ASSESSING THE RELATIONSHIP BETWEEN AWARENESS, INFORMATION ASYMMETRY AND UPTAKE OF INSURANCE PRODUCTS AMONG PUBLIC PRIMARY SCHOOL TEACHERS IN NAKURU SUB-COUNTY KENYA.

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A Research Project Submitted to Kabarak University in Partial Fulfillment of the Requirements for the Award of the Degree of Master of Business Administration (Finance) of Kabarak University

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DECLARATION AND RECOMMEDATIONS

This research project is my original work and has not been presented to any university or college for the award of a degree, diploma, or certificate.

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This research project has been submitted for examination with our approval as university supervisors.

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ABSTRACT

Insurance Regulatory Authority report reveals that in the informal sector, players had no sufficient information on insurance to enable them purchase insurance for their businesses. The lack of right information according to the report showed that individuals were vulnerable to information asymmetry in insurance contracts and limited in making insurance choices. The aim of this study was to assess the relationship between awareness, information asymmetries and uptake of insurance products in Kenya by focusing on public primary school teachers in Nakuru Sub-County, Kenya. Objectives of the study were: to assess the relationship between awareness and uptake of insurance products, to analyze the relationship between moral hazard and uptake of insurance products and to evaluate the relationship between adverse selection and uptake of insurance products among public primary school teachers in Nakuru Town, Kenya. Nakuru Sub-County is an administrative area which was developed from the former Nakuru Municipality. Target population for the study comprised of 1124 teachers in public primary schools in Nakuru Sub-County from which a sample of 92 teachers was drawn using simple random sampling technique. Primary data was elicited from teachers using questionnaires that were administered to teachers using the drop and pick method. Validity in the study was determined using expert opinions while reliability of instruments was determined by computing the Cronbach reliability coefficient from pilot questionnaires. Data analysis was done using descriptive and inferential statistics. Descriptive statistics which include; mean, mode, standard deviations, percentages and frequencies were applied. Hypothesis testing was done. The tests were done at a significance level of P= 0.05. The study found out that the level of awareness on insurance significantly influenced its uptake therefore wrong information translated to low insurance uptake. Adverse selection and moral hazards significantly influenced insurance uptake. Therefore the study recommended that insurance regulatory authority together with other players in the insurance industry should come up with more robust and reliable mechanisms for disseminating correct insurance information to the public.

Keywords: *Awareness, Information asymmetry, moral hazard, adverse selection and insurance uptake.*

DEDICATION

I sincerely dedicate this work to my family for their inspiration, encouragement and financial support. To My Loving wife, Judy Susan (Your comforting words have encouraged me to see this project to completion), my remarkable daughters; Alexandriah and Danielle together with the charming son Gregory thanks for the patience. Lastly, my new born daughter Blessings-Lucci, you are really a blessing to the family

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May God Bless You All

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LIST OF ABBREVIATIONS

AKI – Association of Kenyan Insurers

CAGR- Compound Annual Growth Rates

CSR – Corporate Social Responsibility

GDP – Gross Domestic Product

IRA – Insurance Regulatory Authority

MIP – Medical Insurance Providers

NHIF- National Health Insurance Fund

SPSS - Statistical Package for Social Sciences

TSC – Teachers Service Commission

UK – United Kingdom

US – United States

WTJ - Willingness-to-join

WTP - Willingness-to-pay

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Globally, the Insurance industry is considered to be one of the most important sectors contributing to economic prosperity today (IRA, 2013). One of the items that conducted to various discussions regarding the insurance market functioning is information asymmetry. Approaching the importance of information asymmetry in the insurance field, Hubbard (1990) asserted that it has the potential to cause market failures and create inefficiency both at micro and macro levels. The problems created by asymmetry information in insurance field have an impact in pricing, contract design and regulation (Kau, Keenan, Lyubinov & Slawson, 2012).

The literature on information asymmetry consequences in the insurance sector comprises the theoretical developments of the asymmetry information theory since it was first elaborated by Akerlof in year 1970. The two important items included in this segment form the basis this study concern, which is moral hazard and adverse selection. These informational problems have the potential to lead to the lack of understanding of the markets (Chiappori & Salanie, 2000).

Various studies of the automobile, health, and life insurance markets conclude that asymmetric information may not exist in these insurance markets (Chiappori & Salanie, 2000; Cardon & Hendel, 2001; and Cawley & Philipson, 1999). Despite these studies, predictions by many moral hazard and adverse selection models, show no evidence that individuals with more of these types of insurance are more likely to experience the insured risk (Spindler, 2012). However, in Kenya's insurance market a majority of the inhibitors of insurance uptake are anchored on informational challenges.

Asymmetric information presents a fundamental problem in most insurance markets. It has been established that policyholders are heterogeneous in risk and this risk level is private or hidden information that is important for the contract, but unobservable to the insurer. According to Bolton and Dewatripont (2005) information asymmetry

results in a situation where high-risk individuals are associated with extensive insurance coverage. This shows a positive correlation between ex post risk and extensive coverage. Several studies, both theoretical and empirical, have also suggested the possibility favorable selection which this study intents to investigate. These individuals have a high demand for insurance and are good risks ex post, and this selection predicts a negative correlation between insurance coverage and ex post risk occurrence (Fang, Keane & Silverman, 2008).

The Kenyan insurance industry comprises a number of players including insurance companies, reinsurance companies, intermediaries such as insurance brokers and insurance agents, risk managers or loss adjusters and other service providers (Makove, 2011). The industry is regulated under insurance Act; Laws of Kenya, Chapter 487. There is the office of the Commissioner of Insurance established to strengthen the government regulation under the Ministry of Finance. The industry also comprises of the self-regulation Association of Kenya Insurers (AKI) established in 1987 as a consultative and advisory body to insurance companies and registered under the Society Act Cap 108 of Kenyan law. There is also the Insurance Regulatory Authority (IRA) whose mandate is to supervise and regulate the insurance industry players.

According to IRA (2013) report, there were 47 insurance companies comprising of 10 long-term business insurers, 21 general business insurers, 16 composite insurers and 3 re-insurance companies. The market also comprised 161 licensed insurance brokers, 24 Medical Insurance Providers (MIPs), 3931 insurance agents and 2 locally incorporated re-insurers. In 2015, IRA revealed a continued growth in the insurance industry with insurance premiums amounting to 88 billion up from 76 billion in 2014 (IRA, 2015). The premium income under life insurance stood at 30 billion while the remaining 58 billion was from general business. The report however revealed a significantly high underwriting losses amounting to 105 million shillings. The same report revealed that 35% of the Kenyan insurance claims were fraudulent thus raising concerns on the future of insurance business in the country. Further the report revealed that often insurance companies underwrote risks that they know nothing about and in no time more than one insurance company settle the same claim due to information asymmetry in the sector.

The IRA report of 2015 revealed that the sector has been involved in faster growth over the past years, with written premiums reaching compound annual growth rates (CAGR) of 15.1% between 2004 and 2014. The said report further showed that some in-house estimates put growth in the non-life segment at 20% per annum, while the health insurance component was leading the expansion with a 38% growth a year. According to the report (IRA,2015) the fast market growth notwithstanding, penetration rates remain low, at just 3% of GDP in 2013 and 2014 which is still far below South Africa's 14.16% where premiums have been buoyed by compulsory coverage requirements, or in some cases insurance cover provided through the workplace.

Although the insurance industry in Kenya has been growing in investment, there have been fundamental challenges in the number of new clients thus low penetration levels. FinAccess (2009) revealed that the rate of insurance penetration was less than 3% of GDP, with only 7% of the Kenyan population having any form of insurance. It further revealed that the majority of the insured were drawn from the formal sector, which accounts for about 5% of the total population. Oino and Kuloba (2011) revealed that the penetration of insurance among public primary school teachers was low by then. The level of uptake notwithstanding, Oino and Kuloba (2011) in their study held that majority of the teachers claimed that they would encourage others to purchase insurance. This shows their knowledge and awareness and desire to utilize insurance.

The IRA (2015) report showed that Nakuru County ranked third in insurance uptake at 2% after Mombasa County at 5% and Baringo County at 3% with Nairobi City County leading with three quarters of the total premium. This study seeks to assess the awareness and information asymmetry in relation to insurance uptake among public Primary School Teachers in Nakuru Sub-County.

1.1.1 The Education Structure in Kenya

In Kenya, the system of education is divided into five categories, namely; the pre-unit class which is the first stepping stone followed by primary school education then secondary school which is followed by tertiary colleges and finally the university education. The target population in this study will be made up of all the teachers in public primary schools in Nakuru Sub-County which forms the second stepping stage from bottom in the education system in Kenya

1.2 Problem Statement

The insurance industry in Kenya is growing in importance and it has been identified in Vision 2030 as critical in the Kenya's economic transformation under the economic pillar. According to IRA reports of 2013 and 2014, the Insurance industry was characterized by low penetration levels which were estimated at 3% of the country's GDP constantly during the said two years. The IRA (2015) report showed that Nairobi City County led other counties in the uptake of the insurance products by taking slightly over three quarters of the total premiums followed by Mombasa County which had the penetration rate of 5% while Nakuru County was ranked third at 2%. In the earlier study by FinAccess (2009), he revealed that only 7% of the Kenyan population had any form of insurance out of which 5% were drawn from the formal sector. IRA (2015) revealed that in the informal sector players had no sufficient information on insurance to enable them purchase insurance for their businesses. The report further held that insurance companies on the other hand were faced with the risk of fraudulent claims amounting to 35% of the claims settled in a year due to poor information flows cross the industry. This study, therefore, sought to assess the relationship between awareness, information asymmetry and insurance uptake among public primary school teachers in Nakuru Sub-County.

1.3 Objectives of the study

1.3.1 General Objective

The general objective of this study was to assess the relationship between awareness, information asymmetry and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya.

1.3.2 Specific Research Objectives

(i). To assess the relationship between awareness and insurance uptake among public primary school teachers in Nakuru Sub-County, Kenya.

(ii). To analyze the relationship between moral hazard and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya.

(iii). To evaluate the relationship between adverse selection and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya.

1.4 Research Hypotheses

H_1 There is no significant relationship between awareness and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya.

H_2 There is no significant relationship between moral hazard and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya.

H_3 There is no significant relationship between adverse selection and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya.

1.5 Justification of the Study

Insurance is a key pillar in economic growth and development. In Kenya, it is anchored on Vision 2030. However, the current insurance uptake level is very low. The poor information flows across the insurance industry cited by (AKI, 2015) and the resulting high number of fraudulent claims in the sector require to be assessed in relation to industry performance. This study comes handy at a time that the government through the National Health Insurance Fund is experiencing difficulties of implementing a new health insurance scheme due to resistance. By investigating awareness and information asymmetry and their relationship with uptake of insurance products, the study would develop new knowledge on which the county could leverage on in addressing challenges to insurance uptake.

1.6 Significance of the Study

The study would be significant to various stakeholders in the insurance industry. First, the government would be a major beneficiary since it could unearth key factors affecting insurance uptake that if addressed would translate to a population that has more social security. Secondly, insurance companies in Kenya could benefit by enhancing knowledge on the key factors behind the uptake of their products. Investing on providing the right information and awareness on insurance would translate to a more informed customer base which is likely to enhance the insurance uptake. The findings of this study would supplement annual surveys by the Insurance Regulatory Authority on the trends and issues affecting the insurance industry in Kenya. The study would also contribute to the existing empirical literature on insurance which would help scholars venturing in this field.

1.7 Limitations and Delimitations of the Study

The study was limited on the basis that some of the target respondents did have a prior opinion or attitude towards insurance and insurance companies. However, to manage these, the study incorporated them in to the study as intervening variables that also contribute to uptake of insurance. Segmentation of the study location and the various categories of respondents in the study area was also a challenge since they comprised those in formal employment whose orientation towards insurance varied. Also another challenge was that Nakuru county is only one among the 47 counties whereby 46 counties are left without being sampled so as to give the views of the whole country.

1.8 Scope of the Study

This study was assessing the relationship between information asymmetry, awareness and uptake of insurance among teachers in public primary schools. The study was conducted in Nakuru Sub-County, Nakuru County Kenya. Nakuru sub-county is an education administrative area that was developed from the boundaries of the former Nakuru Municipality. It comprised of 59 public primary schools that are situated in four Educational Zones. Information asymmetries assessed, included moral hazard and adverse selection. The depth of the study was to assess the relationship between these informational factors and decisions to take up or not take up insurance policies.

1.9 Definition of Operational Terms

Adverse selection - Is a symmetric information problem that occurs before the transaction, thus, it is the hidden information before the transaction that is the seller (now the insurer) has more information than the buyer (now the insured) Rotschild & Stiglitz (1976). In this case, the insurer will increase the premium price and therefore the insured will pay more in buying the policy (item).

Awareness- Is a situation whereby there is knowledge that something exists or understanding of a situation or subject, based on information or experience.

Information asymmetry-Is a situation, in which some agent in an insurance contract possesses information while other agents involved in the same do not. The asymmetric information perspective highlights that "information is imperfect (Stiglitz, 2000). In the current study it's assessed in terms of moral hazard and adverse selection on insurance.

Insurance-Is promise of compensation for specific potential future losses in exchange for a periodic payment. Insurance is designed to protect the financial well-being of an individual, company or other entity in the case of unexpected loss (Finkelstein & McGarry, 2006).

