

**PREVALENCE AND CORRELATES OF STRESS AMONG  
TEACHERS IN MIXED DAY PUBLIC PRIMARY SCHOOLS IN  
NAIROBI COUNTY**

**DESERTATION IN PARTIAL FULFILMENT FOR**

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## **DEDICATION**

This dissertation is a special dedication to my late parents; Mr. Herman Karuga and Mrs. Hellen Karuga for the enabling foundation they created to help me achieve my academic dreams through financial and emotional support.

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## Abbreviations

ACTH	- AdrenocortiotropicHormone
CEO	- County Education Officers
FPE	-Free Primary Education
HPA	- Hypothalamic – pituitary – adrenal axis
HSE	- Health and Safety Executive
ILO	- International Labor Organization
JAMA	- Journal of American Medical Association
KENPRO	- Kenya Projects of Organization
KNH	- Kenyatta National Hospital
MDGs	- Millennium Development Goals
SPSS	- Statistical Package for Social Sciences
TSC	- Teachers Service Commission
TSI	- Teachers Stress Inventory
UK	- United Kingdom
UNESCO	- United Nations Educational, Scientific and Cultural Organization
WHO	- World Health Organization

## **ABSTRACT**

Primary school teachers' role acts as the basis for academic success or failure, physical and emotional stability, cultural and social values enhancement for the young school going children. Government expenditure on their salaries in both developed and developing countries accounts for between half to three quarter current education expenditure with some African countries accounting as high as 90%, (World Bank 2003). Research on occupational stress rated teaching occupation as the second most stressful job out of the 26 occupations that were analyzed, *Journal of Managerial Psychology*, (2005). Kyriacou *et al.*, (1987).

**General Objective:** To assess the prevalence of stress and its levels among teachers in mixed day public primary schools in Nairobi County.

**Specific Objectives:** Determine levels of stress among teachers in mixed day public primary schools in Nairobi County.

To correlate socio - demographic factors such as age, gender, marital status among others with teacher stress in mixed day public primary schools in Nairobi County.

**Design:** This was a descriptive cross sectional study.

**Study Setting:** The study was conducted in selected day mixed public primary schools in Nairobi

**Method:** A systemic random sample of (n=267) teachers was selected and interviewed using Teacher Stress Inventory (TSI) and a structured demographic questionnaire.

Data was collected, coded and entered into statistical package for social sciences version 20 (SPSS 20). Prevalence rates of stress levels across all the factors were presented using mean scores and percentages. A beta regression was used in investigating factors that were potentially related with stress levels and significance level was set at 5%.

## Results

The overall prevalence of stress among the study respondents was 67% with mean score of 3.36 as measured by Teachers Stress Inventory (TSI - 1988). All the respondents reported above 53.9% stress scores. Among the 7 subscales perceived to be the sources of stress by the participants, all the respondents with a mean score of 3.8 in lack of supervisory support subscale were 76 % while poor organizational management subscale had 75% of respondents with a mean stress score of 3.73. The two subscales were perceived to be the major sources of stress. Lack of life satisfaction was found to be the least source of perceived stress with 60% of the respondents having a mean score of 3.01. In relation to gender, females were found to be more likely to be stressed at work place than males. Untrained teachers were also found to be likely to be stressed than those with other academic certificates. Respondents with few years to retirement were reported to be more likely to be stressed than those with more years to retirement.

**Conclusion:** Significant prevalence of stress among respondents was identified. Managerial /administrative subscales were the greatest sources of perceived stress. The study also established a serious shortage of teachers in the mentioned schools.

**Implication:** It is hoped that the study outcome will be useful to policy makers in providing interventions in the managerial/administrative subscales that were mentioned by the respondents as the major sources of stress at work place.

## Chapter 1: Introduction

### 1.0. Background information

Work place has continued to be a source of stress to many employees due to continued changes with globalization of the world economy, economic rationalization, job restructuring and greater workload demands. Advanced technology, globalization and educational changes have lead to changes in teachers' role in that today's role of a teacher is to mentor and coach, help pupils develop their own motivation and search for knowledge unlike there before when a teacher's role was to transmit knowledge and information to pupils, Daun, (2004). Teacher stress is characterized by unpleasant negative emotions, frustrations, anxiety, depression and nervousness as result of teaching as an occupation, (Kyriacou, 2000). There has been great research interest in relation to teacher stress and many countries have attempted to re- focus their attention to this relevant area, (Kyriacou, 2001; Troman and Woods 2001; Vandenberghe and Huberman 1999).

By introducing the FPE in 2003, the Kenya government was accomplishing the second Millennium Development Goals out of the eight MDGs to be achieved by 2015. The number of school going children rose from 5 million to 7.2 million by May 2003 and further increased to 8 million by May 2009, World Bank Report, (2009). The schools lacked adequate facilities to handle the influx in relation to teachers, physical classroom space and learning resources, Mukundi, (2004). This scenario resulted to considerable physical and emotional challenges among the teachers and in most times they are unable to give pupils adequate attention due to the added workload, UNESCO, (2005). This has been an additional source of stress among many other stressors that teachers experience in line of duty such as role ambiguity, interpersonal relationships challenges between pupils, parents/guardians, colleagues, low salaries and lack of structured personal career development or promotions, lack of public appreciation of their work, ( KENPRO 2012, Mukundi, 2004, Paula, 2008, Chan, 2002, *International Journal of current Research, Vol. 33, Issue 4 pp. 190 -193, April 2011*). Research has correlated greater workload demands with physical and psychological stress and this has been reported to be a recipe for stressful experiences among service providers such as teachers, Kyriacou, (2000). These teachers have to keep up with the high work demands in order to safe guard their job security. Prolonged stress is known to cause mental and physical disabilities and worse still, this kind of stress has been found to be a silent killer, (Ursin *et al.*,

1991, *International Recognized Multidisciplinary Research Journal*, ISSN No: 2230-7850). There is need therefore to assess prevalence of stress among this group of service providers who spend more than 80% of their time with children who in turn look upon them as their role models. With increased research interest on the same worldwide, there is need to ascertain the magnitude and levels of stress among teachers in mixed day public primary schools in Nairobi County and depending on findings, roll out the same country wide. This is because there are few studies reported to date that have assessed stress among the said teachers especially in Nairobi County. Researcher will seek to determine the stress levels among teachers in mixed day public primary schools and the correlation between demographic factors and teacher stress.

### **1.1. Background**

Stress occurs as a result of inability to adjust to situations appropriately. It's a subjective experience which can be positive/pleasant (eustress) or negative/unpleasant (distress) due to external forces or pressures of life, (Kendi, 2005 in Melgosa, 2004; Willis 2005). For Lazarus & Folkman, 1984; Taylor, 1991, stress is that experience that occurs when an individual is faced with unpleasant situations that threatens to interfere with his/her physical or psychological functioning. Hans Selye, who developed the stress concept, defined stress as a nonspecific response of the body to any demand made upon it, regardless of painful or pleasurable experiences, *American Scientist*, Vol 61(6), Nov 1973, 692-699. However, there have been different definitions of stress among many researchers because of its subjective nature. Selye (1983) concurred with this fact by stating that stress as a concept suffers 'from the mixed blessing of being too well known and too little understood.' Stress is commonly used in daily social interactions in describing an individual's negative emotional state/experiences but rarely used in eustress experiences.

Occupational stress has received great attention in research worldwide. Like many other professionals, teachers experience stress and its one of the occupations that reports highest levels of stress, Johnson, *et al.*, (2005).

This phenomenon has been identified in previous research as a source of poor teaching performances, burnouts and increased pupils' misbehavior, Jennings *et al.*, (2009).

International literature review has shown the association of stress and teaching occupation which is now a world phenomenon, (Brown, Howcrofs and Jacobs, 2010, Chaplain, 2008, O'Neill and Chapman, 2011 and others).

By introducing Free Primary Education (2003) in Kenya, teachers' workload increased which resulted to physical and emotional stressful experiences among teachers. This was an additional source of stress considering that today's teachers' role is not only impacting knowledge but it also involves guidance and counseling, modeling, mentoring as well as settling interpersonal relationships challenges between pupils, parents, fellow colleagues, dealing with pupils' behavior and at times handling administrative issues. This role ambiguity among teachers causes stress. Research that has focused on occupational health among teachers has dealt widely on burnout, depression and job satisfaction, Louw, D.A., George, E & Esterhuyse, K. (2011). More so, research in a Kenyan context focused on the very same areas, Caroline, A; Moses, W. (2011) and few have focused on stress prevalence alone among teachers in mixed day public primary schools in Nairobi County.

### **1.1.2. Public Primary Schools in Nairobi County**

Mixed day Public primary schools in Nairobi County are under the County Education department administratively which is under the Ministry of Education and there are 191 in total. The schools are unevenly distributed within the county and the number of teachers in each school also varies. According to available data from Nairobi county education office, there are 3425 female teachers and 678 male teachers in the mixed day public primary schools in Nairobi County. Most of these schools are located in low and middle social class areas with very few in upper markets.

In Kenya, primary school is the lowest level in academic fraternity where children at a tender age of 3 years are enrolled to start their school life. This is an important time in life of a child because it involves various developmental stages where character formation takes place. According to Eric Erickson, (1983), personality develops through confronting a series of eight major psychosocial stages. Each stage involves a different crisis or conflict over how human view themselves in ambivalent and disorganized disorientation. After the basic trust versus basic mistrust stage (0 – 1 year) where the baby may develop trust or mistrust of the care giver depending on care provided, the baby moves to autonomy versus doubt, (2 – 3 years) stage where the child aspires to achieve personal control in relation to physical skills and a sense of independence. The child develops self-sufficiency by controlling activities such as eating, toilet training and talking. Success creates an ideal basis for the initiative versus guilt stage, (3 - 5 years). However, when this is not successfully achieved, a child may experience shame and doubt. This is the first stage in which the teacher comes into contact with a child as he/she starts school life. At this developmental stage, the child aspires to explore his/her environment and he/she wants to assert control and power. He/she

develops great curiosity about the world. If allowed freedom to explore and receive answers to his/her questions from caregiver, parents or teachers, an ideal environment is created for industry versus inferiority stage (5 – 11 years). This acts as the chief source of self esteem in children's view of their productive competence. Children who are encouraged and commended by parents and teachers develop a feeling of competence and belief in their skills potentials. Those who receive little or no encouragement from parents, teachers, or peers will doubt their abilities to be successful. The last stage in which a pupil interacts with teachers is that of identity versus role confusion. This is the transition period from childhood to early adulthood and the individual at this stage becomes more independent. It's a busy period where he/she is involved in identifying a career, forming intimacy for future relationship among many other activities. It's a period characterized by explorations of possibilities and this forms a basis for forming their own identity based upon the outcome of their explorations. Failure to understand him/herself results to confusion. The adolescent gets confused about his/her role in the world. Research has shown that early childhood development has a role in adulthood. Positive adulthood individual level determinants such as appropriate life skills and life competencies have protective measures in mental health. Considering all the developmental changes that the children undergo, under the watchful eye of the teacher, there is need for primary school teachers to be emotionally and physically stable in order to create a conducive environment for effective transitions in these different childhood developmental stages. Great understanding of these stages/experiences is of essence among the primary school teachers in order to facilitate appropriate transitions and avoid fixation in one stage or another among the growing children which in turn may affect their personalities later in adulthood.

