THE RELATIONSHIP BETWEEN K.C.S.E EXAMINATION SCORES AND
SYMPTOMS OF ANXIETY, DEPRESSION AND SUICIDE IDEATION AMONG
ADOLESCENTS IN NAIROBI, KENYA

BY

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Fulfillment of the Requirement for the Degree of Master of Arts in Clinical Psychology

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STUDENT'S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University in Nairobi for academic credit.

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ABSTRACT

This study examined the relationship between the Kenya Certificate of Secondary Education (KCSE) examination scores and the symptoms of anxiety, depression and suicide ideation among the adolescents in Nairobi, Kenya. The study was conducted at various churches in Eastlands, Southlands and Westlands. A target population of 100 boys and girls were randomly selected. The inclusion criteria for this sample were participants aged 16, 17, 18 and 19 years who had taken their KCSE examination in October and November 2015. The study commenced on 3rd March 2016, after the results for this examination were released by the Kenya Ministry of Education. The Center for Epidemiological Studies Depression Scale, the Beck’s Anxiety Inventory and the Columbia Suicide Severity Scale (Screener version) were administered to each participant in addition to the researchers own questions targeting the participants’ attitude towards this examination. Pearson-product moment correlation method was used to analyze the data and the results presented in tables. The study found that in regards to participants’ KCSE scores: 41% reported moderate to severe symptoms of anxiety; 64% reported depressive symptoms; and 11% reported suicide ideation. In the population studied, there was no significant correlation between KCSE scores and psychological symptoms of depression as evidenced by the Pearson correlation coefficient of 0.133 at a significance level of 0.186. There was also no relationship between KCSE scores and symptoms of suicide ideation as evidenced by the Pearson correlation coefficient of -0.07 at a significance level of 0.49. There was however a correlation of 0.238 between KCSE scores and anxiety symptoms as evidenced by a significance level of 0.017.
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DEDICATION

To Mark Ambundo for your never-ending belief and trust in my abilities.
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CHAPTER ONE

1.0 INTRODUCTION

This chapter includes the background to the study, the problem statement, the study’s objectives and purpose, its significance and foreseeable limitations. The study seeks to explore whether there is a relationship between the scores of a high stake examination in Kenya, the Kenya Certificate of Secondary Education (K.C.S.E), and the psychological symptoms of anxiety, depression, and suicidal ideation among adolescents who recently sat for this exam and reside in Nairobi.

1.1 Background of the problem

Globally, examinations have been known as a standard way of assessing a person’s knowledge on a given subject matter. They are a means towards certain qualifications which are used by the outside world to gauge a person’s abilities and potential (Thomas, 1976). Examinations, in form of tests and other assessments, are part and parcel of learning as they help a student identify areas they have learnt and where they need to put more effort. They can also be used to motivate students by providing goals and targets they can aim at and for teachers to know the effectiveness of their teaching methods (Kellaghan & Greaney, 2001). Tests are at times used to assess the success of an institution or an education system, informing education policies and enabling the government plan for future improvements in the curricula (Rijn, Béguin & Verstralen, 2012).
Testing in different education systems has changed over the years as evidenced by changing methods of teaching, curricula used, objectives and outcomes of learning (Madaus, 1988). These state-mandated testing changes have caused tremendous growth in standardized testing. High-stakes tests and exams are of particular interest. In this paper, high-stakes testing refers to standardized examinations whose scores have a direct impact on several stakeholders such as the student, their teachers, their school and policy makers (Madaus, 1988). The results from these high-stake exams are used to make important decisions such as promotion of a student from one level to another, the teacher in terms of evaluation and certification; and the school’s performance or even funding (Madaus, 1988; Moses & Nanna, 2007). High-stakes exam method of testing, though effective in evaluation and accountability of schools and teachers, has had several negative effects on the learner.

In Australia, high-stakes testing introduced in 2008 requires that students in grades 3, 5, 7 and 9 take national exams on Reading, Writing, Language and Numeracy (Klenowski & Smith, 2012). The results are used to hold the school and teachers accountable for performance as well as gauge students’ abilities and potentials. These exams have been reported by Dulfer, Polesel and Rice (2012) as having significant negative effects on students’ health and well-being. In England, testing is done from as early as elementary school to rank schools by performance and to determine which student moves on to advanced levels such as secondary school and university (Rotberg, 2006). This testing has been observed to cause assessment-related stress and anxiety in children, which in essence affects children’s mental well-being (Putwain, 2008). In the United States, high stakes testing has been linked to increased apprehension and
decreased self-esteem for students who fail (Readon, Arshan, Atteberry & Kurlaender, 2010). It is also a major source of stress not only to the teachers and schools but more so to the students undertaking the exams (Kruger, Wandle, & Struzziero, 2007).

In many African countries, education is critical for development of a nation. According to the 1990 Jomtien Conference on Education for All, an international consensus was reached on the fact that education is “the single most vital element in combating poverty, empowering women, promoting human rights and democracy, protecting the environment and controlling population growth.” As such, education is viewed as the gateway to a better life both economically and socially. Going by the few documented research on high stakes testing, it is not a rare system despite the low literacy levels in some countries.

