policy makers need to recognize perceptions as

potential barriers or enablers to enrolment and thus the need to invest in understanding them in their design of interventions to stimulate enrolment (Appiah et al., 2011). The perceptions on the health insurance services can be explained better by the Cognitive Dissonance Theory (CDT) which was developed in 1957 by Leon Festinger. The theory explains that the feelings of discomfort by customers result from holding two conflicting beliefs. It postulates that when people are exposed to various products or services; they tend to have a neutral feeling about the product or service regarding its performance before consuming it. After consuming the product/service, one gains an experience of the product/service consumed. That experience is called performance. When the performance of the product/services consumed is higher than or is to the level of expectation of the customer; it results to positive dissonance (satisfaction), however, if the expected performance is low, it results to negative dissonance (dissatisfaction) (Festinger, 1957). For instance, when a person joins health insurance scheme thinking that the scheme is helpful, unfortunately, one finds the scheme doesn't meet his/her expectations, can result to a feeling of hunger to the customer

In Tanzania for example, the implementation of NHIF scheme is confronted with many challenges since its establishment in 2001. They include shortages of human resources, medicine, medical supplies and diagnostic equipment. Again, majority of the people in the country including the NHIF customers are not aware of the services offered by the scheme (Humba, 2011). These challenges affect the actual and potential customers' demand for health insurance. For that case, lack of awareness about the services offered by the scheme limit the peoples' demand for the insurance services due to ignorance of the benefits of joining the scheme. The hunger feeling noted before, refers to a situation of discontentment that a person experiences upon failing to meet the expectations. When customers receive poor health services at the accredited health facilities, it makes them unhappy about the insurance scheme. Mwakisu (2005) and Kaumbwa (2008) show that poor services delivered under NHIF scheme reduce the demand for NHIF services among civil servants. It should be noted that, since the establishment of NHIF scheme in 2001 as a mandatory scheme to all civil servants, the scheme deprived them freedom to choose the health insurance of their test to join. However, little information is known about the civil servants' perceptions on their membership in NHIF scheme and the socio-economic factors influencing perceptions of civil servant on health services offered under NHIF scheme. Additionally, less is understood regarding the implications of the perceptions of civil servants for the demand for health insurance services among civil servants. Therefore, the present study was set to examine the civil servants' perceptions on health services offered under NHIF scheme and what would be their demand for NHIF services if they were given freedom to choose the health insurance scheme to join.

1.3 Objectives of the Study
The general objective of the study was to examine the perceptions of civil servants on health services offered under NHIF schemes and their implications on the demand for health insurance services specifically the study focused on the following objectives
   i.   To examine the perceptions of civil servants on the health services offered under the NHIF scheme

   ii. To determine the kind of factors that affect the perceptions of civil servants on the services provided under the NHIF Scheme

2.0 Literature Review
2.1. Demand for Health Insurance
Feldstein (1988) defined demand for health insurance as the quantity of insurance cover an individual is willing to purchase at different premiums. Decision to join health insurance is defined as a choice that an individual takes to register the health insurance (Hottodze, 2008). For the purpose of this paper, demand for health insurance refers to the willingness of the customer to join the insurance scheme. Besides the two terms decision to join and demand for health insurance can be used synonymously since the two terms indicate an individual's need to purchase health insurance services.

2.1 Perception on Health Services
Alrubaiee and Alkaa'ida (2011) define perception on health services as the outcome of the evaluation process, whereby the customer compares his/her expectations with the services he/she has received i.e. he/she puts the perceived services against the expected service

2.2 Theories for the Demand for Health Care

2.2.1 The Andersen Behavioural Model of Demand for Health Care

Andersen's behavioural model was first developed in 1968 to help in explaining the differences in access to health services in the United States of America (Satayavongthip, 2001) as cited in Chiremba, 2013). The model is the most widely used analytical model to explain health care utilisation behaviour. The model gives an overview of relevant social determinants for demanding health care services. The theoretical framework describes the process of health care utilisation as a causal interaction of three different levels which are societal, health care system (programme factors) and individual determinants (Chiremba, 2013).

The societal and system determinants are postulated to influence individual determinants which in turn directly influence the use of health care services. The societal determinants include the current state of knowledge as well as peoples' attitude and beliefs about health and illness. The system factors include structures and activities through which health care and health education are provided. For example, system factors would consider the availability of information, education and communication (IEC) activities in a village to educate people on health care services (Sunil, Zottarelli and Rajaram, 2000). The organisation component of the system factors addresses how services are delivered to people who are in need. These factors include distance to the nearest health facility and access to health care workers (Chiremba, 2013). Andersen and Newman (1995) argues that the theoretical framework establish that the individual's decision to demand health care services is a function of three factors namely the predisposing, enabling and need factors. These factors are explained below

2.2.1.1 Predisposing Factors

The model suggests that certain factors predispose people towards health care service utilisation. These factors influence an individual to seek health care services. For instance, the demographic characteristics such as age, sex and marital status as well as past illness may have an influence on the demand for health care services (Andersen and Newman, 1995). Since female are more concerned with taking care of sick people and children in the household they are more likely to take up health services. The social structure factors such as education, family size, occupation and race are also important predisposing factors. Nevertheless, beliefs, values and knowledge about health and medical care services can affect the demand for health care services.

2.2.1.2 Enabling Factors

Enabling conditions make health service resources available to an individual. Even if an individual may be predisposed to the use of health care services, some means must be available for him or her to do so (Andersen and Newman, 1974). These factors include both individual and household resources (income and health insurance). The availability of the health care services is also an enabling factor. Attributes of the community like the location in which people live are important since they indicate geographic proximity to the source of care as well as local attitudes about health care services.

2.2.1.3 Need Factors

The need for a service (illness) is perhaps the most important factor which influences health care service utilisation. In line with Chiremba (2013), even with the existence of predisposing and enabling factor, the individual seeking health care services must still perceive the need for health care before seeking it. A perception of illness is necessary for the use of health care services. The need for care may be perceived by the individual and reflected in reported symptoms or disability days; such days are those during which the individual is unable to do what he usually does be that work, go to school, take care of the house, or play with other children (Andersen and Newman, 1995). Old people tend to have their immunity lower than the youth, making them prone to illness. Thus, aged individuals will have more demand for health care services. Married individuals also have more chances of reporting sickness in the health facility most especially when they have children and other people in their households than non married ones. Having more need for health services, aged and married couple become prompted to utilize more health services. The perception on the quality of health services will be negative or positive depending on the situation at the facility whether or not the services meet their expectations.

2.2.2 The New Theory for Demand of Health Insurance

The new theory of demand for health insurance was published by Nyman in 2003, with the objective of addressing the challenges observed in the conversional theory. The theory asserts that consumers demand health insurance in order to obtain a transfer of income from the healthy if she/he were to become ill. This income transfer allows the ill consumer to purchase more medical care and more consumer goods and services than he/she would purchase without it. Sometimes this income transfer allows the ill consumer to purchase medical care that would otherwise be unaffordable. Nyman argues that the demand for health insurance is derived from the access it provides to medical care, which generates more utility than does the income spent on premiums.

Nyman contends that insurance buyers do not need to be especially risk averse. Furthermore, the theory suggests that voluntary purchase of health insurance makes the consumer better off (Nyman, 2003). Even with the availability of health insurance in the place, awareness of individuals about the health insurance is important for it can influence their decision to purchase health insurance. People with knowledge about health insurance are more likely to demand health insurance services as compared to people without knowledge about health insurance.

This theory meets the requirement of the present study to explain the dependent variable under study. However, it does not present some perceptions that health insurance customers have toward the scheme. Moreover, there are some controversies with the new theory of demand for health insurance as developed by Nyman (2003). For example, the theory rejects Pauly's (1968) model of the welfare consequences of insurance that pay off by reducing the price. On that ground, the study adopted the new theory of demand for health insurance along with the Andersen and Newman Framework in order that; both the independent and dependent variables of the present study find a foundation. It is therefore, important to use the two theories together because each of them has a contribution to the study that is useful to the completion of the study

2.3 Review of Empirical Literature

Mwakisu (2005) examined the perceived quality of health care services in Dar es Salaam municipal hospitals. The aim was to compare the perceptions on quality of health care services between clients using user fees and the National health insurance fund clients. The findings for the study indicate that provider-client interactions was perceived to be good, with a higher proportion of NHIF clients (93.6%) compared to clients paying user fees (88.3%) reporting to have spent adequate consultation time with the prescriber (p<0.05). Moreover, majority of the clients the study reveals were satisfied with the physical state of buildings and attitude of health workers (i.e. 85.1% of user fees versus 86% of NHIF) at the facilities that they had attended. Findings further reveal that drug availability was perceived to be a problem. However, the level of satisfaction with quality of health care was high. Bhat and Jain (2006) used the probit model in the first dependent variable and Heckman 2-stage in the second dependent variable to examine the factors affecting the demand for private health insurance in a micro insurance scheme in India.. The result showed that income, age, knowledge about insurance and perception regarding future healthcare expenditure are the factors which were found to affect the purchase of health insurance scheme.