## 1.2. Statement of the problem

Stress is commonly expressed as a negative emotional experience within social interactions and rarely is eustress expressed as a kind of stress. Though being often expressed as a negative experience, moderate stress has been associated with higher performances at place of work. Stress is not a disease as such but prolonged stress has been found to be pathological and can result to mental and physical disabilities or worse still, death. Occupational stress has been a great challenge to most service providers and teaching occupation has been rated as a stressful occupation with 41.5% of teachers in UK reporting to be highly stressed, Health Safety Executive, UK, (2000). National Union of teachers, UK (2010) found 81.2 % of teachers reporting to have experienced stress, anxiety or depression at workplace.

In the African context, Nigeria and Kenya (Kajiado) reported significant teacher stress prevalence at 38.2% and 33% respectively (Arikewuyo, 2004, KENPRO, 2012). The main cause factors reported in the said studies were public's attitude and misunderstanding about teachers' workload, high number of pupils in class. Pupils' poor attitudes towards classroom tasks and pupils' misbehavior have also been reported to be factors that contribute to teachers' stress.

In Kenya, most research on teacher mental wellness has focused on burnouts, job satisfaction and depression with few focusing on stress and yet prolonged stress acts as the basis for serious mental disorder, (Kendi, 2005 in Megosa, 2004, Willis, 2005, Kenya Projects Organization, (2012), *International Journal of Current Research, Vol. 33, Issue, 4, pp.190-193, April, 2011*). Among many other occupational stressors that affect teachers, the introduction of FPE in Kenya (2003) was an added burden to teachers that caused more workload thus increasing stressful experiences among the said professionals, Oketch *et al.*, (2010). It will therefore be important to find out the prevalence of stress among teachers in mixed day public primary school in Nairobi city having in mind the other psychosocial challenges that come with big city life like Nairobi among service providers.



### **1.3. Research Questions**

- What is the prevalence of stress among teachers in mixed day public primary schools in Nairobi County?
- Is there a correlation between teacher stress and socio - demographic factors among teachers in mixed day public primary schools in Nairobi County?

### **1.4. Objectives/Aims**

#### **1.4.1. Broad Objectives**

- To assess the prevalence of stress and its levels among teachers in mixed day public primary schools in Nairobi County.

#### **1.4.2. Specific objectives**

- To determine levels of stress among teachers in mixed day public primary schools in Nairobi County.
- To correlate socio - demographic factors such as age, gender, marital status among others with teacher stress in mixed day public primary schools in Nairobi County.

## 1.5. Significance and Justification of the study

“The end result of teacher stress is that many talented men and women with high expectations of achievement are dispirited and disillusioned. Some leave the profession while others stay but are plagued by a multitude of physical, emotional and behavioral stress related manifestations,” observed by Milstein and Golaszewski, (1985). In Kenya and in many other developing countries, teaching occupation suffers from role ambiguity, interpersonal relationships challenges between pupils, parents/guardians, colleagues, low salaries and lack of structured personal career development or promotions as well as lack of public appreciation of teachers’ work among many other occupational challenges which are often sources of teacher stress, ( KENPRO 2012, Mukundi, 2004, Paula, 2008, Chan, 2002, *International Journal of current Research, Vol. 33, Issue 4 pp. 190 -193, April 2011*).

Teaching occupation was rated as the second most stressful job out of the 26 occupations that were analyzed, *Journal of Managerial Psychology*, (2005). Kyriacou *et al.*, (1987) emphasized the need for further research on teacher stress and noted it as major area of international research interest. Research has correlated teacher stress with poor attainment of educational objectives and quality of education in general (Black, 2003; Weidner, 2002). A study in Butere, Kenya reported on how public schools’ resources were greatly affected by the influx which in turn has lead to low levels of schools’ performance, *International Regional Information Network*, (2003). Previous research indicate that being overworked often result to frustrations, stress and burnout whereby persistent stress is known to lead to serious mental illnesses/ disorders such as adjustment disorders, major depression among other related mental illnesses. There is scanty information on teacher stress among teachers in public primary schools especially in Nairobi County which has other unique psychosocial challenges being a capital city.

This study will aim at assessing the prevalence of stress and its levels among teachers in mixed day primary public school as well as the relationship between socio – demographic factors and teacher stress. The researcher hopes that the information generated from the study will aid in formulation of some helpful programs which will prevent psychopathology among teachers as well as generate useful data to aid policy makers. It’s important to realize that Kenya government spends a substantial amount of money on teachers’ salaries among other investments and hence the need for effective service delivery by emotionally healthy teachers.

## Chapter 2: Literature Review

### 2.0. Introduction

This chapter presents a review of available literature that is relevant to this study. The review will constantly focus on stress and its concepts, levels of stress among teachers in mixed day public primary schools and the correlation between stress and social demographic profiles.

In related theories, stressors and stress relationships are classified into two: approaches to 'systemic stress' based in physiology and psychobiology, Selye., *et al* (1976) and approaches to 'psychological stress' that are based on cognitive psychology, (Lazarus 1966, 1991, Lazarus and Folkman 1984, McGrath 1982). Hans Selye (1907 – 1982), a Hungarian born scientist developed the concept of General Adaptation Syndrome, GAS (stress syndrome). The researcher experimented on animals where he could apply stimulus events such as heat, extreme cold, toxic agents and then observe. Through application of a specific stimulus intensively for a long period, each stimulus produced its specific effect. For example, exposure to extreme heat responded with vasodilatation while cold exposure resulted to vasoconstriction in an organism, Selye (1976, p. 64). This is what Selye termed as the systemic stress. Stressors of any kind which rise above a certain threshold in an organism activates the stress system which in turn coordinates the generalized stress response, *Journal of American Medical Association* (JAMA), 1992 Jul 8;268(2):200. Basically, this means that once an organism is faced with stress, the body activates the autonomic nervous system and the hypothalamic pituitary – adrenal (HPA) axis. The normal stress hormone is therefore important and necessary for the survival of an organism in threatening situations. Arousal of the stress system results to behavioral and peripheral changes which are necessary for the organism to adjust to homeostasis and thus increase its chances for survival. In such scenarios, the “fight or flight” outcome represents the behavioral and physiological response to the threatening situation. In his book, ‘ Why Zebras Don’t Get Ulcers’, Robert Sapolsky (2004) observed that zebras don’t get ulcers because they don’t worry unlike human beings who experience prolonged periods of elevated activities of the same system. The prolonged elevations could be due to various factors such as anxiety, adverse environments exposures,

e.g. pollution, interpersonal conflicts, noise or to changes in life style and health related behaviors that result from various chronic stresses, Sapolsky (2004).

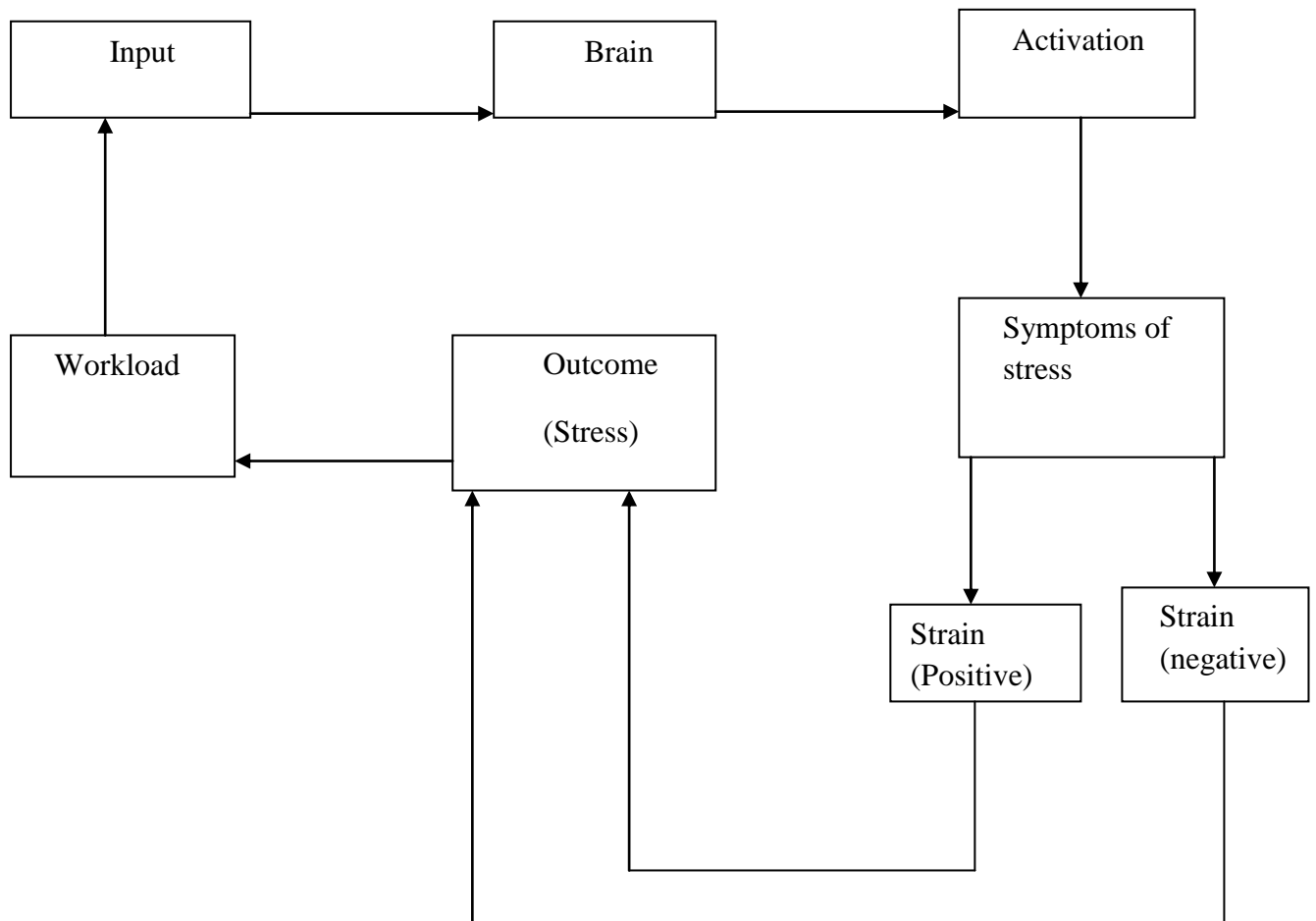
For Lazarus, (1991), stress occurs due to relationships between individuals and their surroundings unlike Selye, who describes stress as a non specific kind of external stimulation, neither a specific pattern of physiological, behavioral nor subjective reactions. Palmer and Hyman (1993) saw stress from a more positive point of view by stating that stress can be a basis for outstanding success. While under pressure, some people have been found to achieve outstanding success and therefore stress is not always a negative fact, Krüger, (1993). Furthermore, minimal level of stress has been noted to cause immobility and unproductiveness while positive stress (eustress) motivates, excites, increases creativity and success, Nydegger, (2002), Griffin, (1990), Schermerhorn *et al.*, (2000); Newstrom *et al.*, (1997). Steer (1981), correlates moderate level of stress with a higher performance at work place which can be a motivating effect so long as an individual's comprehension of roles is positive, (Little, Simmons and Nelson, 2007).

#### **2.1.0. Theoretical Framework (Levine and Ursin, (1991).**

The Cognitive Activation Theory of Stress describes stress in various states which include stress stimuli, stress experience, general stress response and experience of stress. The theory describes stress in human as subjective negative stimuli to an experience. It's also defined as a general non-specific increase in arousal and it helps in understanding the stress reaction chain in people. The nature of primary school teachers' tasks subject them to variety of work load and depending on the nature and weight of the work, the brain registers, interprets and evaluates the load causing the body to react accordingly. If the work is manageable (positive), the body retains normalcy but if the work is beyond the scope of the particular teacher, the body reacts negatively, triggering stress.