Malawi is one of these countries that administer at least three national examinations at three levels, namely: primary- Primary School Leaving Certificate Examination (PSLCE), junior secondary - the Junior Certificate Examination (JCE) and senior secondary- Malawi School Certificate Examination (MSCE) (Chakwera, Khembo, Sireci, 2004). Results from PSLCE are used for selection into form one of the secondary education while results from JCE are meant to test skills and knowledge that can lead to gainful employment as well as promotion to the next level of secondary school (Chakwera et al., 2004). The results from the MSCE, which is equivalent to a high school diploma, are used for certification and selection to the limited spaces in Malawi universities (Chakwera et al., 2004).
This process is highly competitive because the stakes are high as Chakwera et al., 2004 observed:

Students who do not pass the PSLCE do not even make it into secondary school. Even for those who do pass, there are limited spaces in the national secondary schools… For many Malawians, passing the JCE and the MSCE makes the difference between a life of self-sufficiency and a life of poverty. Passing the MSCE makes numerous career options possible that cannot be attained through other routes. (p.11)

In South Africa, though a late entrant into the high-stake testing system, the situation is not so different. Examination scores are used as the prerequisites for entry into higher levels of education. Specifically, scores from the Senior Certificate (Matric) Examination, an equivalent of a high school diploma, are used for selection into universities (Loock & Grobler, 2004). This is the same case in Kenya. The 8-4-4 system in which a person is expected to spend eight years in primary school, four years in secondary and a further four years in University, requires one to sit for at least two national exams; the Kenya Certificate of Primary Education (K.C.P.E.) at the end of primary school and the Kenya Certificate of Secondary Education (K.C.S.E) at the end of secondary school. These are annual examinations that take place during the last term before Christmas break. This season has been observed to be a highly anxious one for both the candidates and their parents. To understand the source of this anxiety, at least in part, one has to realize that scores from these examinations determine, at least for the majority, whether they will move on to the next level, repeat or be “doomed” to a life of poverty.
1.2 Problem Statement

A high premium attached to scores from single exams could adversely affect students’ mental well-being especially those who do not meet the intended mark as per the set standards for higher education enrolment.

While high-stakes examinations can motivate students to work hard in order to qualify for the next level of education, they could also lead to issues with poor self-image, self-esteem, anxiety, depression and even suicidal ideation that may end-up in completed suicides (Jones, 2007; Kruger, Wandle, & Struzziero, 2007, Readon et al., 2010; Dulfer et al., 2012). When examinations do not reflect learning, knowledge acquisition, competence and greater self-reliance but instead leads to psychological disturbances, it demonstrates great deficiency in an education system and undermines the goals of education (Ambaa, 2015).

The main aim of Kenya’s 8-4-4 system at inception was to produce self-reliant students equipped with skills for both the formal and informal sector (Ambaa, 2015). However, with time, a greater emphasis has been put on the scores from KCPE and KCSE examinations. It is the writer’s belief that this focus on scores alone has led to adverse effects on the mental well-being of the students. The proposed study will investigate the effects of KCSE scores on the psychological well-being of adolescents who have taken this examination in the year 2015.

1.3 Purpose of the study

The purpose of this study is to investigate the relationship between KCSE examination scores and symptoms of anxiety, depression and suicidal ideation among
adolescents in Nairobi. The study may provide indicators of the psychological and emotional impact of the KCSE examination requirement upon adolescents in Kenya. In addition, the study may identify recommendations for reducing potential psychological disturbances among adolescents who are required to take KCSE examination.

1.4 Research Questions

1. What are students’ attitudes toward the KCSE examination?
2. What is the relationship between KSCE examination scores and symptoms of depression?
3. What is the relationship between KSCE examination scores and suicidal ideation?
4. What is the relationship between KCSE examination scores and symptoms of anxiety?

1.5 Significance of the study

The findings of this study may inform policy makers on the psychological effects of high-stakes testing on adolescents thereby challenging the existing system for an alternative effective mode of examinations and assessments.

The study may also provide insight to teachers on the negative psychological impact of high-stakes testing. The knowledge generated will not only help the teachers to better prepare the students for examinations but also consider psychological mitigations of effects of scores on their students.

The parents and students will also be enlightened on the existing mental health issues caused by unmet expectations thus be challenged on their outlook on life in view of academic performance.
1.6 Limitations of the study

The first limitation in this study lies in the sample drawn from examinees who reside in Nairobi and may not be representative of all Kenyan examinees.

Secondly, the sample size may not be a true representation of all the KSCE candidates who sat for this examination. The third limitation is that the instrumentation being used is self-report, which may affect results dependent on whether the examinee is completely truthful in responses.

1.7 Definition of Terms

8-4-4:
Kenya’s current system of education which requires students to spend at least 8 years of primary school (class 1 – 8), 4 years of high school (Form 1-4) and at least 4 years of university education.

The Kenya Certificate of Secondary Education (K.C.S.E):
Refers to one of Kenya’s national exam taken at the end of high-school, whose scores are used mostly for selection of candidates into public universities

The Kenya Certificate of Primary Education (K.C.P.E):
Refers to one of Kenya’s national exam taken at the end of primary school education whose scores are used for selection of form one candidates into high schools in Kenya

High-Stakes examination:
Refers to examinations whose scores have a direct impact on several stakeholders such as the student, their teachers, school and policy makers. The scores from these examinations are used to make important decisions such as promotion of a student from one level to
another, the teacher in terms of evaluation and certification; and the school’s performance.

**Depression:**

According to the World Health Organization, “Depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration.”

**Anxiety:**

It is a state of worry and apprehension characterized by feelings of tension, worried thoughts and physical changes such as increased blood pressure and muscle tension.