Ibrahim (2008) investigated the patients' satisfaction with health services at Indra Gandhi Memorial hospital. The study obtained a sample of the research respondents of 251 by a statistical formula based on a stratified sampling technique. The findings revel that, 76.5% of patients were dissatisfied with out of pocket medical services financing whereas 23.5% were satisfied. Regarding the quality of health care services such as quality of instruments, examination of patients, competency of doctors and the way pharmacist dispensed drugs, 44.2% of the patients were highly satisfied and 55.8% of patients were dissatisfied. On the extent of payments for health services that was based on four categories private payment schemes, government payment schemes and insurance payment schemes and others (private organizations), of all these only private payment scheme had high percentage of satisfaction compared to others. Similarly, Kaumbwa (2008) analysed perception of the civil servants on the health scheme provided by the National Insurance Fund. Results show that responsiveness of staff in providing services, supportive language of the health care givers to patients, and skills of service providers have positive impact to the customers' perception on NHIF services. The findings of the study also revealed that customers were not satisfied with the waiting time before they were attended by service providers and services offered by the scheme

On the other hand, Giesbert, Steiner and Bendig (2011) investigated the participation in micro life insurance and the use of other financial services in Ghana. The results revealed that vaccination, sex, age, education, asset and remittance influence positively the decision to take up micro life insurance. This finding was shared in the study of Papanikolaou and Zygiaris (2012) that tested the internal consistency and applicability of Service Quality (SERVQUAL) in primary health care centres in Greece. The results showed that, age, gender, levels of education and empathy were significantly affecting the perceptions on health services quality. Abubakar, Regupathi, Aljunid and Omar (2012), also investigated factors that affect the individual demand for health insurance in Malaysia. The result showed that income level, age, gender, race-religion, education level and risk attitude affected the decision to purchase health insurance for salaried individuals while for non-salaried individuals race-religion, education level, marital status and out-of-pocket affected the decision to purchase health insurance. This was also echoed by Ibok (2012), in their study on factors affecting health insurance consumption in Akwa Ibom State. The results revealed that access to health insurance information, education, age, marital status, sex, family size, occupation and income had positive influence to the demand for health insurance while religion had negative influence. Kimani, Ettarh, Warren and Bellows (2014), used a multivariate

logistic regression to examine the determinants associated with health insurance ownership among women in Kenya. The study shows that being employed in the formal sector, being married, exposure to the mass media, having secondary education or higher, residing in households in the middle or rich wealth index categories and residing in a female-headed household were associated with having health insurance. However, region of residence was associated with a lower likelihood of having insurance coverage. Women residing in Central (or = 0.4; p < 0.01) and North Eastern (or = 0.1; p < 0.5) provinces were less likely to be insured compared to their counterparts in Nairobi province.

2.4 Conceptual Framework

At the individual level, community and country level health insurance scheme is important for it provides health services even at times its customers do not have money in hand to pay for health services. It takes care of family health, thus contributing to the growth of the country's economy. However, there are factors influencing civil servants' perceptions toward the demand for NHIF services that need to be investigated.

The factors and perceptions constitute the independent variables in one hand and on the other hand perceptions and the demand for health insurance services constitute the dependent variables. The factors influencing demand for health insurance services that the present study adopted are demographic factors such as age, sex, marital status and education level of civil servants. Others factors include distance to the accredited health facilities, size of the family, waiting time and frequency of visit to the accredited health facilities. These factors affect the civil servants perceptions on the services offered by the NHIF scheme. Independent variables also comprised of the perceptions on health services.

Figure 1: The Research's Conceptual Frame work
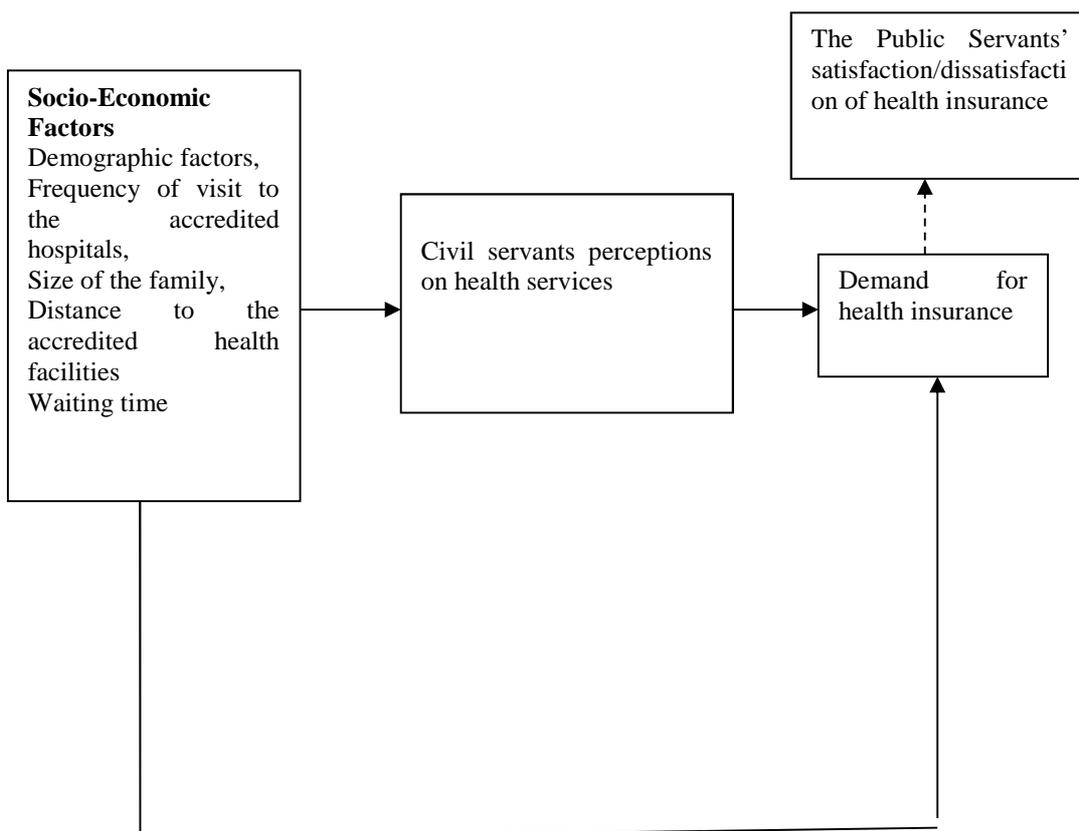
Source: Self conceptualization (2015)

Note: ⟶ Stands for relationship investigated in the study
    - - - - - ▶ Stands for relationship not investigated in the study

2.5.1 Factors Affecting Civil Servants' Perceptions on Health Services

The socio-economic factors affecting perception on health services among individuals are age, sex, marital status, education and distance to the accredited health facilities. The section addresses specific objective number two of the study

People using NHIF services are of varied age; the young, youth and adults. The researcher assumed that adults have more counts of visits to the accredited health facilities than youth. This is mainly due to their exposure to ill-health risks than do the youth. As ageing sets in the body immune system tend to decrease. Therefore, older people are also more exposed to ill-health risks. Thus older individuals having more visits to the accredited health facilities are more exposed to understand the nature of health services offered. Alrubaiee and Alkaa'ida (2011) argue that, aged individuals perceive positively the quality of health care.

Hypothesis 1: There is a positive relationship between older individuals and perception on the health services offered.

As compared to men, women have more need for health services. This is because the women physiology and body make is complex than men. For example, women give birth while men do not. This is one area suggesting the difference in health needs among the two sexes. Nonetheless, men and women have varied family responsibilities. Men are the breadwinners of their families but women are care givers for children and other sick members of the family. Moreover, the women physiological make up and their vulnerability to ill-risks tend to influence their perception on health services positively. Sendino, Castillon, Banegas and Artalejo (2006) argue that, women receive home medical visit and medication more frequently than their men counterpart.

Hypothesis 2: Women have positive perception on health services as compared to their men counterpart.

Education enriches people to understand how things are conducted in various settings including the health sector. Health facilities differ in the way and kind of doing their day to day activities. Some offer good services, and some offer poor services. People with high education level tend to set high standards of quality such that if the services offered do not meet their expectations can lead to negative perception. However, if the services meet their expectations their perceptions will be positive. Alrubaiee and Alkaa'ida (2011) argue that, individuals with higher levels of education perceive positively the quality of the health care.

Hypothesis 3: There is a positive relationship between individuals with higher education and perception on health services.

Married individuals visit health facilities more frequently than unmarried individuals because; married individual's partners tend to persuade them to utilize health services when sick (Esmailnasab, Hassanzadeh, Rezaeian and Barkhordari, 2014). This result to married individuals to get more exposed to the health services offered at health facilities and being able to evaluate the health services. Again; Alrubaiee and Alkaa'ida (2011) argue that, married individuals perceive the health care quality positively as compared to unmarried individuals.

Hypothesis 4: Married individuals have positive perception on the health services.

Moreover; distance to health services facilities has an influence on the perceptions on health services. If the facility is easily accessible and is closer to the customer, the individual will more likely utilize the scheme services at the place, most especially if the services are available. Awoyemi, Obayelu and Opaluwa (2011) reveal that, as the distance increases from the health facilities, the people perceive negatively on the services offered.

Hypothesis 5: There is a negative relationship between distance and civil servants perception on the health services.

2.5.2 Civil Servants' Perceptions and Demand for Health Insurance Services

This section addresses perceptions of civil servants on health services offered under NHIF scheme. Specific objective number one and three of the study are addressed.

Perceptions have an influence on the customers' demand for health insurance services. For example, Chomi (2007) revealed that, respondents were complaining about lack of medicine in the hospitals and that they were to buy medicine somewhere else. Nevertheless, Ibrahim (2008) argued that sanitation and clean environment in the medical facilities encourage people to access health services at that facility

Hypothesis 6*: There is a positive relationship between customers' perception on health services and demand for health insurance services*

2.5.3 Factors Affecting Demand for Health Insurance

The socio-economic factors such as age, sex, marital status and education are addressed. Others are size of the family, frequency of visit; waiting time and distance to the accredited health facility are also addressed here. The section addresses specific objective number three

Age is a factor that has an influence on the customer demand for health insurance. As individuals get old and ageing set in, the chances for illness and being attacked by diseases increase. This is because the body immune system declines. Thus, young people don't find motives for health insurance than do adults. Hottodze (2008) argues that; young people believe that they are healthy and don't find motives for insurance coverage. Again, Kimani et al. (2014) reported that the likelihood of health insurance ownership tends to rise with age due to increase in financial security with age which in turn increases the ability to purchase health insurance policy

Hypothesis 7: *There is a positive relationship between age of the respondent and demand for health insurance scheme services.*

Sex is another factor affecting demand for health insurance scheme. When compared women and men, in terms of health services requirements women have more demand than do men. The women's physiology is more complex than men suggesting more ill risks to the women. Hottordze (2008) revealed that, women as care-givers for children and other sick members of the household, coupled with their vulnerability and physiological make up are likely to have positive attitude towards insurance decisions than do their male counterparts. Kimani et al. (2014) suggest that, women residing in female-headed households were more likely to be insured compared to their counterparts in male-headed households.