## The flow of stress

### Cognitive Activation Theory of Stress - Flow of Stimuli



**Figure 1.1**

#### • Input

It acts as the source of stress which can be the work load, pupils' behaviors, interpersonal relationships with fellow teachers, parents, support staff among many others, inadequate salary and other personal responsibilities that the teacher is expected to fulfill like that of family matters as well as a professional. An individual's appraisal of the situation from the input level will be based on whether a stimulus is pleasant or threatening, Levine *et al.*, (1991). This will also depend on brain interpretation of the situation.

## The Brain

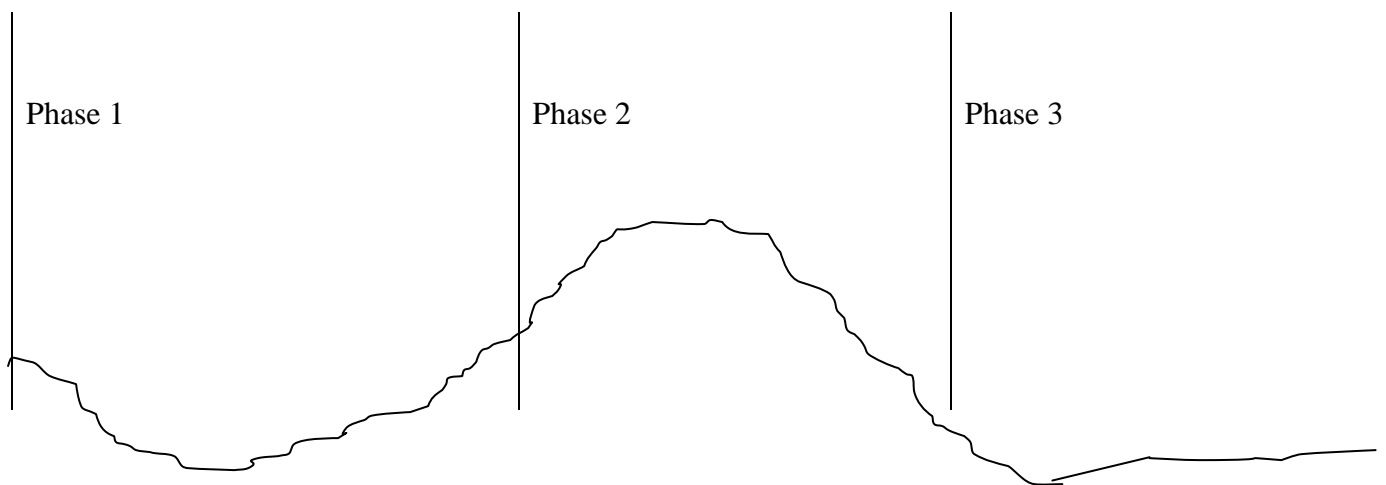
The brain evaluates stimuli and decides whether it's pleasant or threatening. According to Levine *et al.*, (1991), psychological/emotional loads“ are the most frequently reported stress stimuli.” When a particular stimulus is perceived as threatening by an individual, this information is registered as stress unlike in animals which are restricted in registering this information such as, ““ this is something they want to avoid”.

### 2.1.1. Conceptual framework of stress

Researcher reviewed Jenkins’ Model of stress Reaction in order to understand further the theoretical foundations of stress.

#### Jenkins’ Model of Stress Reaction

The model focuses on the three phases of the stress reaction as indicated in figure 2.1.



**Figure 2.1**

#### **Alarm reaction**

Controlled by sympathetic branch of the autonomic nervous system.

It Involves

#### **Resistance**

Involves the hypothalamic-pituitary-adrenocortical (HPA) system:

#### **Exhaustion**

Brings about signs of physical wear and tear

- Immuno -

- Secretion of catecholamines
- increased blood pressure
- enhanced muscle tension
- raised blood sugar

and the body reacts with

“fight-or-flight” response

- $\beta$  endorphin - relieves pain
- ACTH - results in release of cortisol to release energy stores and fight inflammation

- suppression
- Impaired cardiac function

## 2.2. Stress among teachers

Tsutsumi *et al.*, 2009, defined occupational stress as stress at work which is as a result of discrepancies between the demands of the workplace and that of the specific individual. According to World Health Organization (WHO) and International Labor Organization (ILO), “occupational health means the science and the art of providing employees with the highest rate of health, maintaining this high quality and enhancing the health of work force, while maintaining this capital by providing a safe workplace, choice of appropriate workers for different positions, matching work condition with workers psychological and physical condition, accident preventions and occupational disease, training personal hygiene and work related issues, precocious diagnosis and treatment of diseases, paying attention to employees problems and issues and their relatives to help every individual worker to benefit from utmost health”.

People work for financial gain and /or for their own individual satisfaction. Work and family are the two main domains from which most adults derive satisfaction in life; however, these are the very common sources of stressful experiences, Chaplain, R. (1995). Teacher stress is characterized by experiences of unpleasant emotions, frustration, anxiety, anger and depression as result of the nature of the teaching occupation, Kyriacou *et al.*, (2000). According to Jackson, (2001a, 2001b) there has been a tremendous rise in teachers’ responsibilities which result to teachers being overwhelmed. These occupation related challenges have caused severe stress and depression among dedicated teachers, particularly single women due to changes in education institutions in Britain, MD’Souza (1992). According to the researcher, these women felt unappreciated despite their whole lives commitment to the profession. They felt professionally unappreciated by their non – teaching, political employers who force them to do more of administration work at the expense of actual teaching.

This case scenario is not far from that of the Kenyan context in which politically driven FPE was hurriedly implemented without considering its impact on teachers due to the added workload in terms of more pupils, few teachers, inadequate class rooms to accommodate the increased number of pupils among many other social/economic factors thus overwhelming the teachers, Mukundi, (2004).

It’s important to realize the significant role teachers play in children’s lives which include impacting of knowledge, enhancing cultural and social values such as tolerance, dialogue and



gender equality among many others, (UNESCO, 2011b). Therefore, teachers' mental wellness is of essence for the physical and emotional wellness of the children.

Health Safety Executive (HSE, 2000) found teaching to be the most stressful profession in the UK, with 41.5% of teachers reporting themselves as 'highly stressed.' It was also noted that stress and professional burnout among teachers in the UK contributes to an unnecessary and wasteful exodus from the profession significantly. Teaching occupation was rated as the second most stressful job out of the 26 occupations that were analyzed, *Journal of Managerial Psychology*, (2005). A survey published by UnumProvident (2007) reported public administration, education and health employment sectors as the main institutions that registered the highest level of mental health related illness. Lambert, *et al.*, (2006, p. 105) reported teaching profession as "emotionally taxing and potentially frustrating" for a long time.

In United States of America, a survey among teachers reported stress as the greatest cause of work related dysfunction as well as the reason why teachers leave this profession, McMahon (2010).

In a study among teachers in Taiwan, 26% reported teaching as a profession that is 'very or extremely stressful', *Journal of Educational Enquiry*, Vol. 5, No. 2, 2004.

In Pakistan, 28.9% of teachers reported teaching as highly stressful despite the fact that they liked the profession (Rune Høigaard Rune Giske & Kari Sundsli 2011). *IOSR Journal of Humanities and Social Science (IOSR-JHSS) Volume 15, Issue 2 (Sep. - Oct. 2013), PP 68*

In the Sub Saharan Africa, a study in Nigeria reported that all the teachers experienced high levels of stress which in turn exposed them to depressive disorders regardless of whatever level a teacher taught, Arikewuyo, M.O. (2004). According to Mokdad, (2005), teacher stress prevalence is for sure an international phenomenon which requires attention. A study in Kajiado County, Kenya, among teachers in primary public schools revealed that 33% of teachers experienced work related stress to a greater extent with main cause factors' being public's attitude and misunderstanding about teachers' workload, high number of pupils in class, pupils' poor attitudes toward classroom tasks and pupils' misbehavior, Kenya Projects of Organization, KENPRO, (2012).

The above stress cause factors were also observed in a study in 76 public primary schools in Butere, western Kenya, *International Journal of Academic Research in Progressive Education and Development* October 2012, Vol. 1, No. 4.

Teachers spend more time interacting with children and children always look up to their teachers as their role models and this means that the teacher must remain the 'expected role model' at all times notwithstanding the daily career challenges. "Stressed out" teachers exhibit certain characteristics such as being less sympathetic toward pupils, experience lower tolerance for frustration in the classroom and may plan for their classes less often or less carefully. More so, they may fantasize or plan to leave the profession, experience frequent emotional or physical exhaustion, may feel anxious, irritable, may feel less committed and dedicated to their work or worse still, become depressed (Farber & Miller, 1981). These negative emotional experiences among teachers often have negative psychological, academic and/or physical impact on the growing pupils and it's often observed in their behaviors. This clearly indicates that stressful chain of reactions by teachers results to stressed pupils thus poor school performance.

### **2.3. Teacher stress and gender**

According to available research, gender as a demographic characteristic is important when assessing stress experiences, Jick *et al.*, (1985). Mondal *et al.*, (2011) found a significant difference between male and female teachers, with male teachers having more psychological stress and physical stress than the female teachers. Male teachers were also reported to be more insecure and concerned with financial issues, while female teachers were more concerned about intrinsic facets of their jobs, Rosenblatt *et al.*, (1999). In another different study, female teachers were found to experience greater workload stress, greater classroom stress from pupils' behaviors, *Journal of Educational Psychology 2010. 2010, Vol. 102, No. 3, 741–756.* (American Psychological Association). This observation was supported in a study by Antoniou *et al.*, (2006) in which higher levels of work related stress among female teachers were reported compared with male teachers especially in classroom and workload factors. In Malaysia, a study on teacher stress prevalence reported gender and workload as a significant contributing factor towards mental health status, *Global Journal of Health Science Vol. 2, No. 2; October 2010.* With these findings, it will be of great interest to find out the Kenyan context considering our diverse cultural beliefs where males are expected to stand strong despite all life advances.

#### **2.4. Teacher stress and marital status**

Social science emphasizes the characteristic nature of human being as social being. Normally, marriage creates the basic unit of a family in which the members source their psychological, economical and physical support from. In most cases, this institution acts as a fall back where the members can exchange their job experiences both positive and negative without fear. This venting out with significant others creates a safe environment and also acts as mitigating measures against stress during those job related stressful experiences.

According to Smith *et al.*, (2000), being widowed/divorced/separated contributed to a higher proportion of reported stress category among teachers. This was different from other researches whose findings indicated minimal differences between the married status groups and those widowed, divorced, separated or single by choice in stress levels among teachers, (Yahaya *et al.*, 2006; Cheng, K.-L., Kelly, 1993; Chona C. Roxas, 2009).

This indicates the need for more research in this area in order to understand better the relationship between stress and marital status within teaching occupation.

#### **2.5. Relationship between Teacher stress with age and experience**

As observed by (Abdul 1998; Lau *et al.*, 2005; Bhadoria *et al.*, 2010), younger and less experienced teachers are said to experience more stress and burnout than older or more experienced teachers. Anitha Devi (2007), concurred with this phenomenon in a study which focused on the degree of life stress and role stress experienced by professional women where the findings were that the more older one was, the lower the experience of life stress as well as role stress, meaning that younger persons experienced more stress than the older professionals. In contrast, a study among Irish primary school teachers reported those in their forties and above as experiencing higher stress levels than other age groups, Merike *et al.*, (2008). A study conducted among 100 teachers selected from 20 schools in Orissa revealed that the higher the teaching experience, the lesser the perceived stress, Bhagawan (1997).