**Suicide Ideation:**

Refers to thoughts, plans, ideas or considerations of killing oneself or ending one’s life.

**The Kenya Universities and Colleges Central Placement Service (K.U.C.C.P.S):**

Kenya’s corporate body established under the Universities Act of 2012 to ensure a smooth placement process of students who qualify to join public universities.

**The Higher Education Loans Board (H.E.L.B):**

State Corporation established by an Act of Parliament (Cap 213A) in 1995, whose mandate is to disburse loans, bursaries and scholarship to needy Kenyan students pursuing higher education in recognized institutions.

**Adolescence:**

It is defined as a developmental period entered as early as the 12 years of age and exited as late as 22 years (Santrock, 2012). However, for the purposes of this study, the age range is focused on 16 years to 19 years, since it is not uncommon in Kenya for 19 year old candidates to take the KCSE exam.
1.8 Chapter Summary

Examinations are part of life. Indeed, they are important in gauging whether a person has understood the subject under study as well as expose areas of weakness that can be worked on. However, when the scores from a single examination are used to determine whether an individual proceeds to higher education or not, then negative consequences such as psychological disturbances are bound to ensue. This study aims at investigating the relationship between K.C.S.E scores and psychological symptoms of anxiety, depression and suicide ideation among adolescents in Nairobi.

The next chapter provides a literature review on adolescence as part of the human developmental stages and the importance of academic achievement in this stage. The chapter also reviews the global perception on performance in high stakes exams; the development of high-stakes examinations in Kenya; the challenges and the undesirable outcomes of such examinations.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This section will look at various theories on human developmental stages and the place of academic achievement in view of these stages. The chapter will also look at the global perception held by adolescents, their peers, parents and communities on performance in high-stakes exams, how Kenya’s high-stakes examination system came to be and the challenges thereof. This section will consider the negative effects of the high-stakes examination systems and the possible psychological disturbance that may arise from such a system.

2.2 Developmental Stages

Human development refers to the systematic changes that occur in an individual from the time they were born to death. Human development is orderly and occurs in stages that encompass three broad domains namely: physical, cognitive and psychosocial (Sigelman & Rider, 2009). Human development is also a multidisciplinary study of how people change as well as remain the same, reflecting their past through the various stages (Sigelman & Rider, 2009; Kail & Cavanaugh, 2010). Adolescence is one of the stages of development and several theories have explained the development process that occurs during this time in all the three domains mentioned. Adolescence has been defined as the transitional period from childhood safety to adult responsibilities. It is entered as early as 12 years and exited as late as 22 years (Santrock, 2012).
2.2.1 Erik Erikson’s psychosocial theory

In Erik Erikson’s book on *The Life Cycle Completed*, (1985) he expounds on the psychosocial theory of development which occurs in eight biologically determined stages spread throughout life span. Each stage has its own challenge or crisis which if resolved successfully, allows one to better handle the challenges of the next. If the challenge or crisis is not resolved, then the failure is reflected in every subsequent stage. The later stages depend on the foundation laid in the earlier ones. This is what Erikson referred to as the epigenesis principle (Erikson, 1985; Dacey, Travers & Fiore, 2009). Erikson’s theory focused on the social motivation for human behavior at each stage and the importance of early and later experiences (Santrock, 2012).

The psychosocial crisis experienced during adolescence, according to Erikson, is labeled as “identity versus identity confusion.” In this period, adolescents are faced with the questions of who they are, what they are all about and where they are headed in life (Erikson, 1985). It’s not uncommon to find an adolescent trying to dress in one way today and totally different the next day. They may want to become doctors today but change their mind to pursue dance the next day. They may get obsessed with an idea and make it the focus of the things they do. If the adolescent explores roles in a healthy manner and is able to resolve this crisis by positively identifying a positive path to follow in life, then they achieve a positive identity; if not, identity confusion prevails (Santrock, 2012). Erikson, 1985 observed that the psychosocial strength that occurs from this struggle is fidelity. He defined this term, as “not only a renewal on a higher level of the capacity to trust oneself but also the claim to be trustworthy and to be able to commit one’s loyalty to a cause of whatever ideological denomination” (p.60).
2.2.2 Piaget’s cognitive developmental theory

Piaget’s theory involved four stages of cognitive development. Each stage refers to how a child/person constructs their understanding of the world and how this changes over a period of time (Santrock, 2012; Kail & Cavanaugh, 2010). These stages include: the **sensorimotor stage**, from birth to two years, in which the child’s knowledge of the world is based on its senses and motor skills; and the child is completely unaware of itself as subject to the objects (Piaget, 1971); the **preoperational stage**, from 2 years to 7 years, in which the child represents the world with words and images (Santrock, 2012); the **concrete operations stage**, from 7 years to 11 years, in which a child can reason about physical objects (Dacey et al., 2009) and the **formal operation stage**, which is from 11 years through to adulthood. Piaget suggested that children move from one stage to the other in the order mentioned but at different rates (Sigelman & Rider, 2009).

Adolescents fall under the formal operation stage which is characterized by abstract and logical reasoning. With this ability to think in the abstract, adolescents often develop ideal images of different circumstances such as the perfect career, ideal parenting, justice in the world, even perfect school systems. They are able to form hypotheses regarding different situations and reflect on what may be possible or impossible in the future (Kail & Cavanaugh, 2010; Santrock, 2012; Sigelman & Rider, 2009). At this stage, adolescents can basically reason in more complex and varied ways.