Hypothesis 8: *Women are more likely to demand health insurance than men*

Again, marital status is a factor influencing demand for health insurance scheme. Unmarried individuals do not have many family responsibilities as opposed to the married couple. This encourages married individuals to purchase health insurance cover so that they are in position to get health services as the need arises. Sekyere and Chiaraah (2014) report that; married couples are more likely to utilize health insurance than unmarried individuals.

Hypothesis 9*: Married couple are more likely to demand health insurance than unmarried ones.*

Moreover, education is another factor, which has an influence on the demand for health insurance scheme among customers. Educated people are most positioned to understand the fund and be able to weigh the merits and demerits of joining or not joining an insurance scheme. Sekyere and Chiaraah (2014) support this argument by pointing out that people with higher levels of education demanded health insurance on the ground that they had a better understanding of the scheme.

Hypothesis 10: *Individuals with high education are more likely to demand health insurance services.*

Size of the family as a factor also has its impact on the demand for health insurance services. When the size of the family becomes large, possibilities of ill-health occurrences in the family increase; this can encourage the customers to demand health insurance coverage as they realize the benefit of the scheme. The higher the number of children in the household the more the demand for health insurance (Bhat and Jain, 2006)

Hypothesis 11: *There is a positive relationship between size of the family and demand for health insurance services.*

The NHIF scheme customers' number of visit to the accredited health facilities in a year poses an experience about the health services offered under the scheme. Those who visit the accredited health facilities several times, are more positioned to know much better the quality of health care services offered under NHIF scheme than those who do not. In such case, those who visit frequently accredited health facilities will find the insurance useful than those who rarely use the scheme's health services. Sekyere and Chiaraah (2014) report that, people

who frequently visit their doctors for medical attention are more likely to ensure than those who visit the hospitals in a fewer counts in a year

Hypothesis 12: There is a positive relationship between the frequency of visit to the accredited health facilities and demand for health insurance services.

Moreover, accessibility of health services facilities has an influence on the demand for health insurance services. If the facility is easily accessible and is closer to the customer, can influence utilization of services most especially if the services offered are of good quality. The accessibility of health facilities can be linked to the number of accredited health facilities. When they are many in the area it increases the accessibility of the facilities. Chiremba (2013) notes that, accessibility of health services increases the demand for health care.

Hypothesis 13: There is a negative relationship between distance to the accredited health facilities and the demand for health insurance services.

Waiting time at the accredited health facilities poses an impact on the demand for health insurance services. When customers spend longer time at the accredited health facility before getting treated it negatively influences the customers' demand for health insurance services. Andersen and Newman framework (1995) asserts that, accessibility of medical care is perceived to increase as the waiting time decreases. The study by Mwakisu (2005) reports that, long waiting time at the medical facility was one reason for customer dissatisfaction. Again, Osei et al. (2015) found that waiting time had a negative relationship with the demand for health care services.

Hypothesis 14: There is a negative relationship between waiting time and the demand for health insurance services.

3. Research Methodology
The present study was conducted among teachers in Kinondoni District in selected secondary schools and civil servants at National Audit Office headquarters in Dar es Salaam. Kinondoni is located in Dar es Salaam between Latitude 6° 47' 0" South and between Longitude 39° 16' 0" East of Greenwhich. The Municipality is bordered by the Indian Ocean to the North East, Ilala Municipal to the South, Bagamoyo district to the North, Kibaha district to the West and Kisarawe district to the South West. Kinondoni municipality effectively cover an area of 537.44 km^2, out of this are 410.576 km^2 is covered by dry land and111.698 km^2 covered by water and population of 1,083,913 according to national census of 2002 and estimates for 2012 is around 1,775,049. The population density is estimated at 3,302 persons per square kilometer. The total population for Dar es Salaam is 4,364, 541 citizens. The population selected is expected to have information rich due to its heterogeneity. The population of this study was all civil servants (200 civil servants) of NAOT head office and 166 teachers from five selected secondary schools in Kinondoni district, in Dar es Salaam. The study aimed to collect information from the respondents in the study area on their perceptions on health services they get from the NHIF scheme. In selecting a sampling technique we used stratified random sampling technique. Civil servants were paced in two strata namely civil servants at NAOT and civil servants in secondary schools in Kinondoni district. Moreover, five schools were purposively selected from 48 schools in Kinondoni. The sample size in each stratum was obtained by using a statistical formula. In each stratum simple random sampling was used to obtain the sample. The decision to use stratified random sampling technique was based on the fact that the population was heterogeneous i.e. civil servants at NAOT and in selected secondary schools. Simple random sampling was employed because every member had an equal chance to be selected.

3.1 Validity and Reliability of the Research Instruments
Before going to collect data at the research site the researcher conducted a pilot study on the instrument for data collection. A pilot study was conducted to 20 respondents at NAOT head office. The objective of the pilot study was to pre-test the research questionnaires. The pre-testing helped the researcher to refine the items which were unclear to the respondents.

3.2 Factor Analysis
Factor analysis is a set of techniques for determining the extent to which variables that are related can be grouped together so that they can be treated as one combined variables rather than as a series of separate variables (Mutula, 2015). Factor analysis is used to determine the responses to a set of items used to measure a particular concept can be grouped together to form an overall index of the concept (Duncan, 2003).

The study has five perception variables affecting the demand for health insurance services. Respondents were asked to give their responses in a five point likert scale ranging from strong disagree, somehow disagree, neutral,

agree and strongly agree. The data collected on these perceptions were subjected to factor analysis to extract variables or attributes of perceptions of civil servants influencing demand for health insurance services.

Upon running the principal-component factor, two factors (that is factor 1 and factor 2) met the requirement of having Eigen value greater than 1 and were retained as it is shown in Table 3.1

Table 3.1: Results of Factor Analysis

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor 1	1.28384	0.18686	0.2568	0.2568
Factor 2	1.09698	0.12614	0.2194	0.4762
Factor 3	0.97085	0.09804	0.1942	0.6703
Factor 4	0.87280	0.09728	0.1746	0.8449
Factor 5	0.77553	-	0.1551	1.0000

Source: STATA output

Each item is correlated with or loads on each factor. The higher the factor loading, the stronger is the correlation between factors and the item. Statistical literature varies in its acceptable threshold of factor loading; however, 0.3 has been generally accepted as an appropriate salient loading (Kline, 2014). Therefore for the purpose of this study, factor loading above 0.3 considered high and has been accepted.

From Table 3.2, items Perce2 (perception on cleanliness of the environment), Motiv (motivation of respondent on having special desk for NHIF customers in every accredited health facility) and Aware (awareness of the respondent on the health services offered e.g. laboratory services like examination of specimens and consultation services) fall under factor 1 and it was labelled as perceptions on the availability of health services offered (Percav). Furthermore, items Perce1 (perception on quality of health care offered) and Perce3 (perception of the respondent on behaviour and attitude of the health care personnel at the health facility) falls under factor 2 and was labelled as perception on quality of health services offered (Percqu). These two new variables were the ones used in the regression analysis.

Table 3.2: Factor Loading and Unique Variances

Variable	Factor 1	Factor 2	Uniqueness
Perce1	0.3093	0.5852	0.5619
Perce2	-0.4445	-0.3960	0.6456
Perce3	-0.2431	0.7291	0.4094
Motiv	0.6381	-0.2562	0.5272
Aware	0.7241	-0.0226	0.4751

Source: STATA output

3.3 Variables and Measurements

The following is a list of variables that were considered to study the perceptions of civil servants on health services offered under health insurance scheme and their implications on demand for health insurance services.

3.3.1 Dependent Variable

The dependent variables are perception on availability of health services, perception on quality of health services and the civil servants' demand for health insurance services.

3.3.2 Independent Variables

The independent variables were categorized into two groups which are factors affecting demand for health insurance services and civil servants' perceptions on health services. Factors influencing demand for health insurance services consisted of age, gender, marital status, and education level, size of the family, frequency of visit to the accredited healthy facility, distance to the accredited health facility and waiting time. Civil servants' perceptions influencing demand for health insurance services consisted of perceptions on quality of health services and perception on availability of health services offered at the accredited health facilities.

3.4 Data Analysis

The present study used multiple regression and ordered probit models to analyze data by using computer software such as Statistical Package for Social Sciences (SPSS) version 20 and STATA version 11. Presentation of the research findings was done through description in the text format, through graphical, charts, tables and pictorial.

3.4.1 Models and Estimation Techniques

The study employed two different regression analyses namely, multiple regression and ordered probit models depending on the nature of the dependent variable. The dependent variables were perception on quality of health services, perception on the availability of health services and demand for health insurance services.

3.4.2 Demand for Health Insurance Services

The study employed ordered probit model. This model was developed by Aitchison and Silvey 1957 and was brought into social sciences by McKelvey and Zavoina in 1975. The ordered probit and logit models are used for analysing models with categorical dependent variable. Modelling polychotomous dependant variables may use ordered probit or logit model. These two methods arrive at the same conclusion (Borooah, 2002).

Ordered probit model is a type of regression in which the dependent variable has more than two outcomes and very often these outcomes are ordinal in nature; that is they cannot be expressed on an interval scale. For example in survey-type research the response are on a likert type scale, such as strongly agree, somewhat agree, neither agree nor disagree, disagree and strongly disagree. Here there are five possible responses, which evidently can be ordered in a natural way and one can use ordered probit model to analyze the data (Davidson and McKinnon, 2003). Using the ordered probit model, the probability of each category is estimated.

The dependant variable for this study was the demand for health insurance services which was based on the willingness of the civil servants to join the fund if NHIF scheme is made a free fund for civil servant. The researcher asked a question in which the responses were in form of a likert scale such as "I would not join the fund" "I am not sure if I would join or not" and "I would join the fund".

The ordered probit model is usually motivated in a latent (unobserved) variable framework
The general specification is

$$y^* = X_i\beta + \varepsilon_i$$

Where y^* is a latent (unobservable) variable measuring the willingness to join the fund of the ith respondent ; X_i is a vector of factors affecting demand and civil servants' perception; β are the parameters of the model and ε_i is a random term which is assumed to be normally distributed with zero mean and unit variance.