#### **2.6. Correlation between teacher stress and salary and personal development**

Although work and family are the two main domains from which most adults derive satisfaction from in life, many psychological disturbances originate from these very hoped for satisfying domains. More often than not, people work for remuneration gains which help in meeting their daily needs. Unmet daily needs cause stress in most circumstances among

human beings. This is a major contributory factor that motivates most employees in their work place. Reasonable income and personal development have been considered to be a good recipe for job satisfaction for most workers.

A study in Greece among primary and secondary teachers revealed that low salaries and limited promotion opportunities were a source of stress, (Koustelios and Kousteliou, 1997; Papastylianou, 1997). On assessing levels of stress among teachers in relation to personal development, Upadyay and Singh (1999) found that teachers exhibited significant higher levels of stress than executives on intrinsic impoverishment and status factors. They experienced stress because their personal wishes and strong desire for better and prosperous career were felt to be blocked by others. In a study among teachers in primary public schools in Vihiga County, Kenya, 45% reported poor salary as the greatest source of stress, Caroline, A; Moses, W. (2011).

## Chapter 3: Study Design and Methodology

### 3.1 Introduction

#### a. Study Design

The study was a cross-sectional descriptive study and the variables were stress and its levels among the teachers as well as the teachers' socio-demographic profiles

#### b. Study area description

The study was based in day mixed public primary schools in Nairobi County. Nairobi is a cosmopolitan city with a diverse cultural background and is the main administrative centre for the Kenya national government. The population of Nairobi city has grown from 350,000 people at independence in 1963 to 3.1 million people according to the 2009 Kenya census, (central bureau of statistics, 2010). The city is divided into five defined sections which include:

- **Central** - Encompasses the central business district region of the government and the private offices as well as various businesses.
- **East** – Encompasses east part of the city which is a densely populated residential area with estates such as Buru buru, Embakasi, Kariobangi, Eastliegh, Makadara, Mukuru kwa Njenga, Dandora, Njiru, Kayole, Umoja, Ruai, Mwiki
- **West** – This covers the western part of the city which includes Westlands, Parklands, Kitsuru, Mountain View, Kangemi, Loresho, Karura, Highridge, Muthaiga
- **North** – Encompasses Githurai, Kahawa west, Kahawa sukari, Kasarani, Mathare, Korogocho, Roysambu, Ruaraka
- **South** – Encompasses Kileleswa, Maziwa, Kilimani, Gatina, Kawangware, Mutui-in, Waithaka, Uthiru, Ngano, Kabiria, Muthangari, Kibera, Karen, Dagorreti, Mbagathi, Riruta, Lngata, Nairobi West, Karen, Mugumo – ini, Laini Saba, Sera Ng'ombe

### **c. Study Population**

Nairobi County has a total of 191 mixed day public primary schools with a total of 4103 teachers, Teachers Service Commission, TSC, (2013). Female teachers account for 3425 teachers while 678 are male teachers. Systematic random sampling (systematic sample with a random start) was applied in selecting the schools and the teachers to participate in the study. This study focused on both male and female teachers working in those mixed day primary public schools within Nairobi County. To select the target study population of teachers from the selected 32 schools, researcher approached the head teacher of each school in order to obtain access permission as well as the list of teachers in each selected school. The same systematic random sampling was applied where the researcher picked every even number from the teachers' list from each school.

### **d) Sample size determination and calculation**

The target population was teachers working in mixed day public primary schools in Nairobi County. The researcher obtained a list of all mixed day public primary schools in Nairobi County from the County Education office and each school was placed according to where it is situated in relation to the five parts of Nairobi city. According to available data, TSC, (2013), Nairobi County has a total of 191 mixed day public primary schools, out of this number of schools, the researcher picked each section/part of Nairobi at a time and applied systematic random sampling, (systematic sample with a random start) where every 6<sup>th</sup> mixed day public primary school was selected to participate in the study. By picking every 6<sup>th</sup> mixed day public primary school, the researcher obtained a total of 32 schools.

The Cochran's formula was used for sample size calculation whereby key risk factors like confidence level that is acceptable (95%) and a precision (alpha value, type 1 error) of 0.05 (5%) were addressed. With a desire of 95% confidence interval for p that was expected to be about 33% (0.33) (according to a previous study done in Kajiado County, Kenya on the same) and a margin error (d) no more than 0.05, a sample size of  $339.751104 = 340$  was obtained. Through the application of the above said formula, the new sample size for this study was 314 teachers (sample size). However, researcher was only able to recruit 267 participants since the provided teachers' data base was not reflective on the ground where the number of teachers was less.

**Inclusion criteria:** All the teachers who voluntarily accepted to participate and work in day mixed public primary schools in Nairobi County.

**Exclusion criteria:** Those teachers who wished not to participate in the study since participation was voluntary.

#### **e. Data collection procedures**

The researcher introduced herself to the potential study respondents in each selected school and briefly explained the study objectives, the procedures of completing and returning the questionnaires. The respondents were assured of confidentiality in handling of all the completed questionnaires. However, respondents were requested to read the consent form on the first page and voluntarily append their signatures to indicate their willingness in participating in the study (Appendix 4).

Researcher serialized the questionnaires prior to distributing them to the eligible study respondents, (Appendix 5). Both TSI and the socio – demographic questionnaires were then distributed to the potential respondents. Demographic and work information: age, gender, education level, marital status, years of experience, years to retirement, monthly salary, number of promotions and residential areas were captured in the socio – demographic questionnaire.

#### **f. Instruments**

**TSI:** Teacher Stress Inventory tool is revision of TSI developed by Pettergrew and Wolf (1982). Shutz and Long (1988) tested the factorial validity of the TSI using confirmatory factorial analysis, revised it and retested it in a study in Canada. TSI is a brief self report questionnaire that was proved to be valid in a study among urban Caucasians and Africans teachers in South Africa, Boshoff, (2011). The tool identifies the types of situations teachers report as being stressful (see Appendix 5).

**TSI Psychometric Properties:** The Teacher Stress Inventory, revised is used to measure the types of stressful events that teachers encounter. This shortened version has 36 items that are rated on a 5-point Likert scale which are classified as: 1= never, 2= rare, 3= sometimes, 4= often and 5 = always. The items are grouped into seven subscales which include:

- Role ambiguity subscale that measures an individual's understanding on work responsibilities
- Role stress subscale measures respondents' views in relation to work load.
- Organizational management measures respondents' view in relation to the management
- Job satisfaction measures respondents' level of job satisfaction
- Life satisfaction measures respondents' satisfaction in life in relation to work
- Supervisory support measures respondents' view in relation to how individual support at work place

**Socio – demographic questionnaire:** Factored in age, gender, education level, marital status, years of experience, years to retirement, monthly salary, number of promotions and residential areas.

### **3.2 Ethical Consideration**

The process started with obtaining approval from the department of psychiatry, University of Nairobi. The proposal was then presented to Kenyatta National Hospital – Research and Ethics Committee for review and approval. Researcher thereafter obtained an introduction letter from the Psychiatry Department, Nairobi University to aid researcher in gaining access to the County Education Officers and Teachers Service Commission officers. Letters from the concerned officers addressed to the selected individual schools' head teachers, through the respective County Education officers were obtained. With the assistance of the respective school head teachers, the participants were given letters of introduction. Ethical approval was obtained from KNH research and ethics committee as well as Ministry of Research and Technology. Informed written consent was obtained from each teacher from the selected schools after a thorough explanation about the study. The teachers were helped to understand that to participate in the research was purely on voluntary basis.

In order not to interfere with school programs, the researcher sought counsel from the schools' head teachers as well as from the concerned teachers in the respective schools.

The researcher made it clear that participating in the study had no financial gain but would greatly contribute in understanding mental experiences better as well as the need for teachers to be involved in government policy making and implementations.

Confidentiality was assured at all times by limiting access to client data and using codes/initials instead of names, computers used had password protection. The participants were provided for



with information sheet to read and understand before signing a consent sheet which clearly stated that participation is voluntary. The exercise proceeded on well with no provocation of disturbing memories among the respondents while in line of duty. The provided information/data was stored under lock and key by the researcher at her work station for purpose of total confidentiality.

## Chapter 4: Results

### 4.1 Introduction

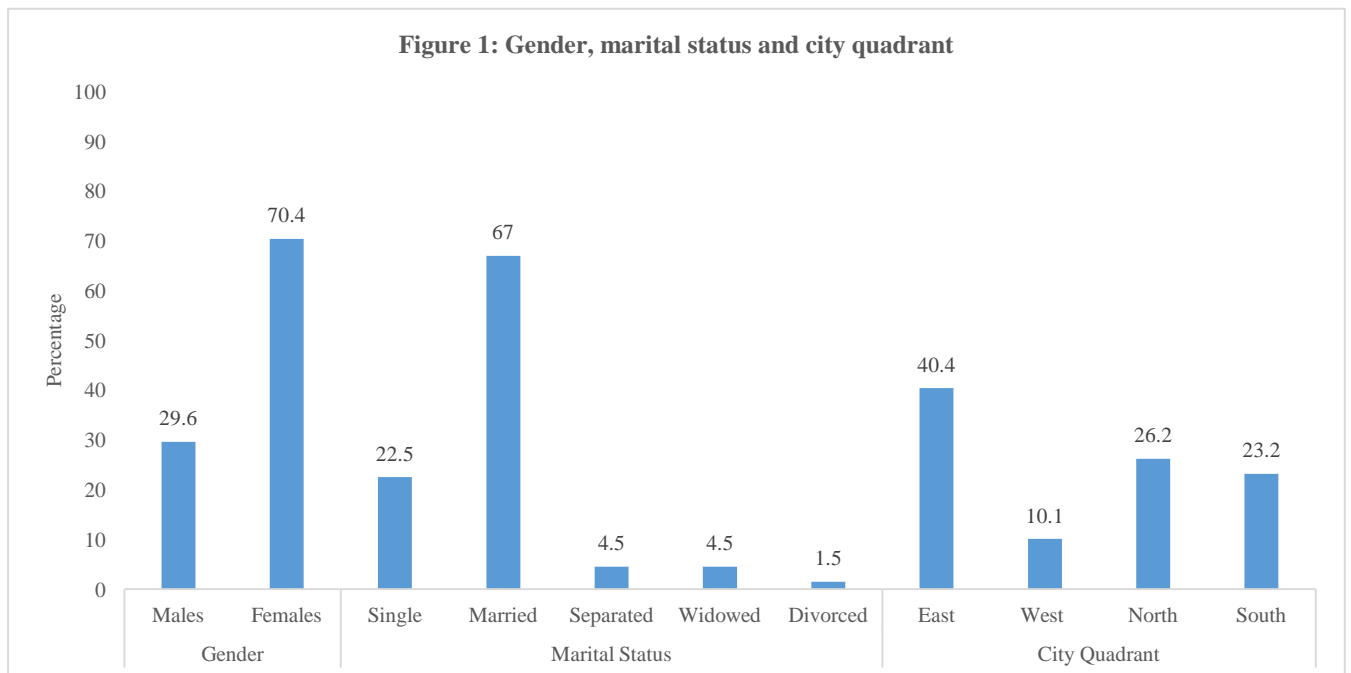
This chapter details the findings of the study and the discussion with respect to the objectives of the study. The aim of the study was to establish the relationship between stress and teaching profession. The results have been presented in order of the objectives i.e to assess the prevalence of stress and its levels among teachers in mixed day public primary schools in Nairobi County, to determine levels of stress among teachers and to correlate socio - demographic factors such as age, gender, and marital status among others with teacher stress.