2.2.3 Levinson developmental theory

Levinson’s theory of development, as elaborated in his book “The Seasons of a Man’s Life,” focused more on the stages of adult development. Levinson notes that “the
process of entering into adulthood is more lengthy and complex than usually imagined….(and that) a man needs about fifteen years to emerge from adolescence, find his place in adult society and commit himself to a more stable life” (p.71).

The early adult transition period is from 17 years of age up to 22 years (Levinson, 1978; Sigelman & Rider, 2009). In this period, the adolescent is moving from dependence as a child to independence as an adult. It is marked with ideas and dreams of the kind of life they want to live; a vision of one’s life goals and achievements they want to make. This stage is full of questioning of the adolescent’s abilities and capabilities of getting to these goals. It is also “a time of experimenting and testing the dream in the real world” (Santrock, 2012). Levinson urges that developmental tasks ought to be overcome at each stage and for the adolescents, a passage from dependence to independence should occur. This means that the adolescent is thinking of getting on a path to financial independence which basically is the beginning of a rewarding career path.

2.2.4 Emerging Adulthood

Levinson’s theory tends to partially illuminate Arnett’s ideas of emerging adulthood. Emerging adulthood is described by Arnett (2000), as the period of life between late adolescence and early adulthood. Arnett describes this period of life as characterized by “a high degree of change, experimentation and instability as the person explores a variety of possibilities in love, work and worldviews” (p.268). The emerging adulthood period begins with the end of high school and ends in the mid to late 20s. This period features frequent transitions and changes in occupation, educational status, personal relationships and residential status. Emerging adulthood also involves the
confusion of whether one has attained adulthood and therefore expected to take-up adult responsibilities or is still an adolescent hence under the care and instructions of the guardian(s). In this period, concerns about the future are predominant, adolescents are optimistic; others are pessimistic depending on their frame of reference. Major decisions about life, work and convictions are yet to be made and their destiny is yet to be determined. Either way, during this stage adolescents believe that in the end, their desire for happiness and/or success is possible and inevitable (Arnett, 2000).

2.3 Academic development among adolescence and emerging adulthood

Adolescence is a period in which most students undertake their high school exams in preparation for higher education. Higher education is of paramount importance because it means several possibilities for the individual. For instance, higher education means a pathway to forming an identity such as career; as Erikson’s theory informs. It also means an opportunity to establish a stable economic state in view of entering into mature adult responsibilities such as work and family; as Levinson and Arnett’s theories allude to (Erikson, 1985; Levinson, 1978; Arnett 2000). According to Piaget’s theory, during this stage, an adolescent is capable of thinking about the ideal future they may want to have and the possibilities thereof; higher education is one of the entry points to that ideal future. Therefore, it is the writer’s conclusion that exams taken during this period are often carry high stakes in regards to the future of the individual.

Adolescents transitioning to early adulthood may struggle to deal with various dynamics of life including pressures of high stakes examinations. This is especially true of the adolescents with limited coping skills and supportive structures both at home and in school (Jones, 2007).
A good academic standing is of great importance especially for the adolescents living in developing countries (World Development Report, 2013). This is because it means there is a possibility of getting a good job, which in turns means a good income which translates to a better life; both economically and socially (Buchmann, 1999; Ambaa, 2015). While this view on academic achievement is a good idea (Jones, 2007), it has led to some education systems that put more emphasis on high school exit-exam scores, as the most acceptable and legitimate way to access higher education at the university level and consequently a better life (Loock & Grobler, 2004). As a result, the pressure to perform well in the final exam may be playing a part in developing mental health problems among adolescents such as depression and suicidal behaviour (Richardson, Bergen, Martin, Roeger & Allison, 2005; Kwon, Lee & Shin, 2015):

2.4 Global perceptions held on high-stakes examination systems

In the United States of America, at least 26 states require the public schools system to have state-mandated exit exams in English, Language, Arts (ELA) and mathematics before one is awarded a high-school diploma (Reardon et al., 2010; Papay, Murnane, and Willett, 2010). These exams are not only a measure of the student’s knowledge in school but also their future outcome post high school (Holme, Richards, Jimerson & Cohen, 2010). They are also targeted at measuring the school’s standards of instruction, teachers’ efforts and curricula used (Jacob, 2001). It is argued that exit exam requirements raise the bar for graduation thereby motivating students to work harder for graduation. They are also seen to increase the value of the high school diploma in the labor market (Readon et al., 2010; Warren & Grodsky, 2009).
However, there are some few concerns regarding the effects of these exams. For instance, according to Readon et al. (2010) the requirement to pass an examination in order to graduate from high school may change the way students and teachers alike behave towards these exams. Students may read just for the sake of passing the exam as opposed to gaining knowledge. Teachers on the other hand may focus their instructions toward subject areas that are examinable. On the psychological front, Richman, Brown and Clark (1987) (as cited in Readon et al., 2010) found that there was an increase in apprehension and a decrease in self-esteem for students who failed these tests. According to Sharp (2013), there is a possibility that poor exam performance may be one of the many risk factors underlying suicidal behavior.