Interval decision rule:

$y_i = 1$ if $y^* \leq \mu_1$, (for respondent who would not join the fund)

$y_i = 2$ if $\mu_1 < y_i^* \leq \mu_2$ (for a respondent who would join or not)

$y_i = 3$ if $y_i^* > \mu_2$ (for a respondent who would join the fund)

The threshold values (μ_1, μ_2) are unknown parameters to be estimated with β. The parameters of the model are estimated by the method of maximum likelihood. The current study, the respondents have their own intensity of feelings, which depends on certain measurable factors X and certain unobservable factors ε. In principle, they could respond to the questionnaire with their own y∗ if asked to do so. Given only, say, three possible answers, they choose the cell that most closely represents their own feelings on the question

3.4.3 Perceptions on Quality and Availability of Health Services

Multiple regression models were used to analyze data on perceptions on quality and availability of health services offered using Ordinary Least Square (OLS) techniques. The reason for using OLS in this regression analysis is because it minimizes the residual sum of squares of the estimated parameters. The multiple linear regression models are used to study the relationship between a dependent variable and two or more independent variables (Green 2003). It is used when the value of dependent variable is predicted based on the two or more explanatory variables especially when the variables have linear relationship.

Gujarati (2004) argues that, under multiple regression model; the assumptions of Classical Linear Regression Model (CLRM) should hold. These are;

(i)   The multiple regression model is linear in parameters

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_3 + \mu_i$$

Y is linear in parameters; however, Y and Xs may be nonlinear

(ii)   Zero mean value of error term μ_i. Given the value of Xs, the expected value of random error term is zero, that is:

$$E\left(\mu_i \Big/ X_{2i,} X_{3i}\right) = 0 \text{ for each value } i$$

(iii) Zero covariance (cov) between error term μ_i and each X values, that is;

$$Cov(\mu_i, X_{2i}) = \text{cov}(\mu_i, X_{3i}) = 0$$

(iv)   The variance of error term is homoscedasticity, that is:

$$Var(\mu_i) = \delta^2$$

(v)   No autocorrelation between the disturbances. Given any two X- values X_i and X_j $(i \neq j)$, the correlation between any two μ_i and μ_j $(i \neq j)$ is zero, that is:

$$Cov\left(\mu_i, \mu_j \Big/ X_i, X_j\right) = 0$$

Therefore, basing on the assumptions above, the estimated econometric model for perception on quality of health services can be derived as:

$$Percqu = \beta_0 + \beta_1 Age + \beta_2 dsex + \beta_3 dmarrit + \beta_4 dEd_1 + \beta_5 dEd_2 + \beta_6 dEd_3 + + \beta_7 size + \beta_8 dist + \mu_1$$

The estimation econometric model for perception on impressive health services offered is:

$$Percav = \beta_0 + \beta_1 Age + \beta_2 dsex + \beta_3 dmarrit + \beta_4 dEd_1 + \beta_5 dEd_2 + \beta_6 dEd_3 + \beta_7 size + \beta_8 dist + \mu_2$$

Where;

$Percqu =$ Perception on quality of health services

$Percav =$ Perception on the availability of health services offered

$dsex =$ Dummy variable of sex

$dmarrit =$ Dummy variable of marital status

$dEd_{1 \to 3} =$ Dummy variable of education

$Freq =$ Frequency of visit at the accredited health facility

$size =$ Size of the family

$dist =$ Distance to the accredited health facilities

$\mu =$ Disturbance term

$\beta_{1 \to 8} =$ Partial coefficients of explanatory variables

3.4.4 Test for Multicollinearity

Multicollinearity refers to the situation where there is either an exact or approximately exact linear relationship or correlation among the independent variables. The consequences associated with multicollinearity are: the standard error of the coefficients would be very large thus, increasing the probability of type two errors (failing to reject the null hypothesis). Another consequence perfect multicollinearity is that the OLS of estimation will not run (Gujarat, 2004).

Multicollinearity test was conducted by using correlation coefficient matrix in ordered probit model and Variance Inflating Factor (VIF) in multiple regression models.

$$VIF = \frac{1}{1 - r^2{}_{23}}$$ where $r^2{}_{23}$ is the coefficient of correlation between X_2 and X_3. As a rule of thumb, if the VIF of a variable exceeds 10, that variable is said to be highly collinear (Gujarati, 2004). However, for the correlation coefficient matrix, with absolute values of correlation coefficient near to unity in the correlation matrix indicate the presence of multicollinearity (Joshi, 2012).

Furthermore, for the qualitative explanatory variables used, the dummy variables introduced were less by one than the categories of the variables. This was done in order to avoid from falling into the dummy variable trap because by including the full set of the dummy variables, one may end up with a perfect linear relation between the set of dummies and the constant (Green, 2003).

3.4.5 Test for Heteroscedasticity

The existence of heteroscedasticity means the assumption of homoscedasticity or constant variance of the error term of the CLRM is violated. When heteroscedasticity occurs the OLS estimators are no longer minimum variance or efficient, that is, they are not BLUE (Best Linear Unbiased Estimator). The BLUE estimators are provided by the method of weighted least squares (Gujarat, 2004). Due to variations arising from the use of the variables such as age, frequency of visit, distance to the accredited health facility and waiting time, the researcher suspected that there might be the problem of heteroscedasticity. To overcome the problem, the numeric variables were transformed into natural logarithm in the OLS regression analysis. Moreover, the standard errors were adjusted for heteroscedasticity by making them robust standard error.

3.4.6 Test for the Fitness of the Model

In order to test the fitness of the overall model, F-test was used to test whether explanatory variables have joint effect on dependent variables. F-test is given by:

$$F = \frac{ESS/df}{RSS/df} = \frac{ESS/k-1}{RSS/n-k}$$

Where,

ESS = Explained Sum of Squares

RSS = Residual Sum of Squares

df = Degree of freedom

n = Number of observation

k = Number of parameters

To test hypothesis; null hypothesis H$_0$: $\beta_1 = \beta_2 = \beta_k = 0$ that is all slope coefficients are simultaneous zero versus alternative hypothesis (not all slope coefficients are simultaneous zero). If $F > F_\alpha(k-1),(n-k)$, reject null hypothesis; alternatively if the p-value of F is low H$_0$ is rejected (Gujarati, 2004).

4.0 Presentation of the Findings
4.1 Descriptive Statistics
4.1.1 Demand for Health Insurance Services

The dependent variable of this study is the demand for health insurance services. The respondents were asked if the NHIF scheme was a free fund in which civil servants were free to decide joining or not. The responses were as follows, 10.4% of the respondents said they would join the scheme, 14.0% of the respondents said they were

not sure if they would join or not and 75.6% of the respondents said they would not join the scheme. The responses are summarized in Table 4.1.

Table 4.1: Willingness to Join NHIF Scheme

	Frequency	Percent
I would join the fund	26	10.4
I am not sure if I would join the fund or not	35	14
I would not join the fund	189	75.6
Total	**250**	**100**

Source: Field Data (2016)

This shows that, majority (more than 75%) of the civil servants are not in favor of the fund; only that their membership is on the ground that the scheme is a mandatory to all civil servants. Had there been a freedom of choice such that a civil servant is at liberty to choose the fund of his/her own test. The findings show that 75.6% of the civil servants would not be members of NHIF.

4.1.2 Respondents Characteristics

In order to come up with a clear understanding of the perceptions and factors influencing demand for health insurance services among the civil servants, the researcher divided the respondents in the categories of age, sex, marital status, education level and the number of dependant in the family of a civil servant who is a member of NHIF scheme (size of the family). This necessitated the researcher to get acquainted with the group of respondents who were more informed of the topic under study.

4.1.2.1 Sex of Respondents

Sex of the respondents was used in order to understand the relationship between sex and the demand for health insurance services.

Figure 4.1: Sex of the Respondents
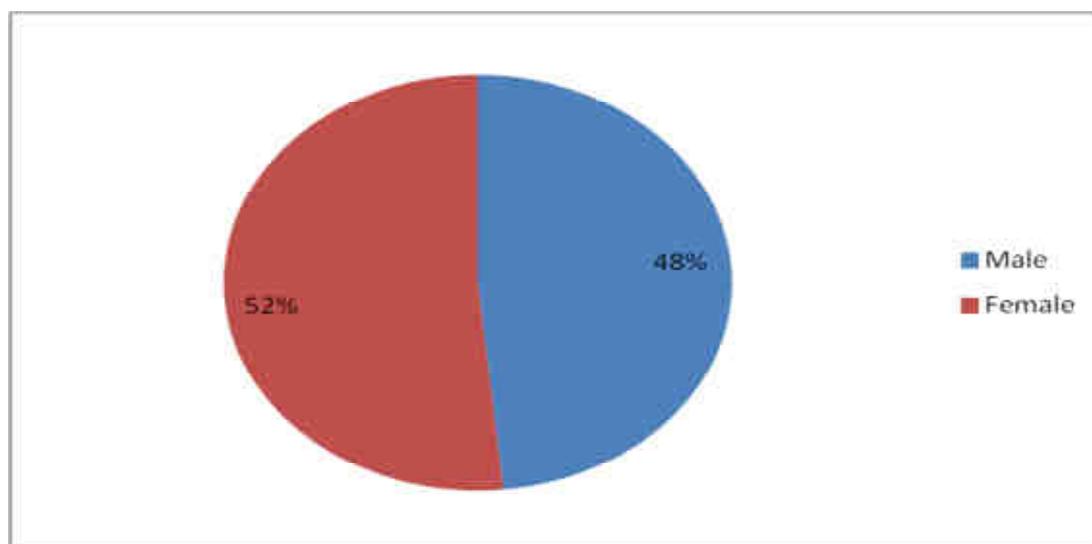
Source: Field Data (2016)

As it can be seen in the Figure 4.1, 48 % of the respondents were male and 52 % were female. From the presented data above the proportion of male and female is almost the same in the present study. However, the results of analysis show that females are bit many than males.

4.1.2.2 Age of the Respondents
The findings show that, 12.4 % of the total respondents were of the age between 20 to 29, 64.4% had the age between 30 to 39, and 18.4 % of the entire respondent sample were of the age between 40 to 49. Respondents aged between 50 and 59 constituted 4.8 % of the sample.