Insurance uptake/penetration – measures the percentage of insurance premiums to a country's gross domestic product. At individual level, this is determined by the level of involvement or purchase of insurance cover (Yaari, 2009).

Moral hazard - Is an asymmetric information problem that occurs after the transaction, thus is the hidden information after the transaction in this case, the buyer,(now the insured) has more information therefore he uses the said information to have low prices (now low premium) for example, one may have a policy for life insurance and pay low premium because of trying to be it healthy wise. In addition, when you insure your car you drive recklessly thus cause an accident. In view of the above, moral hazard is a post- contract information asymmetry where one party's action affects the others payoff (Rubinstein & Yaari, 1983)

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter covers literature related to the study. Literature has been explored based on three broad themes: theoretical literature that examines the existing theories which assist in shaping the study; empirical literature on studies that have been conducted similar or closely addressing issues in this study. The gaps in research are then presented based on the shortcomings of empirical studies.

2.2 Theoretical Literature

This study will be guided by three theories governing the information exchange in the insurance industry: Information Asymmetry Theory, Signalling Theory and Agency Theory.

2.2.1 Information Asymmetry Theory

The concept of asymmetric information was first introduced by (Akerlof, 1970). In the paper, Akerlof developed asymmetric information with the example case of automobile market. Asymmetric information refers to situations in which some agent in a trade possesses information while other agents involved in the same trade do not. The asymmetric information perspective highlights that "information is imperfect, obtaining information can be costly, and there are important asymmetries of information" (Stiglitz, 2000). Information asymmetry occurs when the knowledge of one contracting party is inferior to that of the other party regarding the counterparty's true intentions and planned activities or the quality of exchanged goods (Mas-Colell, Whinston &Green, 1995). In insurance contract, information asymmetry would arise where one party in the contract has information or plans activities that are not knowledgeable to the other party.

Asymmetric information theory is an intuitive model of market behavior. Information asymmetry in an insurance contract would result to adverse selection or moral hazard although these do not always happen. Under specific conditions favorable selection may take place. Since the party with relatively poor information draws a selection with relatively less attractive characteristics.

In a case where information asymmetry occurs after an agreement is obtained between individuals is called moral hazard (Mirrlees, 1999). The framework often used to analyze moral hazard situations is the principal-agent problem. Once the contract has been signed, the agent can either take an action that is non-observable for the principal that is; hidden action. Alternatively he can obtain information about some characteristics of the environment that the principal cannot acquire that is hidden information. As opposed to the case in which agents were offered a menu of contracts, moral hazard situations imply that every agent is given the same contract; the contract must therefore take into account future information asymmetries, and hence address the incentives problem (Grossman & Hart, 1983).

2.2.2 Signaling Theory

The Signaling theory was originally developed by (Spence, 1973) to clarify the information asymmetry in the labor market. It has been used to explain voluntary disclosure in corporate reporting. Signalling refers to any activity by a party whose purpose is to influence the perception and thereby the actions of other parties. This presupposes that one market participant holds private information that for some reason cannot be verifiably disclosed, and which aspects the other participants. Signaling theory explains why firms have an incentive to report information voluntarily to the capital market. Voluntary disclosure is necessary in order for firms to compete successfully in the market for risk capital. Thorne, Mahoney and Manetti, (2014) argue that Insiders know more about a company and its future prospects than investors do; therefore, investors will protect themselves by offering a lower price for the company. The value of the company can therefore be increased if the firm voluntarily reports that is signals private information about itself that is credible and reduces outsider uncertainty (Connelly, Certo, Ireland & Reutzel, 2011).

Hasseldine, Salama and Toms, (2005) in their works to advance signaling theory integrated quality-signaling theory and the resource based view of the firm to test the differential effects of the quantity and quality of environmental disclosures on the firm's environmental reputation. Thorne et al., (2014) suggest that quality of CSR disclosure rather than mere quantity has a stronger effect on the creation of environmental reputation amongst executive and investor stakeholder groups. In the current study, signaling theory can be used to explain information asymmetry and disclosure between insured and the insurance companies. Although there are some

information that is not disclosed during the contracts some of the signals sent by the clients may be used by the insurance company to deduce information about the clients attributes therefore being part of client appraisal. On the other hand, the clients may get signals from other sources such as customer complaints, the media among others that imply the insurance company's claims settlement patterns. This may influence the clients behavior towards the uptake of insurance or not.

2.2.3 Agency Theory

Theory of Agency was originally developed by Ross in and Mitnick, independently and roughly concurrently in 1972. An agency relationship arises where one or more parties called the principal contracts/ hires another called an agent to perform on his behalf some services and then delegates decision making authority to that hired party (Agent).

In economic agency, the problem is one of selecting a compensation system that will produce behavior by the agent consistent with the principal's preferences. Thus, the focus is on the nature of the incentive system and the contracting system that guides the distribution of those incentives, as well as the conditions of risk and information that condition the choices of the actors (Mitnick, 2006).

Further the agency theory was developed by Logan (2000) who grounded his theory on the separation of the ownership and control of economic activities between the agent and the principal the theory held that various agency problems which may be born included but not limited to the following: asymmetric information between the principal and the agent character based on self-interest, differences in risk aversion and outcome uncertainty.

According to Bebchuk and Fried, (2004) principal–agent problem occurs when one person or entity "agent" is able to make decisions on behalf of, or that impact, another person or entity "the principal". The dilemma exists because sometimes the agent is motivated to act in his own best interests rather than those of the principal. The agent-principal relationship is a useful analytic tool in political science and economics, but may also apply to other areas.

According to Logan (2000) the most efficient contract includes the right mix of behavioral and outcome-based incentives whose alignment is an important issue in

insurance agency to motivate the agent to act in the interests of the principal. The principal-agent problem may also create incentives for insurance brokers to encourage households to take on insurance policy they cannot afford or to commit fraud by false information on insured policy applications in order to qualify them for their policy summarizing this problem was regulation e.g the originators, who were not allowed to disclose information to the insured that would have helped them to check whether they could afford the policy. In view of the above, the increased complexity of structured insurance products destroy information, thereby making a systematic information worse is the insurance system and increasing the severity of adverse selection and moral hazard problems.

Majority of insurance companies distribute their products through intermediaries such as agents and brokers who come into contact with the customers. These agencies work in interest of their organizations and also that of the insurance provider. However many at times they are subject to information asymmetries between the clients and the agency and between the client and the insurance provider. Distribution of insurance products through agents could be one of the main causes of low penetration due to the consequences of adverse selection and moral hazard by the agent.

2.3 Empirical Literature

A number of studies have been conducted assessing information asymmetries, moral hazard, and adverse selection in insurance organizations. This section explores such studies, and the link of insurance uptake across different regions.

2.3.1 Asymmetric Information and uptake of insurance products

Research has emphasized the potential importance of asymmetric information in impairing the functioning of insurance markets. The empirical relevance, however, remains the subject of considerable debate. A number of studies of the automobile, health, and life insurance markets in different parts of the world have concluded that asymmetric information does not exist in these insurance markets (Chiappori & Salanie, 2000; Cardon & Hendel, 2001; and Cawley & Philipson, 1999).

The above studies were however based on the same widely used test of asymmetric information. They tested for whether there is a positive correlation between insurance coverage and risk occurrence. Contrary to the predictions of many moral hazard and

adverse selection models, these papers find no evidence that individuals with more insurance are more likely to experience the insured risk.

According to Chiappori and Salanie (2000) data from insurers are well suited for studies of asymmetric information, because they record choice of coverage and outcome (claim or not), as well as many characteristics of policyholders. Finkelstein and Poterba, (2004) held that studies using data from different insurance markets had evidence of insurance coverage risk correlation yet, tests on property/liability insurance, where automobile insurance data did not reveal any strong evidence of information asymmetries that affect the level of risk in the contract (Chiappori & Salanie, 2000).

The work by Dionne (2001) suggested that insurers information set is sufficient if non-linear effects, not considered by Puelz and Snow, are taken into account. A sufficient risk classification implies that there is no residual adverse selection in each risk class, since groups are homogeneous in risk. To overcome previous difficulties with estimation, Chiappori and Salanie (2000) held that there is need to introduce a simple and general test of the presence of asymmetric information. When this test was applied to a homogeneous sample of inexperienced drivers in the French automobile insurance market, no significant correlation was found.

In the study by Finkelstein and McGarry (2006) they considered the policyholder's private information on risk in the long-term medical care insurance market. Their findings indicate that two types of individuals buy insurance: Those with private beliefs that they are high risks and those with a strong taste for insurance. Ex post, the former are a higher risk and the latter a lower risk to the insurer. They conclude that, in aggregate, individuals with more insurance are not higher risks, and that an equilibrium with multiple forms of private information is unlikely to be efficient.

2.3.2 Insurance Awareness and uptake of insurance products

Panda, Dror, Koehlmoos, et al., (2013) categorized factors that enable or impede individuals from enrolling in insurance schemes under five broad headings; households or individual characteristics, scheme-related factors, social capital, supply-side factor, and institutional factors. Many clients are skeptical about paying premiums for an intangible product with future benefits that may never be claimed,

and often do not trust insurance companies. This in the context of the current study could be explained in informational asymmetries that exist in the insurance industry.

Due to a lack of information about the benefits of insurance, people are often wary of it and view it in a negative light. They prefer to rely on traditional arrangements or religious practices (Hardman 2012). Churchill (2007) opines that, low penetration of insurance services has been attributed to a lack of confidence in insurance services. Makove (2011) also cited the lack of demand for insurance products.

A report by AKI (2013) revealed that there was still lack of insurance culture in Kenya which was partly due to negative perceptions about insurance as a financial tool and negative attitudes towards insurers. The paper further revealed that clients still perceived insurance as a luxury good for the elite and for motor vehicle owners. The perception according to AKI was driven by lack of proper information on the importance of insurance, and lack of trust in insurance companies. This also points out to the information asymmetries and the perceptions and attitudes that develop as a result of asymmetric information on the side of the customers.

A study conducted by Oino and Kuloba (2011) among teachers in Kisii County revealed that the level of awareness was relatively low. An analysis on awareness by product revealed that Education policy and Life policy were leading in awareness among the public primary school teachers in Kisii County. However, the proportions were relatively higher among teachers who are above 50 years of age compared to those in lower age brackets. Awareness on medical insurance policy was significantly lower compared to education and life policies and so was the motor insurance. Similarly, the level of awareness varied by age group where teachers aged 31- 40 years were more knowledgeable on health insurance while those aged 41-50 years tend to be more aware of Motor and Personal Accident policies compared to the teachers in the other age brackets. Based on gender, there was slightly higher proportion of male teachers who are aware of education policy compared to the female teachers while females seemed to be more aware of Medical insurance compared to males. This study focused on the awareness and the demographic characteristics of teachers inclined towards different insurance products based on their activities. However focus of the study on the teachers' community may not provide

the general public view since teachers by virtue of their career had more access to information.

Oino and Kuloba (2011) also identified that among the issues raised by teachers as inhibiting their uptake of insurance included negative talk about insurance from other people, lack of good understanding of insurance, and perceived complications in compensation. The teachers also cited dishonesty of insurance agents delay in compensation and complexity of information of insurance products. All these factors point out to information asymmetries and its consequences on insurance uptake.

Karani and Isaboke (2014) in a study assessing the challenges facing the uptake of M-insurance loyalty-based life insurance scheme offered by the yuCover micro-insurance scheme in Kenya found out that over 90% of the respondents including the literate did not understand and are not aware of the yuCover product. 78% of the respondents had no prior experience with formal insurance products and weren't aware of their true exposure to risk, how the products can protect them, how solvent and trustworthy the insurance companies were, or how claims were handled. Similarly the company had little direct contact with clients, hence challenging the insurer to make sure that clients understood the product well. This shows that the level of awareness on the insurance company and its product was low and that there were gross information asymmetries between the clients and the insurance products.

2.3.3 Moral Hazard and uptake of insurance products

Moral hazard is a post-contract information asymmetry where one party's action affects the other's payoff. In their study Rubinstein and Yaari (1983) found that, moral hazard is an economic interaction involving imperfect observability. They recognized that an insurer cannot observe certain actions taken by the insured, actions which, however, have an effect upon the insurer's payoff. This inability of the insurer to observe the actions of the insured creates an incentive for the insured, once insurance is purchased to act in a manner that is liable to enhance the likelihood of a large claim being filed. As a result, the scope for a mutually advantageous interaction becomes severely hampered and, in particular, fully efficient interaction becomes impossible because efficient contracts are not enforceable. If interaction takes the form of an isolated contract, then any attempt to correct the inefficiency caused by moral hazard

must take place through the specification of what rewards or penalties the insured person would incur for any given level of the commonly observable variables

A considerable body of literature has investigated the incidence of moral hazard in insurance. Autor and Duggan (2003) have related the strong increases in the number of people on the disability insurance rolls and the associated expenditures in the US during the 1990s and 2000s to lenient medical screening. A number of studies have shown that higher replacement rates and easier access to benefits reduce the propensity to work (Gruber 2000; Autor & Duggan 2003; Autor, Duggan & Gruber 2012), and that individuals out of the labor market tend to overstate work limitations (Kreider, 1999), this amounts to moral hazards in quest for higher compensation rates.