In South Korea, high school exit exam scores act as gatekeepers of success in life (Kwona, Lee & Shin, 2015). According to Hassanzadeh (2013), the Sueneng is Korea’s national exam taken in the final year of high school every year. The results from this exam are the single most important consideration for college application and acceptance. A significant amount of importance is attached to final examination scores as they are also used to select the best students for the limited and esteemed government positions. The exam determines what profession a Korean will pursue and perhaps even the person they will marry (Hassanzadeh, 2013). This is a high-stake exam and the process is highly competitive. Most families devote a lot of time and resources in the preparation for these exams as they determine the future wellbeing of not just their children but the family as a whole (Kwona et al., 2015). The students work extremely hard to prepare for this exam and inadequate performance according to their expected standards can have very high repercussions. Hassanzadeh (2013) observed that academic pressure is a huge stressor in
the Korean society and it is believed to be one of the causes of the rising cases of youth suicide.

According to the Osaki (2013), Japan’s education system requires one to sit for a national standardized exam at the end of high school, known as the National Center Test for University Admissions. The exam is used to assess how well a person has grasped the basic academic knowledge taught in the 3 years of high school. Thereafter, a student is expected to take another exam from the college they desire to join if their scores from the national exam meet the university’s threshold. Those who do not meet this threshold might be stopped from taking the university’s test. From there, the scores from both the national exam and the University’s exam are combined in order to choose who gets admitted (Osaki, 2013). The Japanese culture also plays a large role in determining how education is viewed (Bosc, 2010). Apart from the permissive attitude toward suicide, Japanese are very conscious of how they are viewed by others in the society. As a result, many individuals are captives to the societal norms because of fear of being shamed. This is regardless of whether the norms are detrimental to their wellbeing or not. Russell (n.d), further notes:

There is an enormous amount of pressure on children to do well in school. Due to the fact that traditionally education has been the only method of raising one’s social status, attainment of higher education and getting into top schools is an important goal for Japanese children. Getting into a good school is very prestigious. Many school-age male suicides can be attributed to difficulty or anticipated difficulty with the college entrance examinations. There are entrance exams for every level of school, including kindergarten. The entrance exam is very stressful because it is the only criteria on which students are evaluated and it is basically a one-shot deal. It is possible to make repeated tries on the exams, but they only occur once each year. The pressures of school take a toll on children and adolescent’s mental health. Failure in school plays a large role in adolescent suicide, and often appears in suicide notes (p.11).
The scenario in Kenya is not so different. Education is highly valued because it is seen as the gateway to economic opportunities and better social status. It is therefore important for most students to perform well on high school exit exams in order to secure places in higher education institutions. However several challenges stand in the way of access to university education. These challenges include an education system in Kenya that puts more emphasis on the results of a single exam score for selection into universities, followed by limited enrollment space in universities, and a rapidly growing population in need of resources to engage in self-employment (Ambaa, 2015).

2.5 The development of Kenya’s high-stakes examination

At the inception of the 8-4-4 system in Kenya, January 1985, the goals were “attitudinal and skills preparations for the world of work and especially self-employment” (Ambaa, 2015, p. 3). The 8-4-4 system meant that a student spent eight years in primary school, four years in secondary school and another four years in university. This 8-4-4 system was clear in its aim to produce self-reliant individuals. Emphasis was put in Mathematics, English and vocational subjects in view that some students might not continue to secondary school; some would opt for self-employment while others would seek employment in non-formal sectors of the economy. The first eight years of primary education were to develop the child’s the ability to self-express; to acquire self-discipline; and to some extent be self-reliant as well as gain academic knowledge (Kinuthia, 2009). To achieve this, several subjects were taught and examined. They included: Mathematics; English; Kiswahili; Science and Agriculture; Geography, History and Civics; Home Science and Business Education; and Art, Craft and Music (ACM). At the end of primary education, the Kenya Certificate of Primary Education
(K.C.P.E) was taken and the scores for each student used for selection into secondary schools.

The next four years of secondary school were aimed at expanding the ability for self-reliance in the hope of contributing significantly in the economy. A student entered secondary school at roughly 14 years of age, with some students delaying to join school due to a delay in primary school admission and lack of enough educational facilities especially in the rural areas (Kinuthia, 2009). Secondary school education was also aimed at preparing the student to manage the demands of further vocational training offered in higher education institutions, the job market and/or self-employment. The curriculum was to cover pre-vocational subjects such as woodwork, metalwork, commerce & accounting, electrical technology, typing and office management among others (Ambaa, 2015). At the end, the student, now transitioning from adolescence to young adult, was supposed to sit for the Kenya Certificate of Secondary Education (K.C.S.E). Admission to public university was on merit, dependent on K.C.S.E scores.

Kenya currently follows the same 8-4-4 system although, due to arising challenges, some few changes were made between the years 2002 and 2005. These challenges have been: “irrelevancy of the curriculum matter to the learner’s daily life, inadequate teaching facilities and equipment” (Ambaa, 2015, p. 25) and a heavy work load. Initially, the system prepared students to take 13 subjects in primary school and 12 subjects in secondary school, presently, a minimum of 5 subjects are examined during K.C.P.E and a minimum of 7 subjects in K.C.S.E (Kinuthia, 2009).

A review of the curriculum to reduce the work load had to be done. This led to the integration of some pre-vocational subjects with others. According to Ambaa (2015);
This move did not alleviate the problems of heavy workload, since what was done here was mere transfer of topics from one class to the other, and changing the names of subjects. As a result of this, education became more examination-oriented; this contradicted the initial objective for equipping the learner with vocational skills, because the practical subjects were phased out” (p.25).