Table 4.2: Age of the Respondents

Age group	Number of respondents	Percentage
20-29	31	12.4
30-39	161	64.4
40-49	46	18.4
50-59	12	4.8
Total	**250**	**100**

Source: Field Data (2016)

4.1.2.3 Marital Status of the Respondent

Of the total respondents of the study, 74% were married, 24% were single and 2.0 % were widowed. A picture we can draw out of this information is that married individuals in this study have more views than unmarried individuals.

Figure 4.2: Marital Status of the Respondents
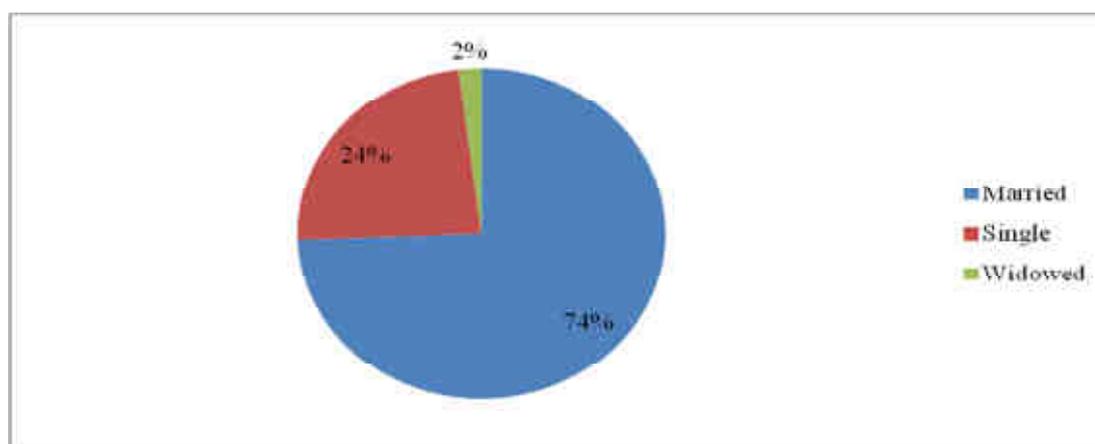
Source: Field Data (2016)

4.1.2.4 Education Levels of the Respondents

The results of analysis show that, 1% of the respondents had college certificate education, 7% had diploma education, 71% had bachelor degree or equivalent, and 21% had master degree education.

This show that the respondents were educated enough to understand the questions asked and could give ideas and views about the present study in a manner that can easily be understood by the researcher.

Figure 4.3 Education Level of the Respondents
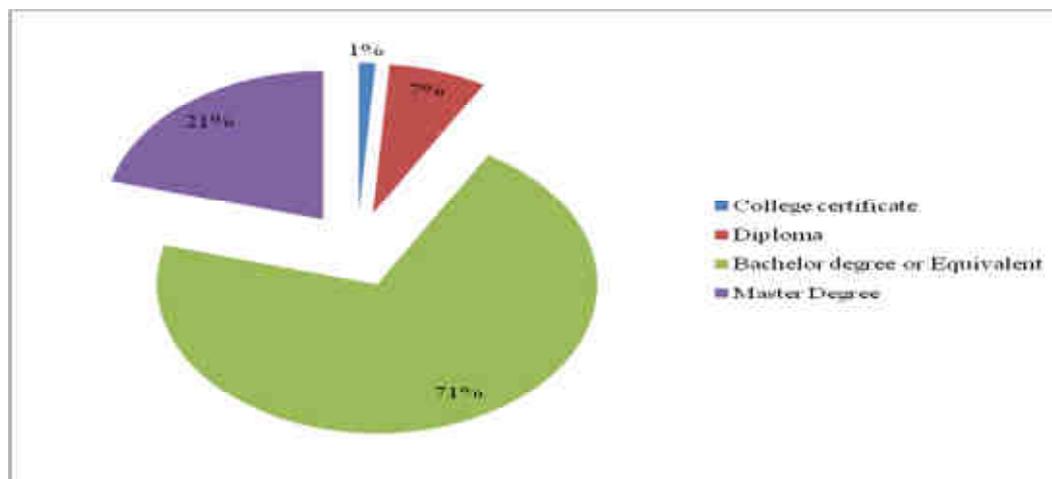
Source: Field Data (2016)

4.1.2.5 Size of the Family of the Respondents
Table 4.3 shows that, 24.4% of the respondents have 5 or below dependants, 66% have 6 to 10 dependants and 9.6% of the respondents said they have 10 or above dependants.

Table 4.3: Size of the Family of the Respondents

Size	Frequency	Percentage
5 or below	61	24.4
6-10	165	66
10 or above	24	9.6
Total	**250**	**100**

Source: Field Data (2016)

Generally the respondents were not satisfied with the number of the dependants that currently the NHIF policy allows to get health services under the coverage of the fund. As it can be seen in the Table 4.4, the respondents were of the opinion that the number of the dependants to be treated under NHIF scheme coverage should be increased.

Table 4.4: Recommended Number of Dependants

Size	Frequency	Percent
1-5	5	2
6-10	232	92.8
11-15	10	4
16 or above	3	1.2
Total	**250**	**100**

Source: Field Data (2016)

The finding reveal that, 2% of the respondents are in favor of need for the number of dependants to be 1 to 5; 92.8 % suggested the number of dependants to be 6 to 10; 4% of the respondents wanted the number of dependants to be 11 to 15 and 1.2% wanted the number to be 16 or above. The results pattern on the number of dependants indicates that majority of the respondents recommend the number of dependants to be increased. This implies that civil servants are not in favour with five dependents who are beneficiaries of the fund as the policy provides to the present.

Respondents raised some comments on the number of dependants to be increased. Some of these comments are given here under.

Person Q said "it is injustice to limit to 5 dependants who benefit from NHIF health service coverage; the fund must revise its policy to allow at least 10 dependants".

Another respondent R said

> *The social setting in which we live in is somewhat complex, we in Africa have extended families in which case we live with our grand sons and daughters some of whom have their parents died of HIV AIDS and they have no one to care for them. These people need health care services just like our biological children. I am suggesting that NHIF should extend the coverage to at least 9 dependants*

Person S said that: "*since the deduction from the employee's salary is done on a monthly base and that it is true we don't seek treatment every month; NHIF fund should not find it difficult to increase the number of dependant to at least 20".* With these comments it is evident that civil servants are of the opinion to increase the number of dependants.

4.1.2.6 Frequency of Visit to the Accredited Health Facility
The study solicited information about the number of times the civil servants visited at the accredited health facilities in a year. Table 4.5 shows that, on average respondents said they go to the accredited health facilities for health services 5 times in a year. The minimum frequency is 1 time and the maximum frequency being 50 times of visit.
Results show that, the extent of civil servants using NHIF services is still low; this may be due to various reasons like good health conditions of the members and their dependants or setbacks that exist, making members of the fund not motivated to access the NHIF services. Some of these setbacks can be limited number of accredited health facilities as it has been revealed in this study, problems related to long queue at the accredited health facilities and bureaucratic procedures that exist in the facilities.

Here we learn that, for NHIF to attract more customers, the fund needs to be truly a services offering organization rather than being a profit making one. The presence of many setbacks reflects that the fund is not a service offering but a profit making organization. This gives a bad image of the fund to its customers. Such perception is evident in the words of a respondent in the study who said " *I don't like NHIF because they just spend our money for their own good rather than concentrating on improving services to their customers, the medicine we get are poor, and you have to wait long before you can get services".*

Another respondent said; "*I don't find a motive to use my NHIF card since the accredited health facility is very far from my area of residency*" said respondent P. Another respondent said "*in the accredited health facility medical doctors don't prescribe good medicine to NHIF customers; I think these are the directives of the fund management but when I pay by out of pocket I am always given good medicine*" Person Y reported.

Table 4.5: Frequency of Visit at the Accredited Health Facilities

Minimum	Maximum	Mean	Std. Deviation
1	50	5.18	5.270

Source: Field Data (2016)

4.1.2.7 Distance to the Accredited Health Facility
The respondents were asked to reveal the distance they had to move to get health services at the accredited health facilities. The findings show that, 66.8% of the respondents are within 1 to 10 kilometers to the accredited health

facility, 21.2% have to travel 11 to 20 kilometers to the accredited health facilities and 9.6% of the respondents are located 21 to 30 kilometers to the accredited health facilities and 2.4% of the respondents are to travel 31or above from the accredited health facilities.

Table 4.6: Distance to the Health Facility

Distance (Km)	Number of respondents	Percentage
1-10	167	66.8
11-20	53	21.2
21-30	24	9.6
31or above	6	2.4
Total	**250**	**100**

Source: Field Data (2016)

This suggest that, majority of the respondents (civil servants) are located far away from their home places to the accredited health facilities. This in turn can affect the people to access health services as they have to go a long distance to access the service.

A respondent Y said

> In the area I live in there are dispensaries and pharmacies but they are not accredited. So if we are to get treatments using NHIF cards we have to travel 18 km to the accredited health facility. To me this is embarrassing, this make me hardly use NHIF services.

4.1.2.8 Waiting Time
Results show that, respondents who had to wait from 9 hours to 12 hours constitute 1.6% of the respondents; and 60% of the entire respondents said they waited between 2 to 8 hours. Nevertheless, 38.4% of the respondents said they have to wait for services in the accredited health facilities for 1hour or less.

Table 4.7: Waiting time at the Health Facility

Waiting time (HRS)	Number of respondent	Percentage
1hour or less	96	38.4
2-8	150	60
9-12	4	1.6
Total	**250**	**100**

Source: Field Data (2016)

The waiting time before civil servants get medical treatment at the accredited health facilities is generally longer as it can be seen in the findings. These results are consistent with the results of the reviewed literatures. For example Mwakisu (2005) established that clients were of the opinion that the time spent at the health facilities was longer resulting to customer dissatisfaction. These findings suggest that as the waiting time before getting medical treatment become higher, results to customers' dissatisfaction and in the context of the present study the demand for health insurance services among the civil servants will decrease.