Moral hazard in disability insurance arises from the information asymmetry regarding claimants' true health status. Applicants may overstate health limitations if the disutility of working is large and benefit receipt is an attractive alternative (Kreider, 1999).The relevance of moral hazard is also confirmed by the fact that incidence is only reduced for those conditions which are difficult to verify and thus most likely to be affected (Liebert, 2014).

A study by Keane and Stavrunovay (2014) to assess adverse selection, moral hazard and the Demand for Medigap Insurance in the UK revealed that moral hazard effect was substantial. The study revealed that individuals with Medigap insurance spent about $1,615 more on health care on average than similar individuals without Medigap $6,789 vs $8,404 which implied a 24% increase. As a result of the moral hazard effect, a policy of expanding Medigap coverage to all would be even more costly.

Einav, Finkelstein, Ryan, Schrimpf and Culleny, (2011) explored the existence, nature and implications of selection on moral hazard empirically in the context of the employer-provided market for health insurance in the United States. The study estimate substantial heterogeneity in moral hazard and selection on it, with individuals who have a greater behavioral response to the contract demanding more coverage. They estimated that moral hazard type is roughly as important as health expectations in determining whether to buy a higher or lower deductible. In other words, selection based on the expected slope of spending appeared about as quantitatively important in the setting as traditional selection based on the expected level of spending. This

implies that argued differently, moral hazard was a driver towards insurance uptake or the uptake increased moral hazard.

Moral hazard has been key driver in insurance fraud. According to Busch (2008) fraud and abuse of private healthcare benefits has three perpetrators. Fraud can take place when an individual patient perpetuates a fraud scheme against his or her own health plan, also called beneficiary fraud when the treatment providers and medical equipment vendors act on their own by using to their advantage a benefits plan, also known as provider fraud, and when there is collusion between the providers and patients, which essentially is a combination of provider and beneficiary fraud, but which opens the door to whole new sets of possible schemes to defraud the insurer. One of the greatest challenges for the insurer is to properly identify and prove whether or not the plan member is involved in the fraudulent or abusive scheme.

According to Parkin, Bray and Devesa, (2000) health insurance markets have the problems of moral hazard and adverse selection. Moral hazard is the tendency for people who are covered by health insurance to use more health service or to be less careful about avoiding health risks than they otherwise could. It can thus be deduced that people get insured because they want to avoid shouldering such risks. On the same note Parkin et al (2000) argue that because of adverse selection in the insurance market, those people who know they have a greater chance of falling ill than the average, are the ones more likely to buy health insurance. Insurance companies are thus expected to attract profitable business from low risk customers as they tend to give preference to healthy and employed people. It is thus normal to find that at times some people are not covered because of the extent of risk regarding their health status or because of their payment abilities.

The issue of health risks as a determinant to health insurance participation is underlined by Morris, Devlin and Porklin, (2007). They hold that the role of health insurance in addressing uncertainty in the demand for healthcare depends on attitude to risk. They maintain that an individual would pay for insurance as long as the utility it yields was at least as high as the utility they would achieve if they did not buy insurance. They see health insurance as a vehicle to remove uncertainty facing individuals with respect to the timing and magnitude of healthcare expenditure.

In a study by Ndungu (2013) assessing factors affecting profitability of private health insurance in Kenya, he found out that there was some form of fraud experienced at Heritage health division and the common one was the member fraud where an insured person claims for compensation falsely. Maxwell (2008) also confirmed that this was the most common type of fraud where the plan members exaggerated illness to collect additional health benefits or where the member share the medical cards with non-members. Leibowitz (2004) found that health insurance induces 'moral hazard' and leads an individual to consume more health care that the patient values less than the cost of producing it.

2.3.4 Adverse Selection and uptake of insurance products

The concept of adverse selection refers to situations where, before the contract is signed, one party (in general the insured agent) has an information advantage upon the other. In most models, it is assumed that clients know better their own risk than insurance companies; the latter may then use deductible as a way of separating individuals with different riskiness.

According to Rotschild and Stiglitz (1976), adverse selection is a general problem in the insurance context. It describes a state in which a disproportionate share of people from the scheme's total target group are insured who are relatively more likely to fall ill/injured and needs more care compared to their uninsured counterparts. Rational behavior induces relatively healthy (and risk-neutral) individuals not to insure if the insurance premium is higher than their expected health costs. Since insurance premiums are generally based on an actuarially fair level calculated over the total target group (plus an additional top-up for the operational costs of the insurance company), healthy people have less incentives to insure. This type of adverse selection, which we call 'Type I', could lead to a high-risk pool, in which collected premiums are not sufficient to cover the expense accounts. The sustainability of insurance schemes are at stake if premiums are not adjusted accordingly. A higher premium however, will drive out enrollees that need relatively less medical treatment, creating a vicious circle.

In the expected utility theory, people choose to insure if expected utility under the scheme is larger than expected utility without being enrolled into the scheme (Lammers & Warmerdam, 2010). Next to the price, the expected utility of the scheme

is formed by risk preference and believes over future health costs depending on valuations of own health, and health risks. The demand for health insurance arises from individuals who prefer certainty or wealth security to uncertainty and risk. Adverse selection, taking place in the context of uncertainty, arises from asymmetric information, where the principal knows his risk profile and the insurer does not. Adverse selection can be counterbalanced by enhancing enrollment among more risk-averse types who behave more cautiously compared to less risk averse types.

A study by Lammers and Warmerdam (2010) to assess adverse selection in voluntary micro health insurance in Nigeria revealed that, adverse selection problems were expected to be larger when enrollment into an insurance scheme was low like is often the case in the beginning of new programs. If enrollment rates increased, the impact of adverse selection would go down. To increase risk pools, mandatory instead of voluntary insurance was frequently used in Western countries. However, this situation would not apply in developing countries since if the premiums are highly subsidized, without adequate knowledge on consumption possibilities of the poorest, obliging them to enroll in a pre-payment health system is not a desirable option.

Chiappori and Salanie (2000) state that it is possible the adverse selection cannot be present in some insurance markets. Furthermore, if we assume that the insurance companies are better informed about the insurant risk, and then the former are better informed about the risk. Based on this, Villeneuve (2000) proposed an analysis of better informed insurants that will study the way in which the information is transmitted.

Wolfe and Goddeeries (1991) studied the demand of a certain type of life medical insurance, Medigat and discovered a very weak presence of adverse selection. Pueltz and Snow (1994) tested the same this in the US car insurance market and they discovered that the agents with a large risk loving coefficient choose the insurance with a larger coverage, which is consistent to the adverse selection. Godfried (2001) studied the dental insurance demand in Holland, which was included in the standard medical insurance package in 1995. The conclusion was that the agents with a large inclination toward risk tend to buy a supplementary dental insurance.

According to Wang, Zhang, Yip and Hsiao, (2006) evidence from the voluntary Rural Mutual Health Care scheme in poor rural China indicates that adverse selection can be

substantial even when uptake is high. They found adverse selection by self-reported severity of recent illness in a sample with an enrollment rate of 71%. Adverse selection mainly occurred among partially enrolled households. Zhang and Wang (2008) showed that the adverse selection effects did not change significantly over time. Arhin (1994) based on a comparison of illness episodes among scheme and non-scheme members in the national health insurance scheme in Burundi adverse selection did not appear to be a major problem. However, non scheme members often bought the insurance just before seeking care. Moreover, high-risk families and larger families were more likely to join due to a fixed family price for the package.

Dror, Soriano, Lorenzo, Sarol, Jr, Azcuma and Koren, (2005) compared morbidities between insured and uninsured in their target population and found no evidence of adverse selection in a scheme in the Philippines. They do find a larger share of hospitalized and diagnosed chronically ill among the insured group, which they explain by the increased access to care via the insurance. Adverse selection issues have also been analyzed using willingness-to-pay (WTP) analyzes. Dror, Radermacher and Koren, (2007) showed that households that experienced high-cost health events displayed a higher WTP for micro health insurance in India. Contrary, based on actual biomedical indicators, such as weight loss, Gustafsson-Wright, Asfaw and Van der Gaag, (2009) did not find a significant positive influence of poor health on the willingness-to-join (WTJ) nor the WTP for a hypothetical health insurance in Namibia.

While a number of the above mentioned studies have analyzed adverse selection using statistical models, none of these studies correct for risk preferences and risk perceptions which might have biased the results.

2.4 Research Gaps

The forgoing literature review shows that information asymmetry is a common phenomenon in insurance industry and a key driver to insurance operations. However, studies of the automobile, health, and life insurance markets have concluded that asymmetric information does not exist in these insurance markets (Chiappori & Salanie, 2000; Cardon & Hendel, 2001; and Cawley & Philipson, 1999). These studies are based on the same widely used test of asymmetric information: they test for whether there is a positive correlation between insurance coverage and risk

occurrence. Contrary to the predictions of many moral hazard and adverse selection models, these papers find no evidence that individuals with more insurance are more likely to experience the insured risk. Although the concept is anchored on theory, there is uncertainty. Theoretical models of insurance market equilibrium investigate insurance contracts that vary only in terms of price and the amount of payout in the event of a claim. Previous empirical studies have limited their focus to whether individuals whose insurance will make a greater payment in the event of a claim exhibit higher risk ex post. Information asymmetries were assessed by focusing on the moral hazard and adverse selections with a view of closing a research gap through assessing the relationship between awareness, information asymmetry and uptake of insurance products.

2.5 Conceptual Framework

The study was guided by the conceptual framework on Figure 2.1

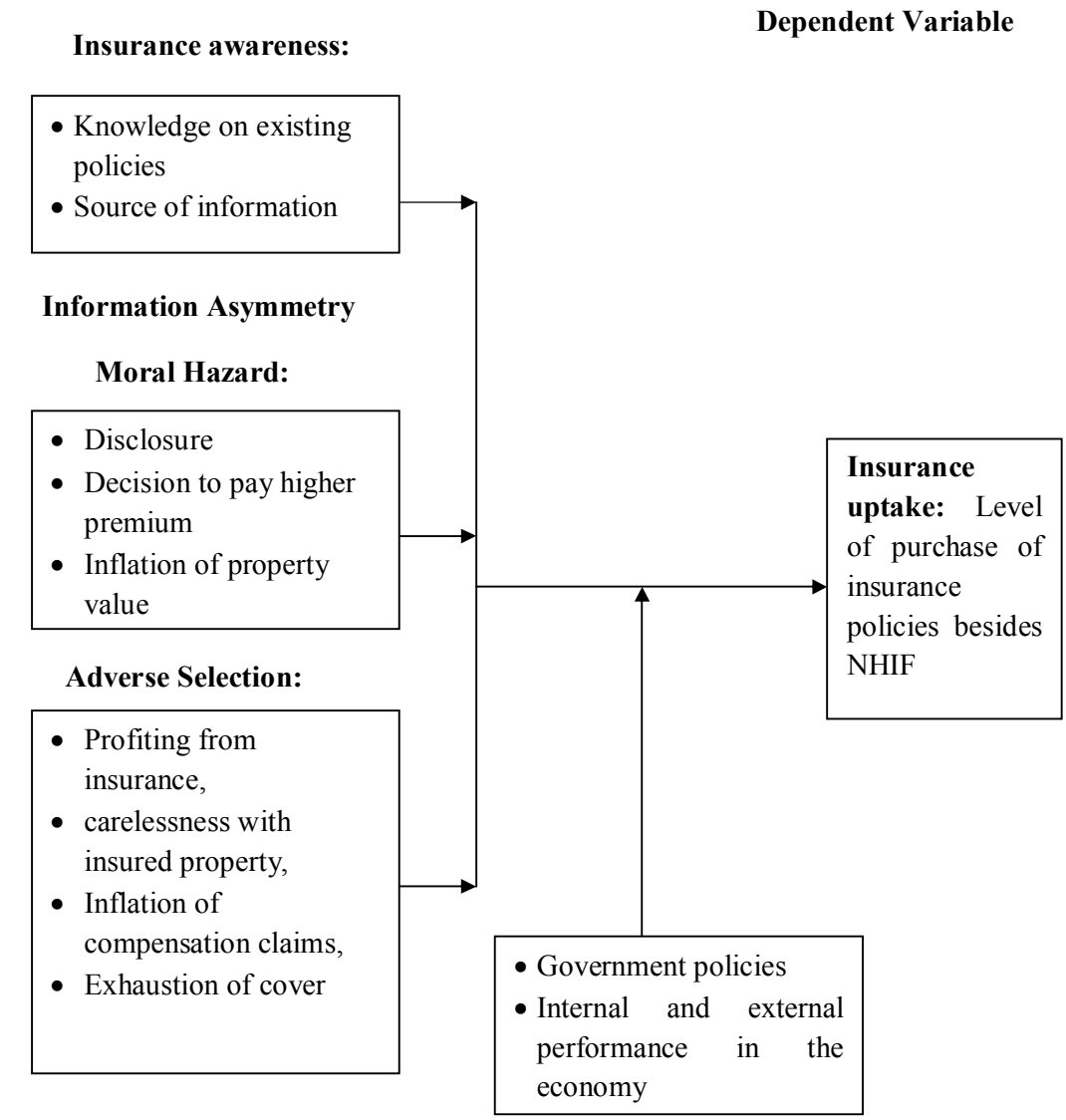

Figure 2.1: Conceptual Framework

Source: Author (2015)

The relationship highlighted in the conceptual framework on Figure 2.1 shows the relationship held that information asymmetry affects insurance uptake. In this study information asymmetry is conceptualized in three perspectives: knowledge and awareness on insurance products and insurance contracts and the information disclosure between insured parties and the insurance assessed in terms of the adverse

selection and moral hazard by the insured parties. Adverse selection occurs due to information asymmetry before entering into insurance contract while moral hazard occurs as a result of information asymmetry after entering into insurance contract.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter provides an insight of the research procedure that was employed in carrying out the research study. Fundamentally it describes the research design, population, sample size, sampling procedures, instruments, validity, reliability, data collection and processing procedures.