With the emphasis moving from vocational training for self-reliance, to examination scores for performance, teaching methods and learning outcomes also changed. Teachers put more effort to have the candidate ready for examinations by selecting possible questions from few examinable topics and making sure the students can be able to answer them correctly in order to perform well. Students spend more of their time memorizing the materials taught than actually understanding the content (Ambaa, 2015); after all, it is the scores that will get them space into the public university and a higher education means a better life, both financially and socially. In trying to address one challenge in the curriculum, the initial objective for self-reliance was lost and another challenge added: that of importance attached to final exams scores. This problem is compounded by the increasing population that is fighting for the limited spaces in the public universities.

2.6 Kenya’s population in view of high stakes examinations

Presently, the population is estimated to be 44.3 million with half of this population falling below the median age of 18.8 years (Kenya Economic Report, 2014). This means that 50% of the population is either in school or transitioning to higher level of education i.e. university. According to the Kenya Economic Report (2014), a large number of KCSE candidates miss admission either in the university or middle-level colleges each year. Take for instance, in the year 2010, there were 357,488 candidates sat for the KCSE examination. Only 97,137 (27%) managed to achieve the overall grade of C+ (Anami & Oriedo, 2011), which is the minimum aggregate grade from all subjects
taken, required for admission into university. This grade is arrived at by summing all the scores from the individual subjects the candidate took. From this population, 32,000 got admissions to public universities through the Kenya Universities and Colleges Central Placement Service (KUCCPS). About 10,000 joined private universities. The remaining 260,351, had to seek places either in middle-level colleges or drop out of the system (Anami & Oriedo, 2011).

In the year 2013, there were 446,696 candidates sat for the KCSE examination and only 123,365 (27.6%) attained the required grade (C+) for admission to university (Jamah, 2014). Of the total of 446,696, only 41,999 got admissions through the KUCCPS to public universities (Jamah, 2014; KUCCPS, 2014). The remaining candidates who were not eligible for public university admission totaled 404,697 candidates. It is the writer’s opinion, the ineligible candidates had to either join private universities, other tertiary institutions or fall off the education map.

The Kenya Universities and Colleges Central Placement Service (KUCCPS), is Kenya’s corporate body established under the Universities Act of 2012 to ensure a smooth placement process of students who qualify to join public universities. Part of its mandate is to enable student’s access the courses for which they applied taking into account the students' qualifications and listed priorities (KUCCPS, 2016). This means partially, that a student is not guaranteed to enroll into the course they chose. Therefore, during University application process, a student is required to list at least three courses he/she would like to pursue in University in order of preference. From there, the KUCCPS, looks at the student’s KCSE scores and matches the scores to the preferred
course chosen by the student and according to availability of space in that particular course in different public universities. This is a highly competitive process.

So for those whose qualify to join public universities, they are faced with the challenge of getting selected to do their preferred course and in the University of their Choice. Furthermore, they are met with the challenges of inadequate facilities such as space in the university hostels, crowded classrooms, high student to lecturer ratios and lack of enough computer labs and textbooks. The institutions are so overwhelmed by the swelling numbers such that, for some, all the students cannot be in school at the same time (Oketch, 2003).

If it is estimated that 50% of the students in universities in Kenya are self-sponsored (Kenya Economic Report, 2014) and the majority of the universities are private, then it is this writer’s conclusion that access to higher education is a privilege for the rich. The huge percentage of students that falls off the system and do not possess any form of skills for self-reliance is a big threat not only to the security and economic development of the country, but also to the mental, emotional and physical well-being of these individuals.

2.7 Kenyan community attitudes toward K.C.S.E’s performance

The importance of KCSE scores to the student and the Kenyan community can never be underestimated. “This test defines the life of a person after school in Kenya. That is unfortunately how the system here is designed. You can be exceptionally smart, but if you cannot perform on [the KCSE], it means nothing” (Mbuto, 2012).
Every year most students who are set to undertake the KCSE exam are normally an anxious lot. This is because, first, the scores from this exam determine whether they will qualify to join university or not. In 2014, KUCCPS had set the cut-off points for degree placement for male candidates as a “B” of 60 points and for female candidates as a “B-“ of 58 points. These cut-offs are normally based on;

- The total declared capacities for Degree Programmes under Government Sponsorship and
- The performance analysis of the K.C.S.E. Examination Results for a particular year by gender.

Secondly, if the students do manage the cut-off grade for university, it is not a guarantee that they will either get to pursue the course of their choice or join the university they prefer (KUCCPS, 2014). Many courses deemed prestigious by the society, such as engineering, medicine and law, have limited spaces in the public universities and their cut-off grades are even higher. For instance, a bachelor’s degree in medicine requires an overall straight ‘A,’ bachelors in engineering, requires a strong ‘A-’.

Thirdly, government sponsorship through the Higher Education Loans Board (H.E.L.B) is also limited meaning not everyone who qualifies to go to public university manages to secure sponsorship from the government. The application process for this sponsorship is rigorous and highly competitive (H.E.L.B, 2015).

2.7.1 Higher Education Loan requirements

According to the Higher Education Loans Board (2015), to qualify for H.E.L.B loan one had to be first be admitted to a public university. Secondly, the student must
prove that they are financially incapable of fully or partially funding their university education. This is done through filling out of certain special application forms that require personal testimonials on family size and income levels of guardians accompanied with evidence of certified pay slips from the guardian’s employer and tax remission numbers known as personal identification number (P.I.N). For orphans, the evidence of the deceased death certificate is required. In addition, a letter from the local chief or religious leader is a must as they act as referees to the loan applicant and can be called upon to confirm information provided in the application forms. Furthermore, details of at least two guarantors are required in case the student defaults on payment after university. Certified copies of KCPE and KSCE certificates are also a must.