4.2 Perceptions on the Health Services Offered under NHIF
4.2.1 Perception Regarding to the Quality of Health Services
As regard the quality of health services, this study considered aspect such as availability of medicine, medical supplies and equipment and the availability of health workers such as doctors, nurses and laboratory technicians.

The respondents were asked to rate the quality of the services they received in a five point scale. Table 4.8 shows that, 42.4% of the respondents strongly disagreed with the quality of health services offered by the accredited health facilities, 20% of the respondents somehow disagreed, 8% were neutral, while 24% agreed and 5.6% strongly agreed. Therefore, the result indicated that the majority of the respondents were not in favour with the quality of health services rendered at the accredited health facilities.

Table 4.8: Perceptions on Quality of Health Services

Response	Frequency	Percent
Strongly disagree	106	42.4
Somehow disagree	50	20
Not sure	20	8
Agree	60	24
Strongly Agree	14	5.6
Total	**250**	**100**

Source: Field data (2016).

Here are some of the respondents' views on the quality of health they get from the accredited health services they visit.

Respondent W said, "*The accredited health facilities dispensaries and health centers in particular do not have enough medical care givers*". He added that "*normally there are long queue in the accredited health facility such that it discourages one to get services up front*".

It was also mentioned that, only few health facilities have a special desk where NHIF customers do access health services. They even mentioned that The Agha-Khan health facilities have specialized medical care givers for NHIF customers only, which is not a common in other health facilities. So it makes it difficult for civil servants to get services at the facility. Person D mentioned that *"Priorities is given to the customers who pay by cash or out-of-pocket"* when you go to the health facility with your NHIF card you will have to wait long but those with cash are saved quickly than you do, she added.

(i)   **Availability of Medicine in the Accredited Health Facilities.**

From the Table 4.9, it is shown that 18.4% of the respondents said there is enough medicine; 26.4% of the respondents said the medicine availability is somehow enough, but 54.0% of the respondents said there is shortage of medicine whereas 1.2% of the respondents reported that there is no medicine at all. With these findings 55.6% of the respondents are of the view that the accredited health facilities have a problem of medicine, this implies that the quality of health services offered in the facilities are poor.

Table 4.9: Views on the Availability of Medicine

Response	Frequency	Percent
There is enough medicine	46	18.4
There is considerable enough medicine	66	26.4
There is shortage supply of medicine	135	54
There is no medicine at all	3	1.2
Total	250	100

Source: Field data (2016)

(ii)   Availability of Medical Equipments at the Accredited Health Facilities

Again the findings on the availability of medical equipments in the accredited health facilities where respondents visit reveal that, 43.6% they strongly said there is no medical equipments, 16.4% said there is no equipments, and 12.8% were not sure whether the accredited health facilities had enough medical equipments or not. 19.6% of the respondents said the equipments in the accredited health facilities are available and 7.6% of the respondents strongly agreed that the health facilities they visit have medical equipments. This shows that 60% of the respondents said the health facilities they visited did not have medical equipment. Since the respondents have their residence in different areas and locations. It can be explained that, NHIF has not reached most of its centres to ensure that all the required equipment and medical supplies are available. This reflects poor quality of services offered.

The results of the present study concur with the study by Chomi (2007) who reported that, drug availability together with medical supplies and equipments are an aspect of quality and they influence services delivery. In her study medical supplies like gauze, cotton, reagents were available most of the time in the health facilities but due to the increased demand; scarcity of drugs and supplies was reported to be increasing

Table 4.10: Views on the Availability of Medical Equipment

Response	Frequency	Percent
Strongly disagree	109	43.6
Disagree	41	16.4
Not sure	32	12.8
Agree	49	19.6
Strongly agree	19	7.6
Total	**250**	**100**

Source: Field Data (2016

(iii)   Presence of Enough and Competent Health care Personnel

The findings show that, 30.0% of the respondents indicated that there was no enough and competent health care givers in the accredited health facilities; 21.6% of the respondents indicated that there was considerably no enough and competent health personnel in the accredited health facilities; and 20.8% said they were not sure of whether or not there were enough and competent health care givers in the accredited health facilities. However;

13.2% said there is enough and competent health care givers whereas 14.4% indicated presence of enough and competent health care givers.

Table 4.11: Views on the Availability of Health Personnel

Response	Frequency	Percent
Strongly disagree	75	30
Somehow disagree	54	21.6
Not sure	52	20.8
Agree	33	13.2
Strongly Agree	36	14.4
Total	**250**	**100**

Source: Field Data (2016)

These findings mean that, some of the accredited health facilities have enough and competent health care givers. The later has an impact in the delivery of good quality services to the customers but also a good number of the accredited health facilities do not have enough and competent health care givers like doctors, nurses and laboratory technicians thereby affecting the quality of services they offer to their customers.

4.2.2 Perception Regarding Cleanliness of the Environment

As it can be seen in Table 4.12, 58.8% of the respondents said the environment was not clean, 17.6% of the respondents said the environment was somehow clean and 5.2% of the respondents were not sure if the environment was clean or not. However, 13.6 of the respondents said the health facilities were clean and 4.8% of the respondents said the environment of the accredited health facilities were very clean. This reflects that some of the health facilities have their environment kept neat and clean but some have their premises dirty. We can say majority perceive the environment of the accredited health facilities to be dirty. Dirty environment are not good premises for offering health services because, it can discourage customers to access health services at a place.

Table 4.12: Views on the Cleanliness of the Health Facility

Response	Frequency	Percent
Strongly disagree	99	39.6
Somehow disagree	44	17.6
Not sure	19	7.6
Agree	76	30.4
Strongly agree	12	4.8
Total	**250**	**100**

Source: Field data (2016)

4.2.3 Perceptions on Behavior and Attitude of the Health Care Personnel

Respondents were interrogated to reveal their perception on the behaviours and attitude of the health care personnel in the health facilities they had visited. About 54.0 % of the respondents said the health care givers were not polite, 26.8% said the health care personnel were somehow polite and 3.2% of the respondents were not sure. However, 11.6% of the respondents said the health care personnel were polite and 4.0% of the respondents said the health care givers were very polite. Here we see that, there is a mix up of personnel in the accredited health facilities. Some health facilities have polite health care givers who attract patients to get health services at

the place. Other health facilities have rude health care givers who repel some of the customers. Like it was reported by one respondent *"At dispensary N the health staff there are not inviting at all, they use harsh language when talking to patients, I only go there in emergency since the place is nearby my place of residence* she reported.

Table 4.13: Views on the Behaviours of Health Care Givers

Response	Frequency	Percent
Strongly disagree	135	54
Somehow disagree	61	24.4
Not sure	8	3.2
Agree	31	12.4
Strongly agree	15	6
Total	**250**	**100**

Source: Field data (2016)

4.2.4 Awareness of the Health Services Offered
The study solicited information about awareness of the health services offered at the accredited health facilities under NHIF scheme. The services include laboratory services and consultations. About 78.4% of the respondents were aware of the health services offered, 13.2% were not sure and 8.4% of the respondents were not aware on the health services offered at the accredited health facilities. This information suggests that, as people understand the health services offered at the health facilities, they will be influenced negatively or positively towards accessing health services i.e. consultation services, medicine, laboratory services among others. If the perceived services are good they will encourage the clients to continually use the health facility and if the services are poor they will discourage the clients from visiting the health facility for medical services.

Table 4.14: Awareness of Health Services Offered

Response	Frequency	Percent
Aware	196	78.4
Not sure	33	13.2
Not aware	21	8.4
Total	**250**	**100**

Source: Field Data (2016)

4.2.5 Motivation to Join or Remain in NHIF Scheme
The study interested to know what motivates customers to join and/or remain in the NHIF scheme. Respondents were asked if having a special desk in the accredited health facilities could motivate them join and remain members of the fund. Here under are the findings in a Table 4.15

Table 4.15: Motivation to Join or Remain in NHIF Scheme

Response	Frequency	Percent
Strongly agree	155	62
Agree	66	26.4
Neutral	10	4
Disagree	9	3.6
Strongly disagree	10	4
Total	**250**	**100**

Source: Field Data (2016)

Table 4.15 shows that, 62.0% of the respondents strongly agreed that having a special desk in every accredited health facility will entice many civil servants to join the scheme and/or remain members, 26.4% of the respondents agreed and 4.0% of the respondents were neutral. But 3.6% of the respondents said they were not in favour that having a special desk in all facilities in the country can motivate civil servants to join the scheme. Moreover, 4.0% of the respondents strongly said presence of a special desk cannot motivate the customers to join the fund and/or remain members of the scheme. Although, the NHIF scheme is mandatory, these finding show that if civil servants were to choose joining or not joining the scheme, majority could require the presence of a special desk in every accredited health facilities.

4.3 Econometric Analysis

The study estimated the multiple regression models in order to determine the effects of socio-economic factors on the civil servants' perceptions on quality and availability of health services offered under NHIF scheme. In the first place the socio-economic factors were regressed against perception on quality of health services as dependent variable. Also these factors were regressed in the second model with perception on the availability of health services as the dependent variable. Furthermore, the study employed ordered probit model in order to determine the effects of socio-economic factors and civil servants' perceptions on the demand for health insurance services.

4.3.1 Factors Affecting Perceptions on Quality and Availability of Health Services

The study employed multiple regression analysis using OLS techniques to estimate factors affecting perception of the respondents on quality and availability of health services offered at the accredited health facilities. The purpose of using OLS techniques was to analyze the factors affecting civil servants' perceptions on the health services offered under NHIF scheme.