3.2 Research Design

The research design adopted in this study was the explanatory design. The explanatory design was chosen for the study because it helped to generate tentative explanations or hypotheses, which may be used as starting points for descriptive or casual research (Kombo & Tromp, 2006). This study surveyed a sample of teachers in public primary schools to represent the public in Nakuru Sub-County so as to be able to investigate the relationships in information asymmetries, awareness and uptake of insurance.

3.3 Target Population

Mugenda and Mugenda (2003) defines target population as that population which posses certain characteristics of interest and to which the researcher wants to generalize the findings of a study. The target population in this study was made up of all the teachers in public primary schools in Nakuru Sub-County. Teachers were preferred for this study because they were in an industry that would give a homogenous population for study. The sampling frame was drawn from the list of public primary school teachers in Nakuru Sub-County. This was obtained from the Nakuru Sub-County education office and the Nakuru Sub-County TSC Staffing Office. According to Nakuru Sub-County staffing office register, there were 1124 public primary school teachers in 59 public primary schools in the Sub-County at the moment. The distribution of teachers in the four Zones is as shown on Table 3.1.

Table 3.1: Distribution of Target Population

Zone	Number of Schools	Number of Teachers
Eastern	19	299
Western	17	273
Northern	12	285
Southern	11	267
Total	59	1124

Source: Nakuru Sub-County TSC (2015)

3.4 Sampling and Sample Size

Stratified random sampling technique was used to select the teachers who participated in the study from the wider teachers register from Nakuru Sub-County TSC Staffing Office. The strata were based on the four Zones. In each stratum random sampling technique was used to ensure that each teacher had an equal chance of getting selected. The sample size was determined using the formula by Nassiuma (2000). The formula was suitable in determining an economical sample size from a larger population. Thus:

$$n = \frac{Ncv^2}{cv^2 + (N-1)e^2}$$

Where n= Sample size

N= Population (1124)

C_v = Coefficient of variation (take between 21%-30%)

e= Tolerance at desired level of confidence, take 0.05 at 95% confidence level

Therefore:

$$n = \frac{1124*0.5^2}{0.5^2+(1124-1)0.05^2} = 91.83$$

Thus n = 92 teachers.

Distribution of the sample teachers in each stratum (Zone) was proportionate to the population. Thus sample distribution was shown on Table 3.2.

Table 3.2: Sample Distribution Size

Zone	Number of Teachers	Sample Size
Eastern	299	25
Western	273	22
Northern	285	23
Southern	267	22
Total	1124	92

3.5 Data Collection

Primary data was collected using questionnaires prepared by the researcher. This tool is more systematic and structured and aims at obtaining information from respondents in a direct and open manner. In their study, Kombo and Tromp (2006) pointed out that a questionnaire may be structured, consisting of direct questions to obtain factual data, or indirect (semi – structured), allowing more flexibility on the part of the interviewer in setting questions in an indirect manner, or probing for answers. The questionnaires were developed and administered to the selected teachers especially the heads and deputies. Questionnaires elicited information from the public point of view on the information asymmetry and uptake of insurance products. Primary data was supplemented with data from secondary sources and document analysis of IRA reports and statistics together with interviews from the respondents.

3.6 Validity of the Study

Adams, Jackson and Marshall (2007) defines validity as the strength of conclusions and inferences of a research, which is dependent on the degree of accuracy in measuring what is intended in the research. To ensure internal, external and construct validity of the research instruments, the study relied on expert advice and judgment. This was provided by research supervisors and lecturers of Kabarak University. Consultations were done in all stages of the study.

3.7 Reliability of Instruments

Reliability according to Mugenda and Mugenda (2003) is a measure of the degree to which research instruments yield consistent results or data after repeated trials. To improve on reliability in this study, piloting of the questionnaires was done on selected public primary school teachers in Nyandarua County. Items in the piloting

questionnaires were then analyzed using Cronbach's reliability coefficient in the statistical package for social scientists (SPSS, 21.0). The judgment on the reliability of the instruments was informed by Fraenkel and Wallen (2000) who stated that an alpha value of 0.7 and above is considered suitable to make group inferences that are accurate enough. The reliability test in this study revealed a reliability coefficient of 0.82 therefore the tools were adopted for study.

3.8 Data Collection Procedure

The researcher requested for a letter of introduction from the Kabarak University and then visited Nakuru Sub-County Education Office for permission before proceeding to book appointments with the head teachers of the sampled schools. After acquiring permission the researcher established a rapport with the respondents and explained the purpose of the study and then proceeded to administer the questionnaires to the sampled respondents. Questionnaires were administered to teachers using the drop and pick method where teachers were allowed one to three days to complete. In the mean time, the researcher appointed one teacher in every school to keep custody of completed questionnaires to avoid losses.

3.9 Data Analysis Procedure

Quantitative data analysis was done using mean, mode, standard deviation, percentages and frequencies. In testing the hypothesis, the study used regression analysis. This determined whether there was a statistically significant relationship between the level of awareness on insurance and uptake, adverse selection among teachers and uptake of insurance and the moral hazard and uptake of insurance. The tests were done at a significance level p = 0.05.. Regression analysis was based on the regression model:

$$y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon_i$$

Where:

y_i	= Insurance uptake
$\beta_1, \beta_2, \beta_3$	= Coefficients of the independent variables
X_1	= Awareness
X_2	= Moral Hazard
X_3	= Adverse selection
β_0	= Constant
ε	= Error Term

CHAPTE FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents findings of the study and a discussion. The chapter is organized based on the study objectives. The general objective of this study was to assess the relationship between awareness, information asymmetry and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya.

4.1.1 Response rate

The data collection instrument which was questionnaire was issued to 92 head teachers and deputy head teachers randomly selected. Out of the 92 respondents issued with questionnaires, 87 filled and returned them for analysis while 5 did not. As a result, the return rate for the study was 94.6%. Mugenda and Mugenda (2003) held that a 50% response rate is adequate, 60% good and above 70% rated best. In view of the above, the response rate in this study of 96.4% is excellent. The high response rate is as a result of the data collection procedures which the researcher put on motion by giving adequate notice to the potential participants of the study, the questionnaire was self administered to the respondents who completed them and these were picked shortly after.

4.2 Demographic Information of Respondents

The study was interested in several demographic information of teachers; gender, age, education, salary range, duration in employment and marital status.

4.2.1 Gender

The gender of head teachers and deputy head teachers in public primary schools in Nakuru Sub-County was as presented on Figure 4.1.

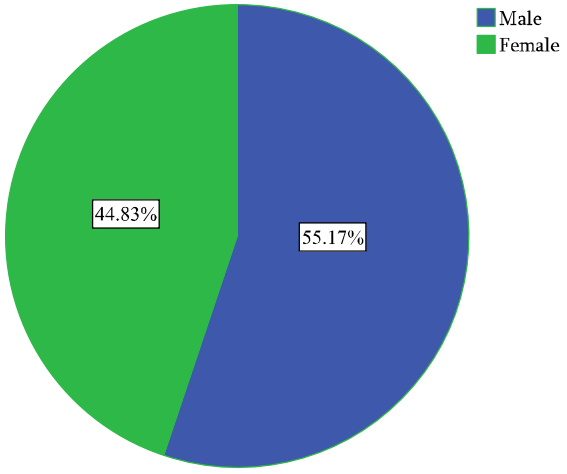

Figure 4.1: Gender of Head Teachers and Deputies

Source: Research Data (2015)

Majority of the public primary school head teachers and deputy head teachers in Nakuru Sub-County were male (55.17%) compared to 44.83% who were female. This shows that the leadership of public primary schools in Nakuru Sub County was not dominated by one gender since none exceeded the two thirds gender rule enshrined in the Kenyan constitution of 2010. The study also found that both gender were involved in data collection and therefore the findings could not suffer from gender biasness. The above findings collate with the study by Oino and Kuloba (2011) whose argument on gender held that there was slightly higher proportion of male teachers who are aware of education policy compared to the female teachers while females seemed to be more aware of Medical insurance compared to males.

4.2.2 Age Distribution of Head Teachers and Deputy Head Teachers

The age of head teachers and their deputies was varied as shown on the distribution in table 4.1.

Table 4.1: Age Distribution of Head Teachers and Deputy Head Teachers

	N	Minimum	Maximum	Mean	Std. Deviation
Age	87	36	59	47	4
Valid N (listwise)	87				

Source: Research Data (2015)

As seen from the findings on Table 4.1 the youngest participant in the study was 36 years while the oldest was 59 years. The mean age of head teachers and their deputies was 47 years. This implies that head teachers and their deputies were of age that enabled them to understand the issues of insurance raised in this study based on their life experiences. The above finding concurs with the study held by Oino and Kuloba (2011) who found that the level of awareness varied by age group where teachers aged 31- 40 years were more knowledgeable on health insurance while those aged 41-50 years tend to be more aware of Motor and Personal Accident policies compared to the teachers in the other age brackets.

4.2.3 Highest Education Qualifications

The highest education attained by the head teachers and their deputies was also sought and determined on Figure 4.2.

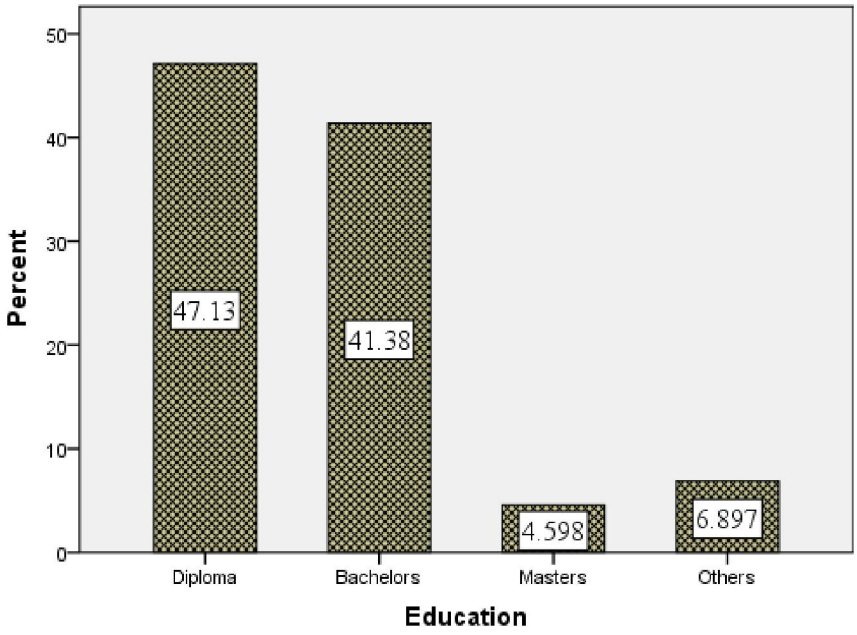

Figure 4. 2: Highest Education Qualifications

Source: Research Data (2015)

The study found out that 47.13% of the school heads had diploma education while 41.38% had bachelors' degree. A small percentage of 4.598% had masters while those with other qualifications such as certificate formed 6.897%. This is an indicator that

the level of individual career advancement through pursuing higher education was high among school heads in Nakuru Sub County since the entry point for primary teachers was P1 certificate. Higher education level also implies a higher level of understanding of school managers on cross cutting issues such as insurance. The finding on the qualification of the respondents has correlations with a study conducted by Karani and Isaboke (2014) whose study was on assessing the challenges facing the uptake of M-insurance loyalty-based life insurance scheme offered by the yuCover micro-insurance scheme in Kenya which found out that over 90% of the respondents including the literate did not understand and are not aware of the yuCover product. In the same study they held that 78% of the respondents had no prior experience with formal insurance products and weren't aware of their true exposure to risk, how the products can protect them, how solvent and trustworthy the insurance companies were, or how claims were handled.

4.2.4 Income Level

The income levels for school heads and their deputies in Nakuru Sub-county was determined based on income range of Ksh 10,000 from the minimum 25,000. The findings are presented on Table 4.2.

Table 4. 2: Income Level of School Heads

	Frequency	Percent	Cumulative Percent
Below Ksh 25,000	19	21.8	21.8
25,000 - 35,000	28	32.2	54.0
35,000 - 45,000	32	36.8	90.8
Above 45,000	8	9.2	100.0
Total	87	100.0	

Source: Research Data (2015)

The findings on Table 4.2 above indicate that most of the head teachers (69.0%) were in the income bracket between Ksh 25,000 and 45,000. However, 21.8% were earning below Ksh 25,000 while 9.2% earned Ksh above 45,000. This implies that most of the teachers were earning a modest salary that could allow them afford insurance cover of common risks. This finding is in agreement with the findings of Panda, Dror, Koehlmoos, Hossain, John, Khan and Dror (2013) who held that those factors that enable or impede individuals from enrolling in insurance schemes under five broad

headings; households or individual characteristics, scheme-related factors, social capital, supply-side factor, and institutional factors. In view of the above, income is within the armpit of social capital and therefore it will influence how one can access the insurance cover.