The loan amounts vary depending on the level of need for each student and the tuition cost of course to be undertaken. Some students get full loans that cover their entire tuition and accommodation fees while others get partial loans that cover the full tuition minus accommodation, or partial tuition and accommodation or partial tuition only. Students from private institutions have for a while been viewed as financially capable of catering for their tuition. It is only recently that the members of the Higher Education Loans Board extended the loan service to these students given the rising numbers of students who miss spaces in the public universities and opt to enroll in private ones.

For candidates who qualify to join public university, i.e. they have met the cut-off point of B+, but come from poor backgrounds and cannot finance their university education, HELB loans are their only option. They either get all the required documentation or give-up the dream for a higher education, unless they get sponsorship from a well-wisher. Their guardians as well, view their child’s KCSE examination score,
in this case B+ and above, as their savior, especially those who cannot afford to sponsor their children through University due to low income, unemployment or poverty.

2.7.2 Media’s role

The media, such as television stations, radio stations, print and online newspapers, contribute a lot to how the public view the scores from this examination. The media follow the on-goings of this examination from the registration period all the way to when the scores are announced. For instance, before the examinations, most newspapers, television and radio stations try to analyze the environment in which the exam will be taken. In 2015, the exam was preceded by a three week long teachers’ strike. The media predicted that this would disrupt the candidates in their preparations for their upcoming national exams under headlines such as “Teachers’ strikes poses threat to national exams” (Raballa, 2015); “From bad to worse: court rules; union mobilize; pupils suffer” (Oduor, 2015a); “Abandoned by teachers but still hopeful” (Oduor, 2015b); “Hundreds of candidates to miss out on the 2015 Kenya Certificate of Primary Education” (NTV, 2015).

The media also create such frenzy around the time the scores are released, making it the focus of the community. The newspapers, news from television and radio stations, all esteem the students and schools that performed well under captions such as “Kabarak, Alliance at top of the table as exams results released” (Aduda, 2015); “KCSE 2013: Overall top 100 schools nationally” (Standard, 2014); “KCSE 2013 results: Top 100 candidates nationally” (Ombaka, 2014). The performance highlights create a feeling of
how prestigious good performance is and consequently, how “doomed” the poor performers are.

In the recent past, newspapers have also highlighted the irregularities experienced around this examination such as cheating. The information published under articles such as “15 students in court for cheating in exams” (Wanyama, 2015); “Kaimenyi (cabinet minister for education) Warns KCPE, KCSE 2015 Candidates Against Cheating” (Muindi, 2015) and “14 teachers, two policemen arrested for abetting cheating in KCSE exams” (Karanja, 2015), serve to inform the public of exam irregularities as well as warn of the consequences thereof. This information from newspapers heightens the seriousness of the exam, making it highly valued.

2.7.3 Community’s role

It is this writer’s observation that during the weekend leading to the start of this examination, most schools and religious institutions hold prayer days for the candidates. The parents are involved and most bring along their children and other family members to intensely pray for good performance in this exam. This writer has observed that the community is highly invested in this day, indicating the importance attached to this examination.

The government, through the ministry of education, also makes sure the exam is taken under strict conditions. Teachers who invigilate these exams are selected way before the commencement of the exam and posted to different locations that are away from their local schools and communities. Sealed exam scripts are transported to various destinations under police escort and the candidates are each checked for any unwanted
material that may be used to cheat before they enter the designated exam rooms. Once the exam is done, the scripts are transported under police guard to marking centers, where specially trained government teachers from all over the country mark and enter the scores in a central system. This examination process is highly guarded to ensure that the scores are genuine and unbiased.

For a candidate, the parent and the society, the journey to success in this exam is highly guarded. It is no wonder that with such perceptions attached to the KCSE scores, there is definitely bound to be repercussions both positive and negative on the candidate’s mental well-being.

### 2.8 Effects of high stakes exams performance on psychological disturbance

There are various psychological disturbances that affect adolescents. According to the World Health Organization (2014), depression is the top cause of illness and disability in this group and suicide is the third cause of death among adolescents. Some of the causes of mental health problems among adolescents have been attributed to poverty, humiliation and feelings of devaluation (W.H.O, 2014). The aim of this paper is to look at the possible links between KCSE performance and psychological disturbances such as depression and suicide ideation among adolescents in Kenya.

#### 2.8.1 General Anxiety Disorder

Worry is a common feature in anxiety disorders (DSM 5, 2013). In the past, anxiety and depressive symptoms have been linked among adolescents (Axelson & Birmaher, 2001). Anxiety and depressive symptoms have both distinct features that identify them as separate disorders, as well as common features that link them. Some of
the distinct features of general anxiety according to the DSM-5 (2013) include the following:

- Excessive anxiety/worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities such as work or school performance;
- Individuals find it difficult to control the worry;
- Three or more of the following symptoms have been present for more days than not for the past 6 months: restlessness, being easily fatigued, difficulty concentrating, irritability, muscle tension, sleep disturbance;
- The worry, anxiety or physical symptoms cause clinically significantly distress or impairment in social, occupational or other important areas of functioning;
- The disturbance is not attributable to physiological effects of a substance or another medical condition;
- The disturbance is not better explained by another mental disorder.