4.3.1.1 Test for Multicollinearity

Before running the model, the study conducted a multicollinearity test to see whether the explanatory variables have strong relationship. VIF and pairwise correlation were used to test for the problem of multicollinearity among explanatory variables used in the multiple regression models and the ordered probit model respectively. Multicollinearity is considered not a serious problem when VIF does not exceed 10 for multiple regression model (Gujarati, 2004). For ordered probit model, values of correlation coefficient in its absolute near to unity in the correlation matrix indicate the presence of multicollinearity (Joshi, 2012). The results for the test of multicollinearity shows that the VIF value was less than 10 for multiple regression model indicating no serious multicollinearity as shown in Table 4.16. Furthermore, for ordered probit model the findings show that the highest value of the pairwise correlation is 0.4337, implying no indication of higher degree of multicollinearity between the independent variables as shown in Table 4.16

Table 4.16: Results of Multicollinearity

Variable	VIF	1/VIF
Bachelor degree	1.35	0.741
Diploma	1.29	0.774
Marital status	1.25	0.800
Age	1.23	0.815
College certificate	1.09	0.914
Size of the family	1.06	0.941
Sex	1.05	0.950
Mean VIF	1.19	

Source: STATA output

4.3.1.2 Fitness of the Model

F-test was used to test whether explanatory variables have joint effect on dependent variables in the model. To test hypothesis; null hypothesis H_0: all slope coefficients are simultaneous zero versus alternative hypothesis H_1: not all slope coefficients are simultaneous zero. Null hypothesis is rejected if the p-value of F is low (Gujarati, 2004).

Table 4.17: Fitness of the Model

	Dependent variable: Perception on quality of health services	Dependent variable: Perception on the availability of health services
Prob > F	0.0000	0.0000
R-squared	0.1214	0.0923

Given the results null hypothesis is rejected at the 1% level of significance since the p-value is 0.0000 as shown in Table 4.17. This indicates that the model is fit.

Table 4.18: Perceptions on Quality and Availability of Health Services

Variable	Dependent variable: Perception on quality of health services			Dependent variable: Perception on the availability of health services		
	Coeff.	Robust std error	P>|t|	Coeff.	Robust std error	P>|t|
LnAge	-0.755**	0.347	0.030	-0.419	0.401	0.296
Sex	-0 .119	0.124	0.342	-0.229*	0.123	0.064
Marital status	-0.492***	0.168	0.004	0.148	0.144	0.307
College certificate	1.416***	0.192	0.000	-0.868***	0.326	0.008
Diploma	0.481**	0.189	0.011	0.516**	0.258	0.047
Bachelor degree	0.271*	0.142	0.057	0.592***	0.149	0.000
Ln Size of the family	0.042	0.153	0.773	-0.122	0.114	0.286
Ln Distance	0.0124	0.061	0.839	0.102*	0.057	0.077
Const	2.802**	2.16	0.032	1.413	1.00	0.320

Source: STATA output

Key: *** significant at 1%, ** significant at 5% and * significant at 10%

The results in Table 4.18 show that, the coefficients of age of the respondents are negatively related in both perceptions on quality of health services and on the availability of health services offered at the accredited health facilities. The study reveals that, age of the respondents is statistically significant at the 5% level of significance in perception on quality of health services, but insignificant in the model of the analysis of the perceptions of the availability of health services. Moreover, the findings show that, as the number of years of respondent increases by 1year on average, perception on quality of health services drops by 0.0076 unit scale, other factors being constant.

The coefficients of sex are negatively related to both perception on quality of health services and availability of health services offered. Moreover, the findings show that sex is significant at the 10% level of significance on perception on the availability of health services. However, the findings show that sex of a respondent is not significant on perception on quality of health services. Furthermore, the negative coefficients of the variable show that the perception of male respondents, in average, is lower by about 0.1 and 0.2 in quality and availability of health services, respectively, as compared to female counterpart, other factors being constant.

The estimated coefficients of marital status suggest that, married respondents perceive quality of health services as negative whereas the availability of health services offered as positive. The results of analysis show that, marital status has statistically significant relation with perception on quality of health service at the 1% level of significance, but insignificant relation with perceived availability of health services offered at the accredited health facilities. Moreover, the findings reveal that for married respondent, perception on quality of health service is lower by 0.494 as compared to unmarried respondents. Furthermore, the findings show that the perception on the availability of health service is higher by 0.144 as compared to unmarried respondent ceteris peribus.

The effect of education was analyzed at four levels namely college certificate, diploma, bachelor degree and master degree by using dummy variables. The findings show that, levels of education are statistically significant on perception in both quality and availability of health services. The results show that, respondents with certificate, diploma and bachelor degree are statistically significant at the 1%, 5%, 10% and 5%, 10%, 1% on quality and availability of health services respectively. However, the coefficients show the decreasing pattern on perception on quality of health services. The findings reveal that perception of quality of health services is higher by 1.419, 0.47, 0.267 for respondents with college certificates, diploma and bachelor degrees respectively, as compared to respondents with master degree. However, the results of perceptions on the availability of health services do not show a systematic pattern. The findings show that, the perception on availability of health services is less by 0.84 when a respondent has college certificate as compared to a respondent with master level. However, the perception on availability of health services is higher by 0.43 and 0.56 for respondents with diploma and bachelor degree, respectively, as compared to respondents with master level of education, other factors being constant. Regarding the size of the family, the results show that the variable is not significant to both perceptions on quality of health services and availability of health services offered. However, the positive coefficients show the positive relationship between the family size and perception of health services.

The findings show that, the coefficient of distance to the accredited health facility is positive and statistically significant at the 10% level of significance for perception on availability of health services. However, the study reveals that the variable is not statistically significant in perception on quality of health services. Moreover, the positive coefficients show that 1% increase in km from the accredited heath facility on average leads to increase in perception by 0.012% and 0.1% in quality and availability of health services respectively, other factors being constant.

4.3.2 Demand for Health Insurance Services

To analyze factors and civil servants' perceptions on demand for health insurance services, the study employed ordered probit model. Table 4.19 presents results from an ordered probit model where the dependent variable is an ordered categorical variable with three responses with a value of 1 indicating the decision not to join the fund while a value of 3 representing the decision to join the fund.

Furthermore, the marginal effects have been estimated to assess how the influencing factors and perceptions predict individual's choices to demand NHIF scheme if not mandatory. The marginal effects give the percentage change in the probability of a success in response to a percent change in the explanatory variables. The marginal effects in the estimation are presented for the value of 3 which is "the willingness to join the NHIF scheme if not mandatory". The marginal effects results are shown in Table 4.19

Table 4.19: Ordered Probit Results for Demand for Health Insurance Services

Ordered probit regression

Number of obs = 250

LR ch^2 (12)   = 42.00

Prob >ch^2 = 0.0000

Log likelihood = -159.52896

Pseudo R^2 =0.1163

Variables	Coeff.	Std error	P>IzI	Marginal effects (dy/dx)
Age	1.521**	0.078	0.011	0.199**
Sex	-0.590***	0.027	0.004	-0.077***
Marital status	-0.321	0.039	0.228	-0.047
College certificate	1.143	0.279	0.295	0.292
Diploma	1.434**	0.155	0.014	0.381**
Bachelor degree	0.941***	0.027	0.000	0.096**
Size of the family	0.128	0.026	0.517	0.017
Distance	0.041	0.012	0.666	0.005
Waiting time	-0.256**	0.016	0.031	-0.003**
Frequency	-0.143	0.017	0.275	-0.019
Perception on quality	0.167*	0.013	0.098	0.022*
Perception on availability of health services	0.039	0.0122	0.673	0.005
/cut1	-7.432			
/cut2	-6.778			

Source: STATA output

Key: *** significant at 1%, ** significant at 5% and * significant at 10%

4.3.2.1 Model Fit

The goodness of fit was measured by the likelihood ratio chi-square of 36.30 with 12 degrees of freedom, pseudo R^2 of 0.0557. However P-value is (0.0000) which means that the model fit at 1 % level of significant.

4.3.2.2 Effects of Socio-economic Factors and Health Services Perceptions on Demand for Health Insurance Services

The results show that the age of the respondent is statistically significant at the 5% level of significance. Nevertheless, age has positive effects on the demand for health insurance services. This implies that as the respondent age increased by one year, an individual is 19.9% more likely to demand health insurance services. Nevertheless, the study finds that marital status as not a significant factor to the demand for NHIF services. However, being married has negative effects on the probability of demanding NHIF services as compared to being unmarried.

Findings also show that the level of college certificate is insignificant; however, diploma and bachelor degree levels of education are significant at the 5% and 1% level of significance respectively. Nevertheless, college certificate, diploma and bachelor degree levels of education have positive effects on the demand for the NHIF services. This implies that respondents with college certificate are 29.2% points more likely to demand NHIF services as compared to respondents with master degree. However, respondents with diploma and bachelor degree are 38.1% and 9.6% points more likely to demand NHIF services respectively as compared to respondents with master degree.

Sex is a significant factor to the demand for NHIF services at the 1% level of significance. The findings show that; being male are less likely to demand for NHIF services. This implies that a family which is headed by male is 7.7% points less likely to demand NHIF services as compared to female. Women are responsible to take care of children under and other sick people since children under five years are more prone to sickness. Therefore, they are more likely join the scheme in order to get medical cover than do their male counterpart.

With regard to size of the family, the study shows that the size of the family has no significant influence on demand for NHIF services. However, size of the family has positive effects on the demand for NHIF services. This suggests that as the number of household increases, the household is more likely to demand NHIF services. It could be that, since medical services are costly (not given free of charge) the increase in the number of people in the family result to high curative costs in the family, thereby, increasing the likelihood for demand for health insurance. Furthermore, the study shows that distance from the accredited health facilities is not an influencing factor on the demand for NHIF services.

The analysis of the relationship between waiting time and demand for NHIF services suggests that, the waiting time is statistically significant at the 5% level of significance. The variable has a negative sign, suggesting that an increase in waiting time reduces the likelihood of demanding NHIF services. More specifically, as the waiting time increases by one hour, the probability of demanding NHIF services decreases by 0.3% ceteris peribus.

The findings show that, perception on quality of health services has an influence on the demand for NHIF services at the 10% level of significance. The study shows that, respondents with negative perception on the quality of health services offered at the accredited health facilities are 2.2% less likely to demand NHIF services. However, the study shows that, perception on the availability of health services has no significant influence on the demand for NHIF services.