4.2.5 Duration in formal Employment

The duration that school heads had been in formal employment was determined in the number of years and presented on Table 4.3.

Table 4. 3: Duration in formal Employment

	N	Minimum	Maximum	Mean	Std. Deviation
Duration in formal employment	87	10	36	23	5
Valid N (listwise)	87				

Source: Research Data (2015)

The minimum duration of time worked by school heads was 10 years while the maximum was 36 years. On average a head teacher or deputy head teacher in Nakuru Sub County had worked in the same profession for 23 years. This implies that promotion of teachers was largely dependent on their working experience in addition to other qualifications. Therefore the respondents chosen had experience in the education enough to provide information on what happened in the industry. This assertion is supported by the findings of Connelly, Certo, Ireland and Reutzel (2011) who held that the value of the company can therefore be increased if the firm voluntarily reports that is signals private information about itself that is credible and reduces outsider uncertainty, in this case the respondents step in the shoe of the outsiders.

4.2.6 Marital Status

Marital status of school managers was also determined as shown on Figure 4.3 based on three categories: single, married, divorced or separated.

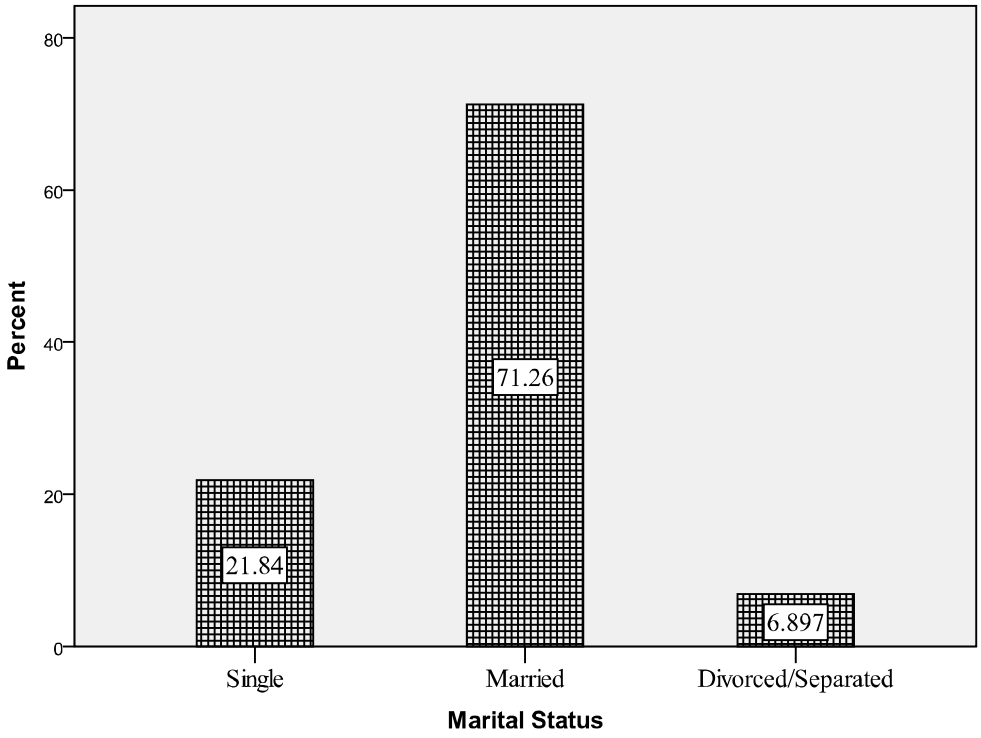

Figure 4.3: Marital Status

Source: Research Data (2015)

The findings on marital status of school managers revealed that 71.26% were married at the time of the study while 6.897% were divorced or separated. The remaining 21.84% were single. The marital status of respondents was important in this study in determining the level of uptake of insurance by gender.

4.3. Insurance uptake Among Teachers in Nakuru Sub County

The main objective of this study was to assess the relationship between awareness, information asymmetry and the level of insurance uptake. This was achieved by determining the current level of insurance purchase as well as the perception on insurance. Respondents were therefore asked to indicate whether they had acquired insurance policies before as shown on Figure 4.3.

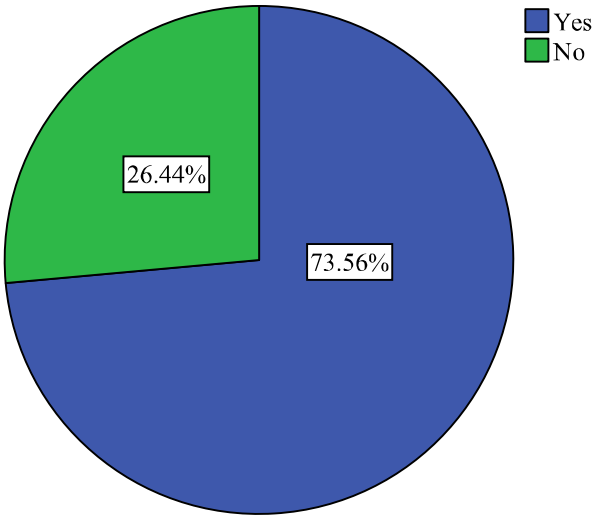

Figure 4. 4: Ever Purchased Insurance Before

Source: Research Data (2015)

From the findings, it was revealed that 73.6% of the school managers have purchased insurance cover before besides the mandatory NHIF. Basing on the previous purchase of insurance cover it was established it can be concluded that uptake was very high among school heads compared to the general uptake of 2% within Nakuru County (IRA, 2015) and 3.0% nationally. Further the study sought to know whether insurance purchase was voluntary of conditional within the category that had acquired it before. The findings are shown on Table 4.4.

Table 4. 4: Voluntary Purchase of Insurance

			Have you ever been insured?		
			Yes	**No**	**Total**
Have you ever purchased an insurance cover voluntarily?	Yes	Count	57	0	57
		% within Have you ever been insured?	89.1%	.0%	65.5%
	No	Count	7	23	30
		% within Have you ever been insured?	10.9%	100.0%	34.5%
Total		Count	64	23	87
		% within Have you ever been insured?	100.0%	100.0%	100.0%

Source: Research Data (2015)

The findings on Table 4.4 revealed that out of the 64 school managers who had acquired insurance, 89.1% did so voluntarily while for 10.9% it was a requirement by other parties but not out of their own wish. This shows that indeed 65.5% of the school heads had purchased insurance voluntarily before. This still indicates a high level of insurance uptake among public primary school heads in Nakuru Sub-County compared to the national statistics.

The study was also interested to know whether policy holders would wish to purchase to purchase insurance in the future:

Table 4. 5: Would You Wish to Have an Insurance Cover in Future

			Have you ever been insured?		
			Yes	**No**	**Total**
Would you wish to have an insurance cover in future?	Yes	Count	23	12	35
		% within Have you ever been insured?	35.9%	52.2%	40.2%
	No	Count	41	11	52
		% within Have you ever been insured?	64.1%	47.8%	59.8%
Total		Count	64	23	87
		% within Have you ever been insured?	100.0%	100.0%	100.0%

Source: Research Data (2015)

Surprisingly, 64.1% of the school heads who had purchased insurance policies before indicated that they would not like to acquire insurance in the future. This number was higher than those who did not have policies in the past and would not like to purchase insurance in the future. This shows that existing customers were shying off from insurance contracts following their past experiences. This means that customers had had suffered the consequences of information asymmetry in favor of the insurance companies. Further in assessing the level of insurance uptake, the school heads were asked to indicate whether they would refer a friend to purchase insurance policies. The findings were presented on Table 4.6

Table 4.6: Advice a Friend to Purchase Insurance

			Have you ever been insured?		
			Yes	**No**	**Total**
Would you advice a friend to purchase an insurance cover?	Yes	Count	33	15	48
		% within Have you ever been insured?	51.6%	65.2%	55.2%
	No	Count	31	8	39
		% within Have you ever been insured?	48.4%	34.8%	44.8%
Total		Count	64	23	87
		% within Have you ever been insured?	100.0%	100.0%	100.0%

Source: Research Data (2015)

Majority of school heads who had purchased insurance cover before (51.6%) would advice a friend to purchase insurance cover too. At the same time 65.2% of school heads who did not have insurance cover would advice a friend to have one. However, of concern was the 48.4% of the school heads who had purchased insurance cover and would not advice a friend to have a cover too. This implies that they were not confident with the insurance policies based on their experiences. These could be victims of bad insurance contracts emanating from insurance information asymmetry. The findings are in agreement with Churchill (2007) who held that low penetration of insurance services has been attributed to a lack of confidence in insurance services. In the same wave length, the above results are supported by Makove (2011) who also cited the lack of demand for insurance products for reasons of information asymmetry in the industry. When asked to indicate whether insurance policies were beneficial, the responses were as shown on Table 4.7.

Table 4. 7: Whether insurance policies were beneficial to policy holders

			Have you ever been insured?		
			Yes	**No**	**Total**
Are insurance policies beneficial to the policy holder?	Yes	Count	41	18	59
		% within Have you ever been insured?	64.1%	78.3%	67.8%
	No	Count	23	5	28
		% within Have you ever been insured?	35.9%	21.7%	32.2%
Total		Count	64	23	87
		% within Have you ever been insured?	100.0%	100.0%	100.0%

Source: Research Data (2015)

The results of cross tabulation on Table 4.7 indicated that majority of the school heads (67.8%) appreciate that insurance was beneficial. More importantly is the 78.3% of school heads who did not have insurance before but understand that insurance was beneficial to them. However, there was a concern that 35.9% of the school heads who had acquired insurance policies before felt that it was not beneficial. This shows that there was increasing awareness and change of attitude towards insurance for persons who were not insured before. The negative attitude of those who had insurance policies before indicate the failure of insurance companies to deliver their promises to the customers' expectations which could be linked to informational asymmetries between the insurer and insurance where the insurance company had a higher advantage. The findings above concur with the study of Hardman (2012) who argued that lack of information about the benefits of insurance allows people to be always wary of insurance and view it in a negative light, thus they prefer to rely on traditional arrangements or religious practices.

4.3.1 Ownership of Insurable Property's

The study sought also to find out whether there was any relationship between insurance uptake and ownership of insurable properties among public primary school heads. The results of cross tabulation are presented on Table 4.8.

Table 4.8: Vehicle Ownership and Insurance Uptake

			Have you ever been insured?		
			Yes	**No**	**Total**
Do you own a car	Yes	Count	45	6	51
		% within Have you ever been insured?	70.3%	26.1%	58.6%
	No	Count	19	17	36
		% within Have you ever been insured?	29.7%	73.9%	41.4%
Total		Count	64	23	87
		% within Have you ever been insured?	100.0%	100.0%	100.0%

Source: Research Data (2015)

The findings on Table 4.8 shows that majority of the school heads who had insurance policies before also owned cars (70.3%) while majority of those who did not have policies did not own cars. This implies that ownership of motor vehicles was associated with insurance uptake. Further, ownership of property was assessed in relation to insurance uptake as shown on Table 4.9.

Table 4. 9: Ownership of Property and Insurance Uptake

			Have you ever been insured?		
			Yes	**No**	**Total**
Do you own property	Yes	Count	49	13	62
		% within Have you ever been insured?	76.6%	56.5%	71.3%
	No	Count	15	10	25
		% within Have you ever been insured?	23.4%	43.5%	28.7%
Total		Count	64	23	87
		% within Have you ever been insured?	100.0%	100.0%	100.0%

Source: Research Data (2015)

The findings on table 4.9 shows that majority of public primary school heads who owned properties also had insurance policies (76.6%). However, 56.5% of those who were not insured also owned properties. This implies that ownership of properties was not a key determinant of insurance uptake. Comparing this finding with ownership of cars, it can be argued that uptake of property insurance was voluntary while that of motor vehicles was compulsory. Thus ownership of motor vehicle was associated more with insurance uptake than property ownership.

4.3.2 Common Types of Insurance Policies Purchased by Teachers

The common types of insurance policies purchased by public primary school heads in Nakuru Sub County was determined a multiple response question where a holder of insurance policy was allowed to select more than one policy held. The findings were presented on Table 4.10.

Table 4. 10: Insurance Policy Penetration

		Responses	
		N	**Percent**
Type of policy owned[a]	Life insurance	44	72.1%
	Education insurance	45	73.8%
	Motor insurance	36	59.0%
	Fire Insurance	8	13.1%
	Medical Insurance	37	60.7%
	Personal Accident insurance	15	24.6%
Total		185	303.3%

a. Dichotomy group tabulated at value 1.

Source: Research Data (2015)

The findings in insurance penetration revealed that education policy was the most common insurance among primary school teachers in which 73.8% of those insured had education policy for their children. Secondly was the life insurance where 72.1% had life cover followed by medical insurance cover which was subscribed by 60.7% of school heads with insurance cover. Motor insurance was also common as it was acquired by 59.0% of the staff with insurance. Personal accident cover was less common where only 24.6% of school heads with insurance were covered. The least adopted cover was the fire insurance subscribed by only 13.1%. From this finding, it can be seen that the penetration of life insurance and medical insurance covers were higher among teachers as opposed to other forms of insurance covers

Other than the policies held at the time of the study, the researcher sought to know, the insurance prospects of teachers. This was by determining their intentions to purchase insurance cover in the future. The findings were presented on Table 4.11.