### 4.2 Response Rate

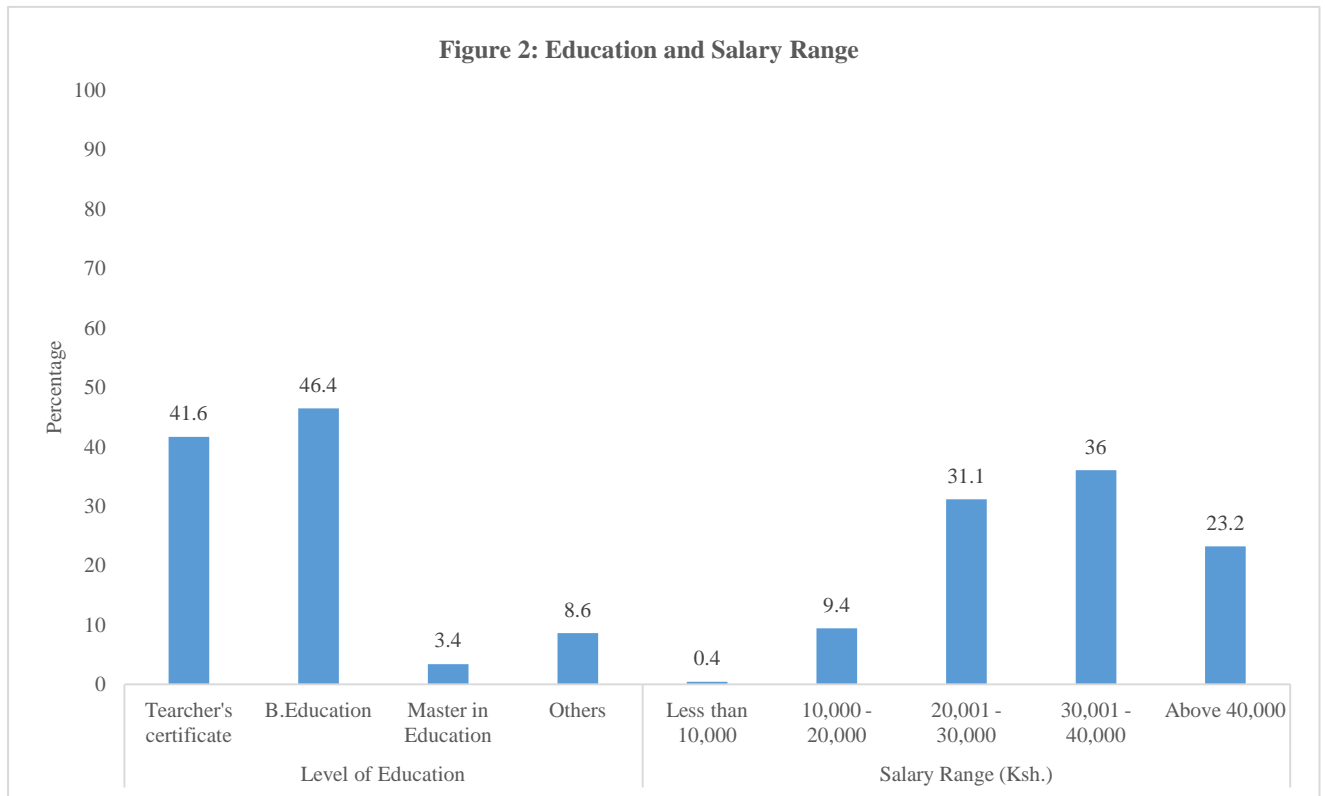
The targeted number of respondents was 340. A total of 267 respondents took part in the study. This represented a response rate of 76 percent. This is because the TSC (employer)'s data in regard to the number of teachers was out dated. Retired teachers and those who had died in service had not been replaced.

### 4.3 Socio-Demographic Characteristics

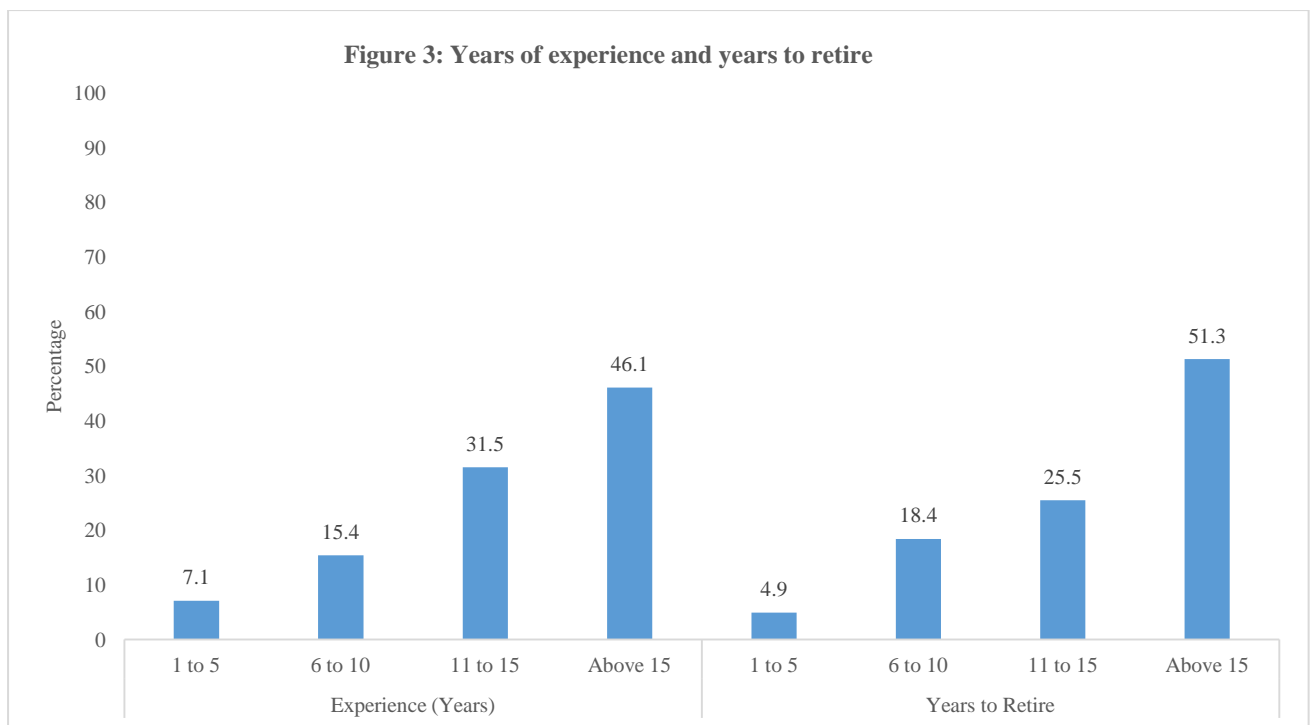
#### 4.3.1 Gender, Marital Status and Residential areas



### 4.3.2 Level of Education and Salary range



### 4.3.3 Years of Work Experience and Years to Retirement



**4.4. Table 1: Prevalence of stress by socio-demographic profiles**

Factor	Overall mean score (C.I)	%
<b>Age (years)</b>		
< 30	3.33 [3.29,3.37]	66.59 [65.78,67.41]
30 – 40	3.33 [3.29,3.37]	66.55 [65.81,67.30]
> 40	3.38 [3.34,3.42]	67.66 [66.92,68.41]
<b>Gender</b>		
Female	3.40 [3.36,3.44]	68.04 [67.30,68.77]
Male	3.27 [3.23,3.31]	65.45 [64.72,66.18]
<b>Marital Status</b>		
Married	3.37 [3.33,3.41]	67.43 [66.69,68.16]
Single	3.35 [3.31,3.39]	66.95 [66.18,67.72]
<b>Years of Experience</b>		
0 – 5	3.31 [3.28,3.34]	66.27 [65.63,66.90]
6 – 10	3.33 [3.30,3.36]	66.50 [65.86,67.15]
11 – 15	3.39 [3.35,3.43]	67.74 [66.96,68.52]
> 15	3.49 [3.44,3.54]	69.80 [68.76,70.85]
<b>Years to Retirement</b>		
0 – 5	3.56 [3.50,3.62]	71.12 [69.84,72.39]
6 – 10	3.35 [3.32,3.38]	66.97 [66.26,67.68]
11 – 15	3.36 [3.33,3.39]	67.26 [66.66,67.86]
> 15	3.35 [3.31,3.39]	67.02 [66.26,67.77]
<b>Education level</b>		
Teachers certificate	3.38 [3.34,3.42]	67.53 [66.81,68.25]
Bachelor of Education	3.31 [3.28,3.34]	66.12 [65.49,66.76]
Master in Education	3.55 [3.51,3.59]	70.99 [70.14,71.84]
Untrained	3.54 [3.48,3.60]	70.74 [69.63,71.85]
<b>City Quadrant</b>		
East	3.36 [3.33,3.39]	67.20 [66.49,67.91]
West	3.33 [3.29,3.37]	66.62 [65.91,67.34]
North	3.37 [3.33,3.41]	67.31 [66.52,68.10]
South	3.38 [3.34,3.42]	67.63 [66.83,68.42]
<b>Overwhelmed</b>		
Yes	3.44 [3.41,3.47]	68.89 [68.37,69.42]
No	3.36 [3.32,3.40]	67.24 [66.49,67.99]
<b>Salary</b>		
Ksh. 0 - 20,000	3.32 [3.29,3.35]	66.41 [65.76,67.06]
Ksh. 20,001 - 30,000	3.36 [3.32,3.40]	67.25 [66.37,68.13]
Ksh. 30,001 - 40,000	3.35 [3.31,3.39]	67.09 [66.30,67.87]
Above Ksh. 40,000	3.40 [3.36,3.44]	67.99 [67.25,68.72]
<b>Promotion</b>		
Never	3.42 [3.39,3.45]	68.36 [67.84,68.88]

Once	3.34 [3.30,3.38]	66.84 [66.12,67.56]
Twice	3.33 [3.29,3.37]	66.56 [65.67,67.45]
Thrice	3.34 [3.31,3.37]	66.82 [66.13,67.51]
More than 3 times	3.38 [3.34,3.42]	67.60 [66.84,68.36]

#### **4.3 Factor Associated with Stress levels (overall stress score):**

In order to assess factors that were related with stress levels, a multivariable beta regression was used. In this case, the mean stress scores for all individuals were converted to proportions. The analysis proceeded as follows; first, univariable/unadjusted models were fitted (for each factor) and those that were significant ( $p$  value  $< 5\%$ ) were then used in a multivariable/adjusted beta regression. Parameter estimates for both unadjusted and adjusted analyses are presented in table 2. In the multivariable regression: Gender had a statistical significance in relation to stress levels with female teachers more likely to have stress than their male counterparts (OR = 1.13 [1.04, 1.21],  $p$ -value = 0.002); those who had more years to retire were likely to be less stressed compared to those who had less years to retire. Additionally, untrained teachers were more likely to be stressed compared to those who had certificate level of education (OR = 1.20 [1.05, 1.36],  $p$ -value = 0.008), see table 2.