5.0 Discussion of the Findings

5.1 Factors Affecting Perceptions on Quality and Availability of Health Services

In the analysis of perceptions on quality and availability of health services; age, sex, marital status, level of education and distance to the accredited health facilities were found significant. This part addresses specific objective number 2 and hypothesis number 1 to 5

The findings indicated that, age of the respondent significantly influences the perceptions of civil servants on the quality of health services provided under NHIF scheme. The result has shown that, age is negatively related to perception on quality of health services; implying that, aged individuals have negative perception on the quality of health services offered at the accredited health facilities. This is because, aged individuals have high risk of illness due to their low body immunity, hence, tend to visit health facilities for medical treatment frequently,

exposing them to know more about the services delivered. Boraschi et al. (2013) confirm that, with age, people produce fewer naïve T cells, which make them less able to combat new health threats. Thus, aged individuals need good quality of health services to deal with health threats. Andersen and Newman theory (1995) confirm that, aged people require better quality health services. The negative relationship indicates that the quality of health services obtained at the accredited health facilities in the area of the study is poor. However, the result is not in line with the prior expectation of the study. The prior expectation was; aged individuals have positive perception on quality of health services. Also the result is inconsistent to Devoe et al. (2009) that, aged people perceive quality of health care services rendered at the hospital positively.

Regarding the marital status of the individuals, the results have shown that the variable has significant effect on the perception of quality of health services. The findings have shown that married couple perceived negatively the quality of health services offered at the accredited health facility as compared to unmarried. This is possibly due to the fact that married individuals are influenced by their partners to use more health services. As a result, they get more awareness of the health services offered at the accredited health facilities. This in turn, give the married individuals a chance to rate the quality of health services offered at the accredited health facilities. The evaluation informs on the quality of health services offered being good or poor. Thus, the negative relationship between married individuals and perception confirm that the health services offered in the area of study are of poor quality. However, the results do not support the prior expectation of the study that; married individuals perceive positively the health services. Also, the results are inconsistent with Alrubaiee and Alkaa'ida (2011) that, married couple perceive positively the quality of health services as compared to unmarried.

As expected, sex of the civil servants, is positive and significantly influencing perception on the availability of health services. The findings reveal that female perceive the availability of health services positively. This is because, female are more responsible in taking care of the sick in households and they are more vulnerable to disease than men resulting to seeking more health care services. Laroche (2000) and Sendino et al. (2006) confirm that, women have positive perceptions on health services and consult health professionals more frequently than do men.

Education is statistically significant with positive relationship to the perception on quality and availability of health services. The result has shown that, individuals with college certificate, diploma and bachelor degree levels of education have higher perception on the quality of health services than individuals with master degree level of education. This implies that, individuals with low levels of education (college certificate, diploma and bachelor degree), tend to set lower standards on availability and quality of services due to low awareness on what package they are supposed to get at the facilities. In line with Papanikolaou and Zygiaris (2011), the findings of this study confirm that, people with low education are reluctant to be strict on services delivered by staff at the hospitals resulting to have positive perception on health services. The results do not support the prior expectation of the study that individual with high education levels have positive perception on the quality of health services. It was expected that individuals with high education level value more the quality of health services as they have a better understanding of what the health facilities offer to their customers. Again, the results are inconsistent with Alrubaiee and Alkaa'ida (2011) who report that, individuals with higher levels of education tend to perceive the health care quality positively.

With regard to distance to the accredited health facility, the findings have shown that the variable has significant effect on the perceptions regarding the availability of health services. The study shows that as the distance to the accredited health facility increase; perception on the availability of health services rises. This is possible because, in the area of study, some health facilities e.g. heath centres and district hospitals, with the capacity to offer diagnostic services (CT scan and MRI), reading glasses, and some medicine were prohibited by NHIF scheme to offer such services. This eventually, makes the individuals to travel to regional and referral hospitals where the services are rendered. However, the results are not in line with the prior expectation of the study that, there is a negative relationship between distance and perception on availability of health services. Again, the results are inconsistent with Awoyemi et al. (2011) that, individuals perceive health services to be available at the near health facilities.

5.2 Effects of Socio-economic Factors and Health Services Perceptions on Demand for Health Insurance Services

In the analysis of demand for NHIF services, age, sex, levels of education, waiting time and perception on quality of health services were found to be significant. This part addresses specific objective number 1 and 3 and hypothesis numbers 6 to14

The present study aimed to investigate the implications of the civil servants' perceptions on the demand for health insurance services. The findings have shown that, age is significant influencing the demand for health insurance services. As age increases, an individual is more likely to demand health insurance services. This is because; age comes with a sense of responsibility e.g. financing education for the children, provision of food, clothing and shelter. Such responsibilities make aged individuals to demand health insurance services in order to reduce expenses by paying by out-of-pocket when illness arises. The result supports the prior expectation of the study that, age is positively related to the demand for health insurance. The findings are in line with Andersen and Newman theory (1995) that, aged people are more likely to demand health care services. Moreover, the results confirm the findings reported by Kimani et al (2014), Hottodze (2008), Giesbert et al. (2011), Ibok (2012) and Mhere (2013)

As expected, sex is positive and significantly affecting the demand for health insurance services. The findings reveal that; females are more likely to demand NHIF services. This is because; females unlike their males are so sensitive to risks because of their homely and motherly responsibilities. The results are in line with Giesbert et al (2011) and Kimani et al. (2014) who confirm that women are more likely to be insured because of their vulnerability and physiological make up. Furthermore, the findings are in line with Andersen and Newman theory (1995) which asserts that female individuals demand more health care than their male counterparts.

The findings show that, individuals with master degree level of education are less likely to demand health insurance services. This is probably because, individuals with master degree level are more aware on the availability and quality of health services offered at the accredited health facilities, due to being inquisitive to understand on what health services they are supposed to get. This suggest that; poor health services offered at the accredited health facilities make them less likely to demand health insurance services in the area of study. The results suggest that, if the NHIF scheme was not mandatory, probably, individuals with master degrees level of education would be less likely to demand its services. However, the results do not support the prior expectation of the study that, people with high education are more likely to demand health insurance services. Likewise, the finding are inconsistent with Sekyere and Chiaraah (2014) and Abubakar et al. (2012) who reported that, respondents with higher levels of education had more demand for health insurance. In addition, Nyman new theory (2003) asserts that, people with knowledge about health insurance are more likely to demand health insurance.

Regarding the waiting time, the results show that, the variable has significant effect on demand for NHIF services. The findings of the study have shown that, as the waiting time increases, individuals are less likely to demand health insurance. This is because, long waiting time before getting medical treatment is associated with long queue due to large number of people using NHIF cards in the accredited health facilities. The results are in line with prior expectation of the study that there is negative relationship between waiting time and demand for health insurance services. In line with Osei et al. (2015), the findings of this study have confirmed that, waiting time had a negative relationship with the demand for health care services. Moreover, the findings have confirmed the expectation of the Andersen and Newman framework (1995) which asserts that, accessibility of medical care is perceived to increase as the waiting time decreases.

The findings have shown that, perception on quality of health services has significant effects to the demand for NHIF services. The findings reveals that, individuals with negative perception on the quality of health services offered at the accredited health facilities are less likely to demand health insurance services. This implies that, the quality of health services determine the demand of health insurance services. The results support the prior expectation of the study that; perception on quality of health services have positive effect on the demand for health insurance services. Closely related to the present study, Kaumbwa (2008) observed that, if the quality of health services offered at the accredited health facilities is poor with no enough facilities; customers are not contented with the services.

6.0 Conclusion and Recommendations

This study concludes that, the majority of civil servants in the study area are not satisfied with their membership to NHIF scheme. This feeling is a result of poor health services delivered under the scheme. Based on the findings of the present study, most (75.6%) respondents involved in the study revealed that the services they get under the scheme are poor. As they clearly indicated in the findings, they would not have joined the programme if joining NHIF had not been a mandatory scheme for the civil servant. The study recommends the following;

A review of National health insurance Act (Act 8 of 1999) that established NHIF scheme to give freedom among civil servants of the health insurance scheme to join. This will place NHIF scheme in competition with other health insurance schemes. When there is competition organizations tend to deliver good services to the customers.

It is imperative for the scheme to improve the quality of health services rendered in order to encourage customers to remain and others join freely. The services offered should be not only inviting and attractive but also should meet the customers' need. To achieve this, the scheme should allow all accredited health facilities with the capacity (in terms of both material and human resources) to offer the services to NHIF customers. Currently, some diagnostic services like MRI and CT scan are not delivered in some health facilities like health centres and district hospitals. Also some medicine can only be given to the patients after seeking permission from NHIF. In addition, for married couple who are both civil servants the number of beneficiaries to be eight.

7.0 Limitations and Areas for Further Study

The study manifests one major limitation, based on the location where the study was conducted. The study was conducted in Dar es Salaam which is urban area. There may be a difference in the availability and quality of services offered in urban and rural areas. Thus, there is a need to conduct a similar study in rural areas which can serve the purpose to compare the state of affair in urban and in rural areas. Also, similar study can be conducted to compare health services offered under NHIF scheme and other health insurance schemes like Jubilee, AAR among others.

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Appendix 1

Table 4.20 Results of Correlation Coefficient Matrix

	Age	Sex	Marital	dEduca1	dEduca2	dEduca3	Family size	Distance	Waiting time	Frequency of visit	Perception	Percav
Age	1											
Sex	0.0426	1										
Marital	0.3874	-0.1655	1									
dEduca1	0.1377	-0.0332	0.0646	1								
dEduca2	-0.0056	-0.0840	0.0216	-0.0307	1							
dEduca3	-0.1661	0.0763	-0.1751	-01716	-0.4337	1						
Family size	0.0330	0.0281	0.0857	-0.1608	-0.1239	0.0034	1					
Distance	-0.0557	0.1314	-0.0865	0.0245	-0.1696	-0.0143	0.0967	1				
Waiting time	0.0560	-0.1541	0.1035	0.0725	-0.0449	0.0400	0.0786	0.3286	1			
Frequency ofvisit	0.0800	-0.0702	0.3090	-0.1309	-0.1227	-0.0891	0.0783	0.0429	-0.0937	1		
Perception	-0.2174	-0.0333	-0.2645	0.0965	0.606	0.0978	-0.0422	0.0147	0.0635	-0.1030	1	
Percav	-0.1198	-0.1027	-0.0102	-0.1348	0.0194	0.2184	-0.0497	0.0611	-0.0168	0.0393	-0.0000	1