Table 4.11: Type of Policy Intended for Purchase In Future

		Responses	
		N	**Percent**
Policy intended for purchase[a]	Life insurance	18	47.4%
	Education insurance	11	28.9%
	Motor insurance	5	13.2%
	Fire Insurance	10	26.3%
	Medical Insurance	21	55.3%
	Personal Accident insurance	15	39.5%
Total		80	210.5%

a. Dichotomy group tabulated at value 1.

Source: Research Data (2015)

The prospects for medical insurance cover were promising in the future since 55.3% of the school heads without insurance cover had intentions to acquire it while 47.4% intended to purchase life insurance cover. The third most promising cover was the Personal Accident insurance since 39.5% of the uninsured indicated their interest to purchase it in the future. Teachers would also like to have education policies and fire insurance in the future although a few were interested 28.9% and 26.3% respectively. Motor insurance was the least cited by only 13.2%. These findings point out to existence of unmet insurance demand skewed to medical, and life insurance cover.

For those teachers who had no insurance policies in place, the study sought to establish the reasons as to why they had not purchased insurance covers. Various opinions were raised in which some teachers cited multiple reasons. The findings were presented on Table 4.12.

Table 4.12: Reasons for Non Purchase of Insurance

		Responses	
		N	Percent
Reasons for non purchase of insurance	Have never heard about insurance	2	9.1%
	Have heard my colleagues/other people talk negatively about insurance	16	72.7%
	There are no insurance policies that meet my needs	2	9.1%
	Insurance is expensive	20	90.9%
	I do not know the insurance products available	4	18.2%
	I do not have a good understanding of insurance	3	13.6%
	Compensation is complicated	20	90.9%
	It is against my beliefs	1	4.5%
	Insurance companies do not give compensation.	4	18.2%
	I cannot afford the cost of cover	3	13.6%
	I do not trust insurance companies	12	54.5%
	I believe God Covers me	2	9.1%
Total		89	404.5%

a. Dichotomy group tabulated at value 1.

Source: Research Data (2015)

The findings on Table 4.12 revealed a general perception that insurance was expensive to afford, and that compensation in case of a risk happening was complicated. These reasons were cited 90.9% of the teachers who had no insurance policies. 72.7% indicated that they failed to purchase insurance because they overheard negative talks about insurance from colleagues while 54.5% do not trust insurance companies which are the main reasons as to why they did not consider purchasing insurance. Other reasons that were cited responsible for failure to take insurance include the lack of information about insurance products available (18.2%), 13.6% have no good understanding of insurance, some 9.1% argued that they have not heard of insurance and an equal number believes that there is no insurance policy that meets their needs while 9.1% believe in Gods cover as opposed to insurance cover. From the findings it can be observed that the most outstanding reasons for low uptake of insurance was related to information held by the customer. The perception that

insurance was very expensive, failure to trust insurance, misinformation on compensation and negative talk all work together to discourage insurance uptake. In the foregoing, the findings herein above is further in support with the study of Hardman (2012) who held that lack of information about the benefits of insurance allows people to be always wary of insurance and view it in a negative light, thus they prefer to rely on traditional arrangements or religious practices. Therefore it can be concluded that information asymmetry was rampant in the Kenyan insurance sector as a key contributor for low uptake of insurance.

4.4 Awareness on Insurance

The first objective in this study was to assess the relationship between awareness on insurance and its uptake among the public primary school teachers in Nakuru Sub-County. In this objective, the type of insurance policies customers were aware of and the sources of information were determined by subjecting various possible options to a multiple response of the teachers. The following section presents and discusses the findings.

Table 4.13: Insurance Policies Teachers Were Aware of

		Responses	
		N	Percent
Insurance policies teachers are aware of[a]	Life insurance	67	81.7%
	Education insurance	74	90.2%
	Motor insurance	63	76.8%
	Fire Insurance	33	40.2%
	Medical Insurance	56	68.3%
	Personal Accident insurance	39	47.6%
	Business Insurance	27	32.9%
Total		359	437.8%

a. Dichotomy group tabulated at value 1.

Source: Research Data (2015)

The findings on types of insurance policies that primary school teachers were aware of on Table 4.13 above shows that the most familiar insurance policy among teachers was the education insurance policy in which 90.2% were aware of followed by life insurance cited by 81.7%, motor vehicle insurance cited by 76.8% and medical insurance cover cited by 68.3%. Personal accident insurance cover was somehow common cited by 47.6% while fire insurance was cited by 40.2%. The least known

insurance policy was the business insurance cover against unexpected losses such as burglary, fire and other related risks which was cited by 32.9%. From the above findings on insurance policy awareness it can be seen that primary school teachers to a large extent were aware of insurance policies related to their career such as education policy, life insurance, medical insurance and motor insurance. However as for other insurance covers such as business and fire, the level of awareness was low. Further the study assessed the sources of insurance information as shown on the findings of Table 4.1.4

Table 4.14: Sources of Information

		Responses	
		N	**Percent**
Sources of information	From friends or relatives	46	55.4%
	From colleagues at the work place	41	49.4%
	From TVs and Radio	21	25.3%
	From Newspapers and Magazines	21	25.3%
	From the insurance company's agents	67	80.7%
	I get regular updates from insurance companies	13	15.7%
	Social Media	26	31.3%
Total		235	283.1%

a. Dichotomy group tabulated at value 1.
Source: Research Data (2015

Insurance agent were cited as the most common source of insurance information by 80.7% of the respondents who took part in the study followed by friends (55.4%) and colleagues at work (49.4%). The media was also active in insurance information dissemination since 31.3% cited the social media, 25.3% radio and TV while an equal number cited the news papers. Very few obtained updates from insurance companies. From this finding, it can be seen that most of the teachers obtained insurance information from other individuals such as insurance agents, friends and colleagues. However, this medium was highly prone to distortion of information especially where the person disseminating has no full understanding of the functioning of insurance or driven by anterior motive such as sales target by insurance agents and the negative attitude by friends and colleagues. The findings above support a study by Chiappori and Salanie, (2000) who argued that the informational problems; adverse selection

and moral hazard have the potential to lead to the lack of understanding of the markets.

When asked to indicate the reliability of information obtained, the teachers responded as shown on the findings on Table 4.15.

Table 4.15: Reliability of Insurance Information Sources

	Very reliable f(%)	Reliable f(%)	Moderate f(%)	Unreliable f(%)	Very unreliable f(%)	χ^2	p
From friends or relatives	6 (6.9)	22 (25.3%)	20 (23.0%)	35 (41.4%)	3 (3.4%)	56.9	0.00
From colleagues at the work place	17 (19.5%)	15 (17.2%)	28 (32.2%)	27 (31.0%)	0 (0.0%)	81.6	0.00
From TVs and Radio	0 (0.0%)	31 (35.6%)	29 (33.3%)	24 (27.6%)	3 (3.4%)	22.6	0.04
From Newspapers and Magazines	10 (11.5%)	39 (44.8%)	31 (35.6%)	6 (6.9%)	1 (1.1%)	45.3	0.03
From the insurance company's agents	5 (5.7%)	12 (13.8%)	32 (36.8%)	37 (42.5%)	1 (1.1%)	39.5	0.02
Updates from insurance companies	2 (2.35)	7 (8.0%)	61 (70.15)	17 (19.55)	0 (0.0%)	31.6	0.04

Source: Research Data (2015)

According to the findings on Table 4.15 on reliability of information sources it can be observed that the reliability of insurance information varied significantly. The most reliable source cited was the news papers, 11.5% of the primary school heads found newspapers very reliable while 44.8% termed them reliable, 35.6% were of the view that newspapers were moderately reliable. Those of a contrary opinion were 8.0% who cited unreliable or very unreliable. Information from colleagues was the second reliable source where 19.5% termed it very reliable while 17.2% reliable and 32.2% moderately reliable. Those with contrary opinion were 31.0% who cited unreliable. The third most reliable information source was the TV and Radio which 35.6% rated TVs and Radios Reliable while 33.3% moderately reliable, 31.0% were of the view that TVs and Radios were unreliable means of disseminating insurance information.

On the reliability of information disseminated directly by insurance companies as updates on products 70.15% of the school heads found the message communicated as moderately reliable while 19.55% termed it unreliable. This could be as a result of focusing on the positive side of insurance when providing insurance information. Information from friends was termed as reliable by 25.3% while 6.9% termed it very reliable, 23.0% found it moderately reliable while and 41.4% found it unreliable. Information disseminated by insurance agents was the least reliable according to teachers since 42.5% termed it unreliable while 36.8% termed it moderate in reliability. Only 13.8% found insurance agents to disseminate reliable information while 5.7% very reliable. The chi-square results on table 4.15 herein above show that the reliability of insurance information sources significantly affects the level of uptake of insurance among teachers.

In order to evaluate and quantify the level of awareness on insurance matters, respondents were subjected to various questions either agree or disagree in order to test whether they had the right information on insurance or not. The level of agreement was measured on a five point scale as (CA – completely agree, A – Agree, NAD – Neither agree nor disagree, D – Disagree, CD – Completely Disagree). This was also compared with the uptake of insurance to find out whether having the right information about insurance contributed towards its uptake. Insurance uptake was computed as an average of whether one had an insurance cover, voluntary purchase of insurance cover, whether one would acquire insurance cover in future and whether one would advise a friend to acquire insurance. The findings are presented and discussed below:

Table 4.16: Awareness

	CA	A	NAD	D	CD	χ^2	p
Insurance is cheap	1 (1.1%)	3 (3.4%)	43 (49.4%)	34 (39.1%)	6 (6.9%)	51.9	0.00
Insurance is easy to understand	0 (0.0%)	12 (13.8%)	48 (55.2%)	25 (28.7%)	2 (2.3%)	57.8	0.00
There are delays in compensation	30 (34.5%)	41 (47.1%)	9 (10.3%)	5 (5.7%)	2 (2.3%)	60.3	0.00
Insurance agents are Not trustworthy	19 (21.8%)	48 (55.2%)	5 (5.7%)	13 (14.9%)	2 (2.3%)	79.5	0.00
Insurance companies' offices are not accessible	4 (4.6%)	20 (23.0%)	27 (31.0%)	31 (35.6%)	5 (5.7%)	58.6	0.00
There is office in which insurance complaints can be launched	4 (4.6%)	19 (21.8%)	54 (62.1%)	8 (9.2%)	2 (2.3%)	36.1	0.02
The insurance products available do not meet my needs	2 (2.3%)	20 (23.0%)	47 (54.0%)	13 (14.9%)	5 (5.7%)	49.8	0.00
Information on insurance policies is simplified for easy understanding	3 (3.4%)	34 (39.1%)	21 (24.1%)	24 (27.6%)	5 (5.7%)	43.6	0.02

Source: Research Data (2015)

As seen on the findings in Table 4.16, a high proportion of teachers (49.4%) were not able to judge whether insurance was cheap or not but 46.0% % were of the view that it was not cheap since they disagreed or strongly disagreed. This was the wrong perception since insurance pricing was cascaded even for low income earners like the " *Mbao*" NHIF payment plan for small scale business operators. The perception on the cost of insurance significantly affected the insurance uptake.

Majority 55.2% were neutral on whether insurance was easy to understand or not since they neither agreed nor disagreed, However, the proportion of those who agreed (31.0%) was higher than those who agreed (13.8%) that insurance was easy to understand. The perception on the ease of understanding of insurance was found to significantly influence it uptake. Regarding whether there were delays in the compensation of insurance policies in the event of a risk, majority 81.6% of the teachers were in agreement while 8.0% disagreed, 10.3% were neutral. This shows

that there was a strong perception that insurance was characterized by delays in compensation which was not the case for all insurance covers. In support of the above findings Oino and Kuloba (2011) identified that among the issues raised by teachers as inhibiting their uptake of insurance included negative talk about insurance from other people, lack of good understanding of insurance, and perceived complications in compensation. As a result, this was a wrong perception due to information asymmetry on insurance claims among teachers. This perception significantly influenced insurance uptake among teachers.

There was also a widely held view that insurance agents were not trustworthy. This was derived from 77.0% of the teachers who agreed that insurance agents were not trustworthy as opposed to 17.2% who disagreed and 5.7% who were neutral. This negative perception also could be associated with the lack of the right information on the role of insurance agents in the provision of insurance among teachers. The negative perception towards insurance agents significantly affected its uptake among teachers. This findings concur with the findings of Panda, et al., (2013) who argued that many clients are skeptical about paying premiums for an intangible product with future benefits that may never be claimed, and often do not trust insurance companies.

On whether insurance company offices are not accessible, 27.6% of the teachers agreed while 41.3% disagreed, 31.0% were neutral on the matter which implies that a high proportion of teachers were not aware of the existence of physical offices of insurance companies and their locations. This significantly influenced their level of uptake of insurance products. The results on whether there were offices in which insurance complaints could be launched 62.1% were not aware since they neither agreed nor disagreed, and 11.5% disagreed; only 26.4% were aware therefore agreed.