**Table 2: Unadjusted and adjusted beta regressions mean estimates (Mean stress score)**

Factor	Unadjusted Estimates		Adjusted Estimates	
	OR (95% C.I)	p - value	OR (95% C.I)	p - value
<b>Age (Years)</b>				
<30#				
30 – 40	1.00 [0.81,1.22]	0.979	–	–
> 40	1.05 [0.86,1.28]	0.631	–	–
<b>Gender</b>				
Female	1.12 [1.04,1.21]*	0.003	1.13 [1.04,1.21]*	0.002
Male#				
<b>Marital Status</b>				
Married	1.02 [0.94,1.10]	0.631	–	–
Single#				
<b>Years of Experience</b>				
0 – 5 years#				
6 - 10 years	0.83 [0.70,0.97]*	0.022	0.88 [0.75,1.03]	0.115
11 - 15 years	0.84 [0.72,0.97]*	0.021	0.88 [0.76,1.02]	0.089
Above 15 years	0.89 [0.77,1.03]	0.125	0.91 [0.77,1.07]	0.241
<b>Years to Retirement</b>				
0 – 5 years#				
6 - 10 years	0.78 [0.64,0.94]*	0.008	0.79 [0.66,0.94]*	0.008
11 - 15 years	0.78 [0.65,0.94]*	0.009	0.80 [0.67,0.95]*	0.013
Above 15 years	0.78 [0.66,0.93]*	0.006	0.83 [0.69,1.00]	0.051
<b>Education level</b>				
Teachers certificate#				
Bachelor of Education	0.93 [0.87,1.00]	0.066	0.95 [0.88,1.02]	0.138
Master in Education	1.18 [0.96,1.45]	0.108	1.15 [0.94,1.40]	0.179
Untrained	1.21 [1.05,1.38]*	0.007	1.20 [1.05,1.36]*	0.008
<b>City Quadrant</b>				
East#				
West	0.97 [0.85,1.10]	0.639	–	–
North	1.01 [0.92,1.11]	0.800	–	–
South	1.02 [0.93,1.12]	0.649	–	–
<b>Overwhelmed</b>				
Yes	0.94 [0.72,1.23]	0.658	–	–
No#				
<b>Salary</b>				
Ksh. 0 - 20,000	1.06 [0.92,1.21]	0.441	–	–
Ksh. 20,001 - 30,000	1.04 [0.95,1.15]	0.391	–	–
Ksh. 30,001 - 40,000	1.08 [0.98,1.19]	0.112	–	–
Above Ksh. 40,000#				
<b>Promotion</b>				
Never	1.00 [0.85,1.18]	0.990	–	–
Once	1.00 [0.85,1.19]	0.955	–	–
Twice	1.04 [0.88,1.23]	0.632	–	–

Thrice	1.06 [0.90,1.26]	0.472	–	–
More than 3 times#				

# – Reference level; \* – significant at 5%; OR – Odds Ratio; C.I – Confidence Interval

#### 4.4 Prevalence of stress by subscales

The highest possible score was 180 considering the Teacher Stress Inventory (TSI) likert scale with a range of 1 – 5. As indicated in table 3 below, the overall stress level among the participants was 67 % with a mean score of 3.36. In order of prevalence, 76 % of all the respondents in supervisory support subscale had a mean of 3.8. 75%, thus scoring the highest score while those who perceived life satisfaction as a source of stress scored 60% with a mean score of 3.01. This being the least score.

**Table 3: Prevalence of stress by subscales**

Construct	Mean Score (C.I)	%
Role Ambiguity	3.62 [3.55,3.69]	72.40 [71.00,73.80]
Role Stress	3.04 [2.98,3.10]	60.73 [59.44,62.02]
Organizational Management	3.73 [3.65,3.81]	74.64 [73.02,76.25]
Job Satisfaction	3.23 [3.11,3.35]	64.68 [62.20,67.17]
Life Satisfaction	3.01 [2.96,3.06]	60.12 [59.19,61.05]
Task Stress	3.11 [3.02,3.20]	62.23 [60.41,64.05]
Supervisory Support	3.81 [3.75,3.87]	76.18 [75.01,77.35]
Overall	3.36 [3.32,3.40]	67.27 [66.52,68.02]

#### 4.5 Comparing overall stress scores with those from an empiric study

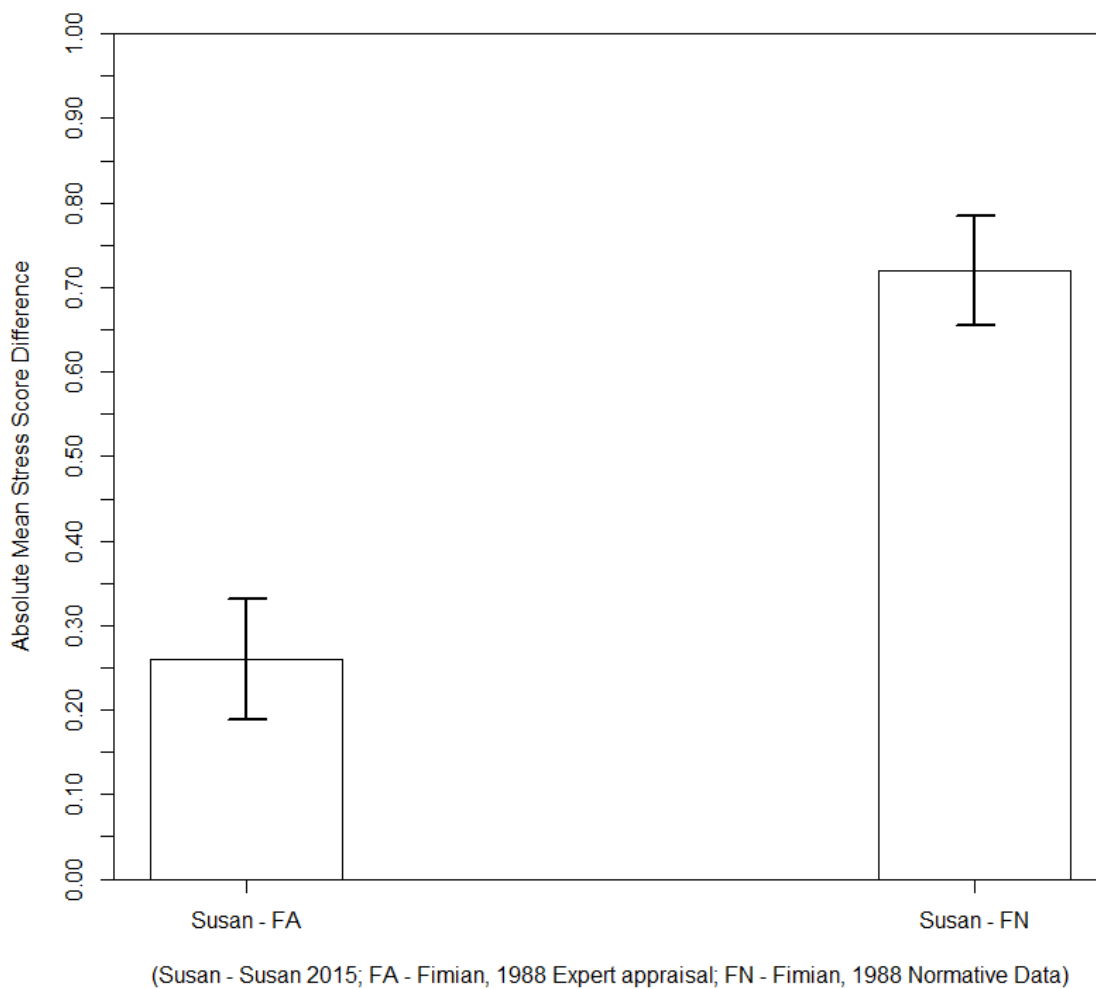
Fimian (1988) validated the TSI tool and summarized studies that informed stress level cut-off points. In one, he sought expert opinion (n = 226) where the reported mean stress score was 3.10 [2.60 – 3.40]. While in the second study among randomly selected participants (n = 3401) in the United States (sample included both regular and special education teachers), the mean stress score was 2.64 [2.62 – 2.67]. The differences between the mean stress score in this study and Fimian's

expert appraisal & survey were 0.26 [0.12 – 0. 40] and 0.72 [0.59 – 0.84] respectively. Fimian’s finding from expert appraisal is closely similar to finding in this study (table 4 and figure 4).

**Table 4: Overall stress scores versus an empiric study (Fimian, 1988)**

Study	Mean score	%
Susan (2015): unpublished (present study)	3.36 [3.32, 3.40]	67.27 [66.52, 68.02]
Fimian (1988): expert appraisal	3.10 [2.60, 3.40]	62.00 [52.00, 68.02]
Fimian (1988): normative data	2.64 [2.62, 2.67]	52.80 [52.40, 53.40]

**Figure 4: Absolute mean stress score difference between findings in this study and Fimian (1988)**





#### 4.5.1 Test Norms and Interpretation (Fimian J.M, 1988)

Table 5 below, (Fimian, 1988), shows those study respondents who had a mean score of between 3 – 4 and were reported to have medium strength, meaning they were moderately noticeable in relation to stress to very noticeable (great strength).

**Table 5**

<b>How Strong?</b>	1	2	3	4	5
<b>Stress: noticeable</b>	No strength: not noticeable	Mild strength: barely noticeable	Medium strength: moderately noticeable	Great strength: very noticeable	Major strength: extremely noticeable

#### 4.6 Factors associated with each of the TSI subscales

In assessing the explanatory variables that were correlated with each of the TSI subscales; a multivariate beta regression was fitted. Here, the same variable selection strategy used in univariate (one response – mean stress score) analysis was adopted (though here the ‘dependent variable’ consisted of all TSI subscales).

The adjusted analyses (see table 6) showed that;

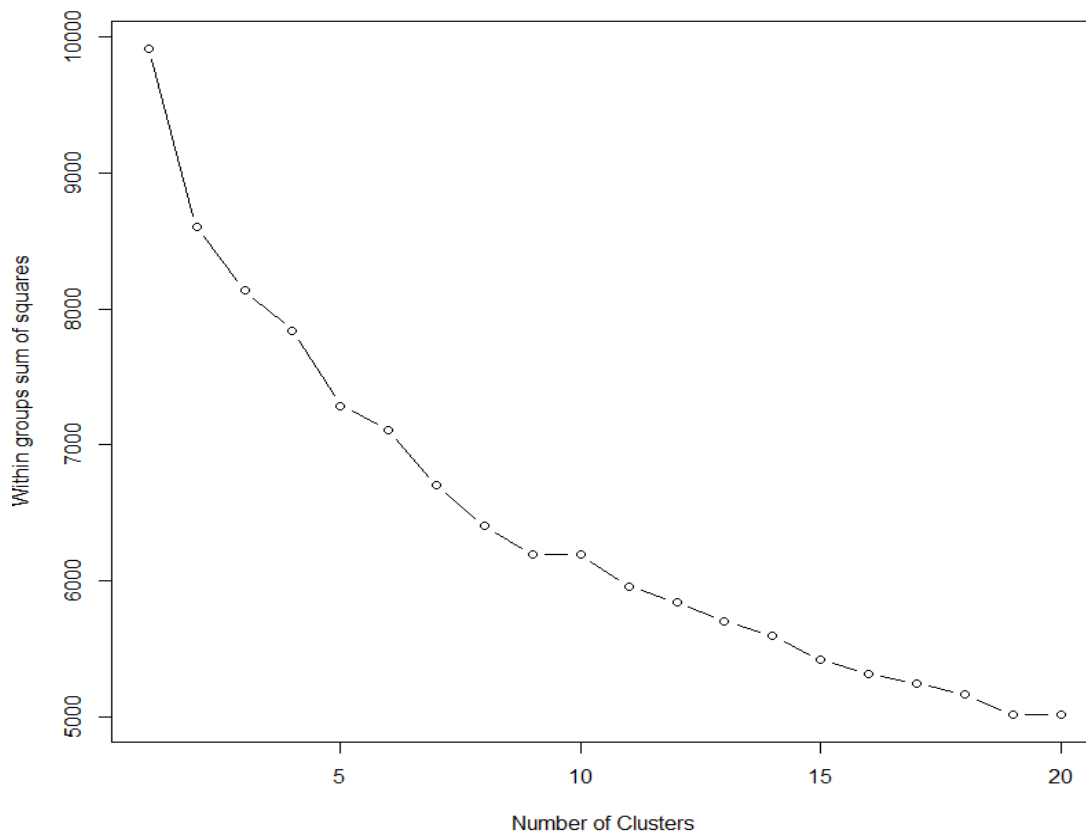
1. Role ambiguity was significantly associated with more years of experience and having lower salary.
2. Role stress was significantly associated with being older, having more years of experience, having masters in education or being untrained, having lower salary and no promotion.
3. Organizational management was significantly associated with being younger, having bachelors in education and being promoted at least once.
4. Job satisfaction was significantly associated with being female and having few years to retirement.
5. Life satisfaction was significantly associated with having masters in education.
6. Task stress was significantly associated with having masters in education and working at the Northern quadrant of the city.