Majority of the teachers were not aware of whether the insurance products in place met their needs or not because they neither agreed nor disagreed while 25.3% were aware and agreed that the policies in place were not suitable to them. This implies that there were information gaps on the existing insurance products among teachers which significantly affected their insurance uptake as revealed by the results of chi square tests. There were also mixed opinions on whether Information on insurance policies was simplified for easy understanding since 42.5% agreed while 33.3% disagreed, 24.1% neither agreed nor disagreed which means that they were not sure. Again this

shows lack of awareness and misinformation among teachers on the prevailing insurance services. This was found to significantly affect insurance uptake.

4.5 Adverse Selection

The second objective of the study sought to assess adverse selection in relation to insurance uptake among primary school teachers in Nakuru Sub County as shown on the findings in Table 4.17.

Table 4.17: Adverse Selection

	CA	A	NAD	D	CD	χ^2	p
It is not advisable to disclose sensitive information to insurance companies when purchasing insurance	18 (20.7%)	17 (19.5%)	29 (33.3%)	4 (4.6%)	19 (21.8%)	50.6	0.00
I acquire insurance policies when I expect some losses to occur in the future	24 (27.6%)	40 (46.0%)	15 (17.2%)	1 (1.1%)	7 (8.0%)	68.3	0.00
I don't mind paying higher premiums especially where the losses involved are obvious	7 (8.0%)	32 (36.8%)	40 (46.0%)	1 (1.1%)	7 (8.0%0	53.9	0.00
Sometimes I stay without insurance when I perceive the cost of loss to be incurred to be lower	4 (4.6%)	27 (31.0%)	33 (37.9%)	10 (11.5%)	13 (14.9%)	57.9	0.00
I always acquire insurance for activities where risk involved is high	9 (10.3%)	32 (36.8%)	36 (41.4%)	5 (5.7%)	5 (5.7%)	36.7	0.013
I prefer having higher value of properties declared when acquiring insurance	7 (8.0%)	37 (42.5%)	18 (20.7%)	11 (12.6%)	14 (16.1%)	55.0	0.00

Source: Research Data (2015)

On the various forms of adverse selection it was found out that there was rampant challenges in information disclosure since 40.2% of the teachers agreed that it is not advisable to disclose sensitive information to insurance companies when purchasing insurance, against 26.4% disagreed meaning that they would not fail to disclose important information in an insurance contract, 33.3% were however neutral. Teacher with the view of not disclosing vital information to insurance companies contributed a lot towards information asymmetry. The chi square results show a significant association between perception on information disclosure and insurance uptake.

Majority of the teachers (67.6%) agreed that they would acquire insurance policies when they expect some losses to occur in the future as opposed to 1.1% with contrary

opinion, while 17.2% who were not sure. This shows that majority of teachers would acquire insurance policy when the risk involved was obvious although they would not disclose this to the insurance company. This also signifies a high level of insurance uptake which is significantly associated with insurance uptake. Wang, Zhang, Yip and Hsiao, (2006) argued that evidence from the voluntary Rural Mutual Health Care scheme in poor rural China indicates that adverse selection can be substantial even when uptake is high which is in support to the above findings.

The findings further revealed that 44.8% of teachers would not mind paying higher premiums especially where the losses involved are obvious hoping to gain when the risk strikes, 9.1% disagreed while 46.0% were neutral. This finding is in agreement with the findings of Parkin et al (2000) who held that because of adverse selection in the insurance market, those people who know they have a greater chance of falling ill than the average, are the ones more likely to buy health insurance. Again this shows a high level of adverse selection on the side of primary school teachers for opting to purchase insurance at whatever cost to cover eminent losses without the know of the insurance company. This is an indicator of asymmetric information driving insurance uptake for teachers.

Teachers also indicated that sometimes they stayed without insurance when they perceived the cost of loss to be incurred to be lower. This view was upheld by 35.6% of the teachers who agreed as opposed to 11.4% who disagreed. The remaining 37.9% neither agreed nor disagreed. This implies that teachers who considered their risk profile to be low made little efforts to purchase insurance. This is an indicator of information asymmetry against the insurance company. Over half of the respondents 50.5% prefer having higher value of properties declared when acquiring insurance as opposed to 38.7% who would not. This is an indicator of adverse selection hoping to gain from an insurance contact which is supported by the findings of Morris, Devlin and Porklin, (2007) who argued that an individual would pay for insurance as long as the utility it yields was at least as high as the utility they would achieve if they did not buy insurance. Further analysis revealed that this significantly influenced insurance uptake among teachers in Nakuru Sub County.

4.6 Moral Hazards among primary school Teachers in Nakuru Sub County

The third and last objective of the study was meant to assess the moral hazard among primary school teachers and its relationship with insurance uptake among teachers. Moral hazard was associated with the behavior after contract as held by Rubinstein and Yaari (1983) in their study found out that an insurer cannot observe certain actions taken by the insured, actions which, however, have an effect upon the insurer's payoff.

Table 4.18: Moral Hazards

	CA	A	NAD	D	CD	χ^2	p
Whenever you insure property, there is no need of incurring lots of cost to guard it since insurance company would pay in case of any eventuality	3 (3.6%)	26 (29.9%)	1 (1.1%)	10 (11.5%)	47 (54.0%)	45.6	0.00
Whenever I'm claiming for compensation from insurance it is always advisable to fix the compensation value slightly higher	14 (16.1%)	23 (26.4%)	34 (39.1%)	4 (4.6%)	12 (13.8%)	70.8	0.00
If well schemed, insurance claims can always be profitable to the insured party	28 (32.2%)	38 (43.7%)	11 (12.6%)	0 (0.0%)	10 (11.5%)	54.1	0.00
I always ensure that I fully maximize on my medical insurance cover	6 (6.9%)	25 (28.7%)	38 (43.7%)	10 (11.5%)	8 (9.2%)	58.1	0.00
Over speeding is okay for as long as your car is well insured	1 (1.1%)	7 (8.0%)	10 (11.5%)	10 (11.5%)	59 (67.8%)	44.2	0.00

According to the findings on moral hazard 33.6% of the teachers were of the view that whenever one has insured a property, there is no need of incurring lots of cost to guard it since insurance company would pay in case of any eventuality. However, 65.5% were of a contrary opinion. This shows some level of moral hazard in the

minds of teachers with insurance policies. This was found to have a significant impact on insurance uptake among primary school teachers in Nakuru Sub County.

Further 42.5% of the teachers agreed that whenever they were claiming for compensation from insurance it was always advisable to fix the compensation value slightly higher than the actual amount of loss incurred. 39.1% were neutral while 18.2% disagreed. There was also a significant association between the perception on inflation of claims and level of insurance uptake. This implies that insurance uptake to some extent was driven by the desire to profit from inflated claims at the time of compensation. The above view was also associated with the thinking that if well schemed; insurance claims can always be profitable to the insured party upheld by 75.9% of the teachers who participated in the study.

Moral hazards was also observed in a section of teachers (35.6%) who always ensure that they fully maximize on their medical insurance cover which was compulsory in the Kenyan employment sector. 43.7% were neutral while 20.7% disagreed. The behavior of exhausting all the insurance cover in medical insurance through unnecessary claims could be attributed to moral hazard. The finding goes hand in hand with a study by Kreider (1999) who held that applicants may overstate health limitations if the disutility of working is large and benefit receipt is an attractive alternative. This finding was also significantly associated with the level of insurance uptake in Kenya. Finally majority of teachers did not approve the idea of over speeding by virtue the nature of insurance cover one had acquired since 79.3% disagreed of that over speeding was okay for as long as your car is well insured.

4.7 Hypotheses Testing

The study was guided by three hypotheses stated. These were tested by performing a regression analysis to determine the relationship between variables. The regression results are presented on Table 4.19. a, b and c

Table 4. 19 a: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.357[a]	.128	.096	.24431

a. Predictors: (Constant), Moral Hazard, awareness, Adverse selection

The model summary results on Table 4.19a estimates the variations of dependent variables emanating from the variations in independent variables. The R Square = 0.128 which means that 12.8% of the variations in insurance uptake were explained by variations in asymmetric information.

Table 4. 20 b: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.724	3	.241	4.045	.010[a]
	Residual	4.954	83	.060		
	Total	5.678	86			

a. Predictors: (Constant), Moral Hazard, awareness, Adverse selection

b. Dependent Variable: Insurance Uptake

The results of ANOVA test on Table 4.19. b: show that ($F(3, 83) = 4.045$, $p < 0.01$) which implies that the variations explained in the study were significant. This means that the regression model derived in this study is significant in explaining the insurance uptake among teachers.

Table 4. 21 c: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			VIF
		B	Std. Error	Beta	t	Sig.	
1	(Constant)	2.075	.202		10.251	.000	
	Awareness	-.331	.057	-.339	-2.293	.024	1.037
	Adverse selection	.256	.032	.299	2.758	.032	1.222
	Moral Hazard	-.118	.040	-.151	-2.454	.041	1.221

a. Dependent Variable: Insurance Uptake

The results on Table 4.19 c show coefficients of relationships between independent and dependent variables. These together with the significance levels were used to determine whether the hypotheses in this study held or not.

The first hypothesis of the study was:

H_0: There is no significant relationship between awareness and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya.

The results of regression on Table 4.19, c revealed that ($\beta = -0.331$, $p < 0.05$) which implies that there was a significant negative relationship between awareness and uptake of insurance. Therefore the study **rejected H_0 and accepted H_1.** There is a significant relationship between awareness and uptake of insurance products among primary school teachers in Nakuru Sub-County, Kenya. Majority of the teachers had the wrong information on insurance therefore reversing these would translate to insurance uptake. The finding on this hypothesis is in agreement with the work of Oino and Kuloba (2011) who argued that lack of good understanding of insurance, perceived complications in compensation and complexity of information of insurance products point out to information asymmetries and its consequences on insurance uptake.

The second hypothesis of the study was :

H_0 There is no significant relationship between moral hazard and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya.

This was tested using regression analysis as shown on the results in Table 4.19, c which revealed that (β = - 0.118, $p < 0.05$) which implies that there was a significant negative relationship between moral hazard and uptake of insurance. Therefore the study **rejected H_0 and accepted H_1.** There is a significant relationship between moral hazard and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya. Majority of the teachers were driven by moral hazard to acquire insurance policies which lead to insurance fraud. This finding is in agreement with the findings of Busch (2008) who stated that fraud and abuse of private healthcare benefits has three perpetrators; Fraud can take place when an individual patient perpetuates a fraud scheme against his or her own health plan, also called beneficiary fraud when the treatment providers and medical equipment vendors act on their own by using to their advantage a benefits plan, also known as provider fraud, and when there is collusion between the providers and patients, which essentially is a combination of provider and beneficiary fraud, but which opens the door to whole new sets of possible schemes to defraud the insurer.

The third objective of the study was:

H_0 There is no significant relationship between adverse selection and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya

The results of regression analysis testing this hypothesis revealed that (β =- 0.256, $p < 0.05$) which shows that the level of insurance uptake tended to be higher for people with higher levels of risks as compared to those with lower risks. This implies that adverse selection significantly influenced insurance uptake therefore the study **rejected H_0 and accepted H_1.** There is a significant relationship between adverse selection and uptake of insurance products among public primary school teachers in Nakuru Sub-County, Kenya. This finding concur with the finding of Godfried (2001) who studied the dental insurance demand in Holland, which was included in the standard medical insurance package in 1995 and came up with the conclusion that the agents with a large inclination toward risk tend to buy a supplementary dental insurance.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMEDATIONS

5.1 Introduction

This chapter presents a summary of the key research findings, conclusions and recommendations drawn from the findings and discussion of the study.

5.2 Summary of Findings

The summary is drawn based on the objectives of the study.

5.2.1 Insurance Uptake

The findings on insurance uptake revealed that 73.56% of the teachers have purchased insurance cover before besides the mandatory NHIF. Further, of those who had acquired insurance before 89.1% did so voluntarily. However, majority of teachers who acquired insurance before would not want to have insurance in the future although they would advice others to have it. Majority also appreciate the benefits accrued from insurance. Majority of those who had insurance also owned cars thus ownership of motor vehicles was closely associated with insurance uptake. The most common insurance policies purchased by primary school teachers were education policy for their children, life insurance, medical insurance cover and motor insurance respectively. Property and business insurance were less common. The prospects for medical insurance cover were promising in the future followed by life insurance cover, personal accident insurance and education policies and fire insurance. The main reasons cited for failure to purchase insurance covers were that it was expensive, they overheard negative talks on insurance, no good understanding of insurance, lack of information about insurance products available and that they do not trust insurance companies.

5.2.2 Insurance Awareness

Concerning the level of awareness on insurance among teachers in Nakuru Sub County, the most familiar insurance policy among teachers was the education insurance policy followed by life insurance, motor vehicle insurance, medical insurance cover and personal accident insurance cover. Insurance agents were cited as the most common source of insurance information followed by friends and colleagues at work. The media was also active in insurance information dissemination

particularly the social media, radio and TV and news papers. The most reliable source cited was the news papers followed by colleagues at the work place, mass media such as TVs and Radio as well as direct updates from insurance companies. A high proportion of teachers were not aware whether insurance was cheap or not. Some held the wrong perception that insurance was expensive. There was a strong perception that insurance was characterized by delays in compensation which was not the case for all insurance covers. There was also a widely held view that insurance agents were not trustworthy. A high proportion of teachers were not aware of the existence of physical offices of insurance companies and their locations. Majority of the teachers were not aware of whether the insurance products in place met their needs or not. This implies that there were information gaps on the existing insurance products among teachers which significantly affected their insurance.

5.2.3 Adverse Selection

On the various forms of adverse selection it was found out that there were rampant challenges in information disclosure since a number of the teachers agreed that it was not advisable to disclose sensitive information to insurance companies when purchasing insurance. Teacher with the view of not disclosing vital information to insurance companies contributed a lot towards information asymmetry. Majority of the teachers agreed that they would acquire insurance policies when they expect some losses to occur in the future. Teachers would not mind paying higher premiums especially where the losses involved are obvious hoping to gain when the risk strikes. Teachers also indicated that sometimes they stayed without insurance when they perceived the cost of loss to be incurred to be lower.

5.2.4 Moral Hazard

According to the findings on moral hazard a number of teachers were of the view that there is no need of incurring lots of cost to guard insured property since they would be compensated in case of any eventuality. In addition, 42.5% of the teachers agreed that whenever they were claiming for compensation from insurance it was always advisable to fix the compensation value slightly higher than the actual amount of loss incurred. The view that insurance claims can always be profitable to the insured party was upheld by 75.9% of the teachers who participated in the study. Moral hazards was

also observed in a section of teachers (35.6%) who always ensured that they fully utilized their medical insurance cover.

5.3 Conclusions

From the research, it came out that; the level of awareness on insurance among teachers was low in that majority of them held the wrong information which also influenced their perception on insurance. The level of awareness on insurance significantly influenced its uptake therefore wrong information translated to low insurance uptake.

The level of adverse selection on insurance was high among the teachers of Nakuru sub County as majority believed that it was not right to disclose all information in an insurance contract. Further, majority were driven by the high risk levels to purchase insurance. Adverse selection significantly influenced insurance uptake.

Moral hazard was also high among teachers who believed in profiting from an insurance claims. As a result, most insurance claims were inflated. Most insured parties were also keen on utilizing their insurance cover therefore driven by moral hazard. Moral hazards therefore was a key driver to insurance uptake among teachers.

The study also concluded that the level of asymmetric information in the Kenyan insurance industry was high emanating from either parties to the insurance contract. Insurance companies did not disclose correct information at the time of contracting therefore most insured parties would understand the terms well while already in contract thus majority were not willing to enter onto insurance contracts again.

5.4 Recommendations

The insurance regulatory authority together with other players in the insurance industry should come up with more robust and reliable mechanisms for disseminating correct insurance information to the public. This would ensure that people make the right choices on insurance, thus enhance insurance uptake.

The government should also enact a regulation to allow insurance companies access critical information about customers before entering into an insurance contract. A platform similar to the credit referencing bureau would allow insurance companies address fraud associated with adverse selection.

Insurance companies should invest more on actuarial science to enhance their capacity to detect fraud in insurance claims as well take legal action on persons launching fraudulent insurance claims. By putting insurance industry straight in line with the principle of utmost good faith, there will be more trust in the industry that will enhance insurance uptake.

5.5 Recommendations for Further Research

There is need to conduct further study to determine the other factors other than information asymmetry that are responsible for insurance uptake in other industries in Kenya since the form a significant proportion.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

Charles Okeyo Owuor,
P.O. Box, 15142-20100,

Nakuru.

Date: 16th September, 2015.

RE: RESEARCH

I am a student at Kabarak University, Nakuru. I would wish to request you to provide me with the information as asked by this questionnaire to enable me carry out a research titled

Assessing the Relationship between Awareness, Information Asymmetry and Uptake of Insurance Products among Primary School Teachers in Nakuru Sub-county Kenya

Any clarifications or additional information required can be obtained from the University or through the contact address provided.

Your assistance will be highly appreciated.

Thank you in advance.

Yours Faithfully

CHARLES OKEYO OWUOR

APPEDIX II: QUESTIONNAIRE
Part A:

Demographic Information

Name…….

1. Indicate your gender.

Male [ ] Female [ ]

2. What is your Age? …….

3. Kindly indicate your highest academic qualification

Diploma	[ ]	Bachelors Degree	[ ]
Masters Degree	[ ]	Any other (please specify)	[ ]

4. Which of the following best describes your income level?

Below Ksh 25,000	[ ]	25,000 – 35,000	[ ]
35,000- 45,000	[ ]	Above 45,000	[ ]

5. For how long have you been in formal employment?.....

6. Indicate your marital status.

Single	[ ]
Married	[ ]
Divorced/ separated	[ ]

Part B:

Insurance Uptake

7. The following set of questions relate to your perception on life insurance. *Choose by ticking [√] to indicate your opinion/response.*

		Yes	**No**
a.	Have you ever been insured?	[ ]	[ ]
b.	Have you ever purchased an insurance cover voluntarily?	[ ]	[ ]
c.	Would you wish to have an insurance cover in future? If Yes, why……...	[ ]	[ ]
d.	Would you advice a friend to purchase an insurance cover? If Yes, why……	[ ]	[ ]
e	Are insurance policies beneficial to the policy holder?	[ ]	[ ]

8. Do you own a car? Yes/No…..

9. Do your own your permanent asset (e,g house)? Yes/ No…

10. Which of these insurance covers have you ever purchased?

Life insurance	[ ]
Education insurance	[ ]
Motor insurance	[ ]
Fire Insurance	[ ]
Medical Insurance	[ ]
Personal Accident insurance	[ ]
Others (specify) …….	

11. Which insurance policies do you intend to purchase in future (can tick more than one)

Life insurance	[ ]
Education insurance	[ ]
Motor insurance	[ ]
Fire Insurance	[ ]
Medical Insurance	[ ]
Personal Accident insurance	[ ]
Others (specify) …….	

12. Why should one get covered by insurance? Indicate by ticking against the following statements.

Reason	**Tick as appropriate (you can choose more than one)**
Have never heard about insurance	
Have heard my colleagues/other people talk negatively about insurance	
There are no insurance policies that meet my needs	
Insurance is expensive	
I do not know the insurance products available	
I do not have a good understanding of insurance	
Compensation is complicated	
It is against my beliefs	
Insurance companies do not give compensation.	

Part C:

Awareness on Insurance

13. The following are insurance policies, which ones are you familiar with?

Life insurance	[ ]
Education insurance	[ ]
Motor insurance	[ ]
Fire Insurance	[ ]
Medical Insurance	[ ]
Personal Accident insurance	[ ]
Others (specify) …….	

14. What has been your main source of information about life insurance?

From friends or relatives	[ ]
From colleagues at the work place	[ ]
From TVs and Radio	[ ]
From Newspapers and Magazines	[ ]
From the insurance company's agents	[ ]
I get regular updates from insurance companies	[ ]
Any other	[ ]

15. How would you rate the information you obtained from source above. Tick As Appropriate.

	Very Reliable	**Reliable**	**Moderate**	**Unreliable**	**Very Unreliable**
From friends or relatives					
From colleagues at the work place					
From TVs and Radio					
From Newspapers and Magazines					
From the insurance company's agents					
I get regular updates from insurance companies					

16. On a scale of 1 to 5 where 1 represents “completely disagree” and 5 represents "completely agree," to what extent do you agree with the following statements? *Tick As Appropriate.*

	Completely Agree (5)	**Agree (4)**	**Neither Agree nor disagree (3)**	**Disagree (2)**	**Completely disagree (1)**
a. Insurance is cheap					
b. Insurance is easy to understand					
c. There are delays in compensation					
d. Insurance agents are Not trustworthy					
e. Insurance companies’ offices are not accessible					
f. There is office in which insurance complaints can be launched					
g. The insurance products available do not meet my needs					
h. Information on insurance policies is simplified for easy understanding					

Part D:

Adverse selection

17. On a scale of 1 to 5 where 1 represents “completely disagree” and 5 represents "completely agree," to what extent do you agree with the following statements? *Tick As Appropriate.*

	Adverse selection	**5**	**4**	**3**	**2**	**1**
a.	It is not advisable to disclose sensitive information to insurance companies when purchasing insurance					
b.	I acquire insurance policies when i expect some losses to occur in the future					
c.	I don’t mind paying higher premiums especially where the losses involved are obvious					
d.	Sometimes I stay without insurance when I perceive the cost of loss to be incurred to be lower					
e.	I always acquire insurance for activities where risk involved is high					
f.	I prefer having higher value of properties declared when acquiring insurance					

Part E:

Moral Hazards

18. On a scale of 1 to 5 where 1 represents “completely disagree” and 5 represents "completely agree," to what extent do you agree with the following statements? *Tick As Appropriate.*

	Moral Hazards	**5**	**4**	**3**	**2**	**1**
a.	Whenever you insure property, there is no need of incurring lots of cost to guard it since insurance company would pay in case of any eventuality					
b.	Whenever I’m claiming for compensation from insurance it is always advisable to fix the compensation value slightly higher					
c.	If well schemed, insurance claims can always be profitable to the insured party					
d.	I always ensure that I fully maximize on my medical insurance cover					
e.	Over speeding is okay for as long as your car is well insured					

Thank You

APPENDIX III: LIST OF SCHOOLS IN NAKURU SUB-COUNTY

NO.	LIST OF PRIMARY SCHOOLS IN NAKURU SUB COUNTY
1.	BAHARINI
2.	ST. THERESA'S
3.	BONDENI
4.	ST. MARY'S
5.	ST. PAUL'S
6.	ST. XAVIERS
7.	JAMHURI
8.	MOI
9.	KENYATTA
10.	LANET
11.	HYRAX
12.	KISULISULI
13.	LENANA
14.	MADARAKA
15.	CRATER PRIMARY
16.	NAKURU PRIMARY
17.	NAKURU EAST
18.	MENENGAI
19.	KARIBA ROAD
20.	KALOLENI
21.	LIONHILL
22.	NAIROBI ROAD
23.	ST. JOHNS
24.	NAKURU TEACHERS
25.	NDIMU
26.	NAKA
27.	RHINO
28.	ST. JOSEPHS
29.	HARAMBEE KHALSA
30.	MAMA NGINA
31.	KIMATHI
32.	FLAMINGO
33.	UHURU
34.	LANGALANGA
35.	KAPTEMBWA
36.	MLIMANI

37.	HESHIMA
38.	KOINANGE
39.	MWARIKI
40.	FREEHOLD
41.	PANGANI
42.	MUSLIM
43.	PRISONS
44.	BARUT
45.	MOGOON
46.	KELELWET
47.	KIGONOR
48.	NAKURU WEST
49.	LAKE VIEW
50.	UMOJA
51.	RACETRACK
52.	KIBOWEN KOMEN
53.	INGOBOR
54.	EILEEN NGOCHOCH
55.	PARKVIEW
56.	KIPTENDEN
57.	MBURU GICHUA
58.	MIRUGI KARIUKI
59.	NGALA SPECIAL

APPENDIX IV: UNIVERSITY INTRODUCTION LETTER

SCHOOL OF BUSINESS & ECONOMICS

P.O. Private Bag, 20157
Kabarak, KENYA
Email: kkibet@kabarak.ac.ke

Tel: 020-2035181
Fax: 254-51-343529/343012
www.kabarak.ac.ke

10th November, 2015

To Whom It May Concern:

Dear Sir/Madam,

RE: CHARLES OKEYO OWUOR – GMB/NE/0857/09/14

This is to confirm that the above named is a bonafide student of Kabarak University pursuing a Master of Business Administration (Finance Option).

Charles has completed his coursework and currently carrying out a study on "***Assessing the Relationship between Awareness, Information asymmetry and Uptake of Insurance Products among Primary School Teachers in Nakuru Sub-county Kenya.***"

Your assistance will be highly appreciated.

Thank you.

Yours faithfully,

KABARAK UNIVERSITY
DEAN,
BUSINESS SCHOOL
10 NOV 2015
PRIVATE BAG 20157, KABARAK

KIBET KIRUI
MBA COORDINATOR

Kabarak University Moral Code
As members of Kabarak University family, we purpose at all times and all places, to set apart in one's heart, Jesus as Lord.
(1 Peter 3:15)

APPENDIX V: RESEARCH AUTHORIZATION LETTER

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

Telegrams: "LEARNING"
Telephone: 2216529/2216563
When replying please quote

SUB COUNTY EDUCATION OFFICE
NAKURU SUB COUNTY
P.O. BOX 1028
NAKURU

REF: NKU/ED/18 (179)

11th November , 2015

ALL HEADTEACHERS
PUBLIC PRIMARY SCHOOLS
NAKURU SUB COUNTY

RE: RESEARCH AUTHORISATION –
CHARLES OKEYO OWUOR - GMB/NE/0857/09/14

The above named post graduate student has been authorized to conduct research on "**Assessing the Relationship between Awareness, Information asymmetry and Uptake of Insurance Products among Primary School Teachers in Nakuru Sub County Kenya"** for a period ending **30th March 2016.**

Kindly accord him the necessary assistance he may require.

For: DISTRICT EDUCATION OFFICER
NAKURU DISTRICT

Willy R. Kariuki
FOR: Sub County Director of Education
NAKURU SUB COUNTY

C.C.

- School of Business & Economics - Kabarak University