- Supervisory support was significantly associated with being female, having more experience and working at the Northern quadrant of the city.

#### 4.7 Investigating groups which are likely to have challenges

In order to investigate groups of teachers that were possibly facing challenges as indicated in table 8, a cluster analysis was performed with all the 36 TSI questions forming the dependent variables.

**Figure 5:** Scree plot for selection of clusters



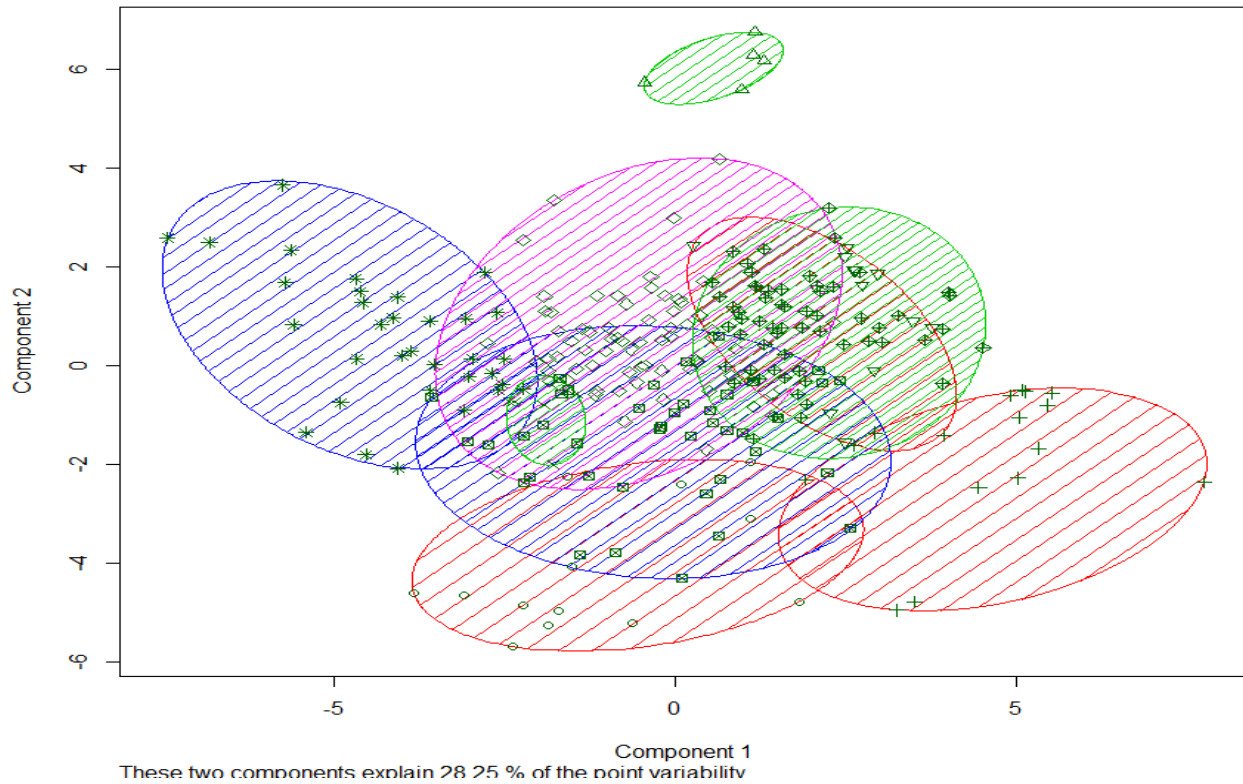
From the scree plot (**figure 5**), about 9 clusters were identified as the respondents' perceived source of stress and were sufficient to explain approximately 90% of variability in the data. The respondents' perceived sources of stress as per cluster were as indicated below, table 6.

**Table 6: Outstanding challenges faced by different clusters**

Cluster	Characteristics
1	<b>ALWAYS</b> have extra work beyond what is expected. <b>ALWAYS</b> the criteria of performance for their jobs always too high. <b>ALWAYS</b> find dealing with student discipline problems causing a lot of stress.
2	<b>ALWAYS</b> unclear on the scope and responsibilities of their jobs. <b>ALWAYS</b> given too much responsibility without adequate authority to carry it out. <b>NEVER</b> satisfied with their jobs.
3	<b>ALWAYS</b> have extra work beyond what is expected.
4	<b>ALWAYS</b> find dealing with student discipline problems causing a lot of stress.
5	Problems not extreme
6	Problems not extreme
7	Problems not extreme
8	Problems not extreme
9	Problems not extreme

The above table indicates the perceived sources of stress by the study respondents in relation to the various TSI – constructs. Cluster one respondents perceived role stress and organization management as their sources of stress while cluster two respondents perceived role ambiguity and lack of job satisfaction as their sources of stress. The two clusters had more respondents compared to the rest of the various clusters. This is supported by the figure 7 below which indicates the respondents distribution per cluster.

**Figure7: Distribution of the 9 clusters**



The distribution of participants in the respective clusters was as follows (see figure 7 above and table 7 below)

**Table 7: Cluster Distribution.**

Cluster	1	2	3	4	5	6	7	8	9
n	69	27	53	51	4	4	52	4	3
probability	0.26	0.10	0.20	0.19	0.01	0.01	0.20	0.02	0.01

The probability of belonging to cluster one was the highest (0.26); followed by that of belonging to clusters three and seven which had membership probability of 0.20 each. Membership probability



## Chapter 5: Discussion

### 5.1. Prevalence of stress among teachers in public primary schools

The overall prevalence of stress among the study respondents was 67% with a stress mean score of 3.36 as measured by Teachers Stress Inventory (TSI – Schuzt *et al.*, 1988). Stress rate among respondents ranged from 53.9% being the least and highest score being 88.9%. The stress scores were significantly high compared to those of other related studies. Pervez *et al.*, (2003) while using TSI assessment tool, three categories for stress levels were identified which included: mild stress, moderate stress and high stress levels. A mean score of below 2.25 was determined as mild. Scores ranging from 2.26 to 2.87 was taken as an indicator of moderate stress while a score above 2.87 was determined as high stress level. Comparing these findings with the present study in which mean stress score ranged from between 3.01 and 3.81, which is comparable with that category level of high stress level in Pervez *et al.*, (2003) study, it clearly indicates that stress levels among teachers in the present study were significantly high compared with those in the said study in Pakistan.

Fimian (1988) validated the TSI tool and summarized studies that informed stress level cut-off points. In one, he sought expert opinion (n = 226) where the reported mean stress score was 3.10. While in the second study among randomly selected participants (n = 3401) in the United States (sample included both regular and special education teachers), the mean stress score was 2.64. The differences between the mean stress score in this study and Fimian's expert appraisal & survey were 0.26 and respectively. Fimian's finding from expert appraisal is closely similar to finding in this study (table 4 and figure 4). Like in the present study, Fimian used a likert scale of 1 – 5 in which the least score was 1 meaning no strength or stress is not noticeable, 2 representing mild or barely noticeable, 3 for medium strength or moderately noticeable, 4 for great strength or 5 for major strength or extremely noticeable. Going by the mean stress scores in the two studies, 3.10 (1st study) and 2.64 (2nd study), most of the participants were between being mild stressed (barely noticeable) to moderately stressed (medium strength).

The stress scores were slightly lower than those reported in the present study. In relation to the sources of perceived stress 76% of all the respondents with a mean stress score of 3.81 fell within lack of supervisory support subscale which had the highest mean followed by organizational

management subscale with 75% of respondents with a mean stress score of 3.73. The two subscales can be compared with Fimian's work related (as source of stress). Subscale which reported a mean stress score of 3.0. This therefore means that the mentioned subscales are significantly associated with teacher stress. The least perceived source of stress subscale in the present study is lack of life satisfaction with 60% of respondents in that subscale having a mean of 3.01 followed closely by role stress with 61% of all the respondents in that subscale having a mean of 3.04. Unlike the findings of the present study, Kyriacou (2001), Chaplain (1995) and Romano and Wahlstrom (2000) found role stress to be the highest source of stress among teachers. For Austin *et al.*, (2005), organizational management and role stress contributed more in teacher stress. Research on job satisfaction among teachers and stress levels has not been well-researched. However, according to Ho *et al.*, (2006), job satisfaction was negatively correlated with teacher stress, meaning that teachers with high levels of stress reported lower ratings of job satisfaction. Both role ambiguity and task stress subscales also were found to be a significant source of stress with a mean of 3.62 and 3.11 respectfully. These result findings were in agreement with Fimian (1988) findings which reported a mean of 3.0.

### **5.1.1. Social demographic versus teacher stress**

In this study, female respondents were more than their male counterparts. Available research indicates that women preponderance (largely at the primary level) was already evident by the second half of the nineteenth century (Cortina and San Roman, 2006) and western countries like UK, Canada, Australia, New Zealand and the US have a long literature on feminization where young girls were recruited as teachers for the young children. According to UNESCO (2009) report, primary school female teachers accounted for 85.8 % in Europe, 79.3% in N. America, 70.5% in Asia and 44.8% in Africa. One reason given for this phenomenon was that taking care of younger children in nursery and primary school is traditionally seen as an "extension of motherhood" and therefore a "natural" job for women, International Labor Organization, (ILO, 2010).

In the present study, 68% of female teachers had a mean stress score of 3.40 while males with a mean score of 3.27 were 66%. In a related study Mariya A *et al.*,(2012 in which Teachers Occupational Stress Scale (TOSS) tool was used, females had occupational mean stress score of 53.40, (n = 327) while males had occupational mean stress score of 49.60, (n = 281), (TOSS uses a five point Likert

scale ranging from 5 (strongly agree) to 1 (strongly disagree). On comparison of the means of the two groups, the difference was found statistically significant, ( $P < 0.01$ ), Mariya *et al.*, (2012). The trend of result showed that male teachers were significantly more stressed with their job than female teachers. This was contrary to the present study findings where female teachers were reported to be more likely to be stressed than males,  $p\text{-value} = 0.002$ .

Mondalet *al.*, (2011) found a significant difference between male and female teacher stress levels, with male teachers scoring higher in stress levels than the female teachers which was in contrast with the findings of the present study but in agreement with Mariya *et al.*, (2012) findings. According to Mondal *et al.*, (2011) male teachers reported to be more insecure and concerned with financial issues, while female teachers were more concerned about intrinsic facets of their jobs, Rosenblatt *et al.*, (1999). Romano and Wahlstrom (2000) were in agreement that females and males experience different types of stressors. For Pervez *et al.*, (2003) the mean scores on the TSI in relation to age increased with increase of age which was partially in agreement with present study. There was no statistical significance in age in both studies.

In the present study marital status had no statistical significance with stress prevalence which was in agreement with the findings of Mariya *et al.*, (2012) and other research findings which indicate minimal differences in stress levels in the marital status factor, (Yahaya *et al.*, 2006; Cheng, K.-L., Kelly, 1993; ChonaC.Roxas, 2009).

However, present study found years to retirement to have a statistical significance with those with 6 – 10 years,  $P < 0.008$ , 11 – 15 years to retirement with a  $P < 0.013$ . Those with more than 15 years to retirement had a  $P < 0.051$ , meaning there was no statistical significance, (0 – 5 years as the referencing level). Rationally thinking, the more the years of experience a respondent has, the fewer the years to retirement. According to Mariya *et al.*, (2012), through application of TOSS tool, though there was no statistical significance in years of experience factor, teachers with 6 – 10 years of experience reported significant highest occupational mean stress of 55.11 compared to the other group categories, those with 11 – 15 years scored occupational mean stress of 51.37. However, those with more than 15 years of experience reported a lower mean of 49.81, probably indicating some kind of coping adaptation to stress or accepting the reality of potential retirement. In the present study through application of TSI tool (1988), those with 6 – 10 years scored 3.35, 11 – 15 years scoring slightly



higher, a mean stress score of 3.36 and those with more than 15 years to retirement a mean stress score of 3.35.

## **Chapter 6**

### **6.1. Conclusion and implications**

As per the study findings, stress level among the study respondents was significantly high with all the participants scoring above 54% stress score levels. Majority of the study respondents perceived managerial /administrative as the greatest source of stress. Research has shown that excessive stress impacts negatively on individual's health both physically and psychologically. Teachers are role models to the young school going children and therefore their state of health can have a positive or negative impact on their pupils and thus compromise the children's future prospects. Level of education, years to retirement and gender factors were found to contribute significantly to stress with untrained respondents and those near to retirement being more stressed at work. Being untrained can contribute to low morale, low self esteem among many other challenges. Respondents with few years to retirement were also found significantly stressed implying that they could be experiencing occupational related disappointments or unfulfilled dreams. It was also interesting to find that female teachers experienced more stress than males. Females play a 'motherly role' in children upbringing and therefore they provide emotional fitness like that of a mother. Therefore, in emotionally drained teacher as a result of excessive stress, children may be affected negatively health wise.

#### **6.1.1. Limitations**

Considering that the study was conducted immediately after teachers had just reported from a national strike, the results obtained may be exaggerated since most teachers were behind the first term syllabus. The study site (Nairobi) is an urban setting, which means the results obtained may not be generalized to a rural setting.

In almost three quarters of the said schools, females were more than three quarters compared to their male counter parts and therefore it was difficult to get a well balanced gender representation. We also found most schools were highly understaffed and data from Teachers Service Commission in relation to staffing was not reflective on ground.

### **6.1.2. Recommendations**

As shown in the outcome of this study, there are a few areas in teaching profession that require urgent attention from the stakeholders which include:

1. There is need for Teachers Service Commission to have an up dated data for its employees
2. There is urgent need for more teachers in day mixed public primary schools in Nairobi County.
3. As indicated above, the major sources of stress were supervisory support and organizational management. There is therefore need for further training for the managers and supervisors on management skills to enhance a better working environment.
4. Better teacher oriented policies that will deal with teachers' welfare such as further trainings and better retirement benefit packages among others are needed in order to attract more teachers in these institutions.
5. Considering that stressed teachers may have a negative impact on pupils' emotional and academic progress there is need for counseling to help teachers cope appropriately.

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## 8.0 Appendices

### Appendix 1

Timeline/Time Frame – Work Plan		
Activity	Duration	Remarks
<b>Conceptual phase</b> <ul style="list-style-type: none"><li>• Idea generation</li><li>• Literature review</li><li>• Writing Project Proposal</li></ul>	March	
Presentation of Project Proposal Department	May	
<ul style="list-style-type: none"><li>• Ethics Review of Proposal</li></ul>	June	
<ul style="list-style-type: none"><li>• Data collection</li><li>• Data analysis</li></ul>	July	
<ul style="list-style-type: none"><li>• Report writing</li></ul>	July	
<ul style="list-style-type: none"><li>• Binding</li><li>• Presentation for</li></ul>	August	



## Appendix 2

### Budget

<b>Resource</b>	<b>Quantity</b>	<b>Total Amount</b>
5 Exercise books	@Ksh. 70	Ksh. 350
3 ream of papers	@Ksh. 800	Ksh.2400
10 pencils	@Ksh.20	Ksh.200
10 pens	@Ksh.50	Ksh500
4 rulers	@Ksh.40	Ksh.160
Transport Facilitation		Ksh.15,000
Typing/Photocopying/Binding		Ksh. 45,000
Computer/Stastitian		Ksh.120,000
Total		Ksh. 183,610

## **Appendix 3**

### **Consent Explanation Form**

My name is Susan M. Njoroge, a Master of Science in Clinical Psychology student at the Department of Psychiatry, University of Nairobi. I am carrying out a study to determine the **“PREVALENCE AND CORRELATES OF STRESS AMONG TEACHERS IN MIXED DAY PUBLIC PRIMARY SCHOOLS IN NAIROBI COUNTY.”**

This is a partial fulfillment for the degree award.

#### **My Supervisors are:**

##### **Dr. RACHEL KANG’ETHE**

MBChB (Nrb), M. Med (Psych.) Nbi

Senior Lecturer, Department of Psychiatry

University of Nairobi

##### **Dr. PIUS KIGAMWA**

MBChB (Nrb), M. Med (Psych.) Nbi

Senior Lecturer, Department of Psychiatry

University of Nairobi

I am requesting you to participate in the study by completing two (2) instruments namely: socio – demographic questionnaire and Teacher Stress Inventory – Revised. This study has been approved by Kenyatta National Hospital Research and Ethical Committee. Your participation is completely voluntary and you may withdrawal your participation anytime in the course of completing the questionnaire.

I request that if you do accept to complete the questionnaire, please do so as honestly as possible. This will take about 20 minutes to complete.

Please, do not write any personal identity on the instruments to ensure confidentiality. The researcher will instead use coded identification. There are no risks to you except that it may cause emotional pain in some situations. However, in case it does happen, the researcher will be willing to provide the necessary support. There are no financial incentives for taking part in this study. However, the Ministry of health, other stakeholders in health sector as well as your institution will get copies of the findings and recommendations which they may use to improve the management of stress among service providers. If you choose to complete the questionnaires, it will be an indication that you have voluntarily consented to participate in the study. Kindly feel free to ask for further clarification. You can get in touch with me or my supervisors through the provided telephone numbers.

Thank you in advance,

Susan M. Njoroge

Msc. Clinical Psychology Student

Telephone: + 254724394077

Department of Psychiatry,

University of Nairobi.

## Appendix 4: Social Demographics Questionnaire

### Personal Data

Please answer all of the questions below. Kindly don't write your name on the questionnaire.

1. Age:  years                      Date of birth: DD: MM:YY
  
2. Sex:     M      F
  
3. Marital Status: Single:  Married:  Separated:  Divorced:   
  
Widowed:
  
4. Number of years in teaching (experience) in years:     Less than 1 year       
  
1 – 5                  5 - 10          10 – 15          15years
  
5. Number of years to retirement:     Less than 1 year          1 - 5 years       
  
5 - 10 years          10 - 15 years                  above 15 years
  
6. Education:     a) Teacher's Certificate:                       b) B.Ed.       
  
                                c) Master's in Education:                       d) Ph. D.       
  
                                e) Others (Specify)
  
7. In which quadrant of the City of Nairobi are you teaching: East st   
North      South

8. Are there times you feel overwhelmed at your work place? Yes  No

9. At your place of work, what stresses you most?

- 1. Role ambiguity
- 2. Interpersonal relationships
- 3. Monotony of work
- 4. Increased workload
- 5. Large number of pupils
- 6. Other factors

10. What is the range of your monthly salary: Less than Ksh. 10,000  Ksh. 10,000 -

20,000  Ksh. 20,000 - 30,000  Ksh. 30,000 - 40,000

Above Ksh 40,000

13. How many times have you been promoted since you started your teaching occupation?

- 5. More than 3 times
- 4. Thrice
- 3. Twice
- 2. Once
- 1. Never

## **Teacher Stress Inventory – Revised Schultz & Long (1988)**

Please answer all of the following questions using this guide: 1= never, 2 = rare, 3 = sometimes, 4 = often and 5 always. Kindly don't write your name on the questionnaire.

1. I can predict what will be expected of me in my work tomorrow. 1 2 3 4 5.
2. I am unclear on what the scope and responsibilities of my job are. 1 2 3 4 5
3. I am uncertain what the criteria for evaluating my performance actually are. 1 2 3 4 5
4. I receive enough information to carry out my job effectively. 1 2 3 4 5
5. When asked, I am able to tell someone exactly what the demands of my job are. 1 2 3 4 5
6. I find that I have extra work beyond what should normally be expected of me. 1 2 3 4 5
7. The criteria of performance for my job are too high. 1 2 3 4 5
8. I am given too much responsibility without adequate authority to carry it out. 1 2 3 4 5
9. I receive conflicting demands from two or more people or groups in the school setting. 1 2 3 4 5
10. I have to buck a rule or policy in order to carry it out. 1 2 3 4 5
11. I have a hard time satisfying the conflicting demands of students, parents, administration and teachers. 1 2 3 4 5
12. I am given school-related duties without adequate resources and material to carry them out. 1 2 3 4 5
13. I have influence over what goes on in my school. 1 2 3 4 5

14. I'm informed of important things that are happening in my school. 1 2 3 4 5
15. My administrative head asks my opinion on decisions that directly affect me. 1 2 3 4 5
16. All in all, I would say that I am extremely satisfied with my job. 1 2 3 4 5
17. My job is extremely important in comparison to other interests in my life. 1 2 3 4 5
18. Knowing what I know now, if I had to decide all over again whether to take this job, I would definitely do so. 1 2 3 4 5
19. In general, my job measures up extremely well with the sort of job I wanted before I took it.  
1 2 3 4 5
20. My administrative head brings me together with other faculty in joint meetings to make decisions and solve common problems. 1 2 3 4 5
21. My administrative head gives me full information about the things which directly involve my work. 1 2 3 4 5
22. I currently find my life very rewarding. 1 2 3 4 5
23. My life is currently quite lonely. 1 2 3 4 5
24. I currently find my life quite enjoyable. 1 2 3 4 5
25. I currently find my life quite boring. 1 2 3 4 5
26. My life is currently very hopeful. 1 2 3 4 5
27. Trying to complete reports and paper work on time causes me a lot of stress. 1 2 3 4 5

28. I find that dealing with student discipline problems puts a lot of stress on me. 1 2 3 4 5

29. There is a lot of stress just keeping up with changing professional standards. 1 2 3 4 5

30. Trying to keep my work from being too routine and boring puts a lot of stress on me. 1 2 3 4  
5

31. Having to participate in school activities outside of the normal working hours is very stressful to me. 1 2 3 4 5

32. I find that trying to be attentive to the problems and needs of fellow faculty is very stressful.  
1 2 3 4 5

33. When I really need to talk to my administrative head, (s) he is willing to listen. 1 2 3 4 5

34. My administrative head pays attention to what I am saying. 1 2 3 4 5

35. My administrative head stands up to outsiders for the people (s) he supervises. 1 2 3 4 5

36. When I have conflicts with parents or students my administrative head gives me the kind of support I need. 1 2 3 4 5



## **9.0 Authority Letters**