2.8.2 Major Depressive Disorder

In Major Depressive Disorder, the distinct features include at least 5 of the following symptoms having been present during the same 2 week period and represent a change from previous functioning. These symptoms cause clinically significant distress or impairment in social, occupational or other important areas of functioning and are not attributable to the physiological effects of a substance or another medical condition. As noted in the DSM 5 (2013):

- Depressed mood as indicated by self or observed by others e.g. feelings of sadness, hopelessness, irritability (for adolescents and children);
- Markedly diminished interest or pleasure in all, or almost all activities;
- Significant weight loss when not dieting or weight gain, or a decrease or increase in appetite;
- Sleep disturbance as seen in either insomnia or hypersomnia;
- Psychomotor agitation or retardation as seen by others or reported by self-e.g. restlessness or being slowed down;
- Fatigue or loss of energy;
- Feelings of worthlessness or excessive or inappropriate guilt;
- Diminished ability to think or concentrate or indecisiveness;
- Recurrent thoughts of death, recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.
Irritability, restlessness, sleep disturbance, difficulty concentrating and social impairment are some of the shared symptoms of both General Anxiety Disorder and Major Depressive Disorder. Axelsson and Birmaher (2001) observed in their study that anxiety and depression are highly correlated and much of the intersection lies in a shared domain of negative affectivity. They noted that both anxious youth and depressed youth share a cognitive style that processes information negatively. The anxiety and depression symptomatology increases from childhood to adolescence, which they thought could be partially as a result of pubertal development.

Around the time for any exam, the students experience stress and anxiety. Indeed, all over the world, tests are categorized as anxiety-provoking stimuli. This is especially the case in high stake exams such as the final exams in high school. A study done by Putwain (2011) identified several related elements that make examinations stressful and anxiety provoking, all of which differed from student to student. These include: anticipation of failure, poor competency belief, value attached to examination credentials, an unfavorable assessment formats, a personal predisposition to view events as threatening, workload or the lack of control over it, thorough effort and preparation for forthcoming examinations and whether ability was viewed as fixed or incremental.

Putwain (2011) further observed that education related anxiety goes beyond the exam, to include other factors such as general education stress. This form of stress is basically ingrained in the school system that advocates for high academic achievement and strict examination procedures.
2.8.3 Suicidal Ideation

Suicide is a complex phenomenon. Its causes vary from psychological, physical to environment factors. No single definition is entirely sufficient to describe the term suicide as it constitutes an array of behaviours. For instance, suicidal thoughts, intentions, ideation, gestures, attempts, completions, equivalents are all terms used to refer to suicide (Silverman, Berman, Sanddal, Carroll & Joiner, 2007). Therefore suicide encompasses the behaviour or act(s) of deliberate self-harm with the intention of taking one’s life (Sharp, 2013) mostly resulting from mental illness or depression (APA, 2015). Suicidal behaviour can happen at any time during the life-span of an individual but it is rarely experienced by children under the age of 5 years (DSM 5, 2013).

According to the World Health Organization fact sheet (2015), suicide is the second leading cause of death among 15 – 29 years old. Furthermore, 75% of global suicides happen in the low- middle income countries. Some of the reasons attributed to these suicides are life stressor such as financial difficulty and social isolation; the greatest predictor of suicide is previous attempts.

This age group (15-29 years) constitutes the adolescents and young adults who are transitioning from high school to higher education and ultimately to adult responsibilities such as career and marriage. Durisch (2013) observed that pressures of academic performance on this age group have been strongly related to suicide problems and are the main cause of it. She notes that, education systems worldwide have been blamed for academic pressure but in essence, the blame ought to be on the systems’ lack of teaching skills to handle life stressors such as unemployment and financial difficulties. The latter
are what these young people miss and these drive them to feelings of helplessness and hopelessness hence the contemplation, attempt and completion of suicide.

Take for instance, in Singapore; a study was done by Chia, Chia & Tai (2008), reviewed letters left after the suicide. The study indicated that the leading causes for suicide, among 10-24 year olds, were school and relationships problems. The school-related problems included difficulty in meeting high standards of performance set by the individuals themselves or their parents as well as school and examination pressures. Relationship-related problems included parental demands and discipline, sibling rivalry and boy/girl friend problems under the same age bracket. The mid-range group of the study included individuals from 25 years to 59 years. Their main problems that led to suicide involved marital and financial problems.

In another earlier study conducted by Richardson et al., (2005) on adolescents from 27 South Australian high schools, results showed that their perception on academic performance was related to their self-esteem, locus of control and depressive symptoms. These variables were linked to suicidal thoughts and behaviours.

According to the DSM 5 (2013), suicide ideation and attempt, with or without a specific plan, is one of the criterion used to identify a depressive episode in an individual. Feelings of depressed mood most of the times, worthlessness, insomnia/hypersomnia, weight loss/gain, inability to concentrate and fatigue are all indicators of the inability to cope. The above symptoms, observed in a same 2-week period diagnose an individual as suffering from major depressive Disorder. Indeed, suicidal behaviour exists at all times during major depressive episodes.
Educational problems such as those that pertain to academic performance, e.g. failing school examinations and occupational problems such as unemployment, threat of job loss, job dissatisfaction and uncertainty about career choices have been identified in the same manual as possible causes of psychological disturbance that warrant clinical attention (DSM 5, 2013).

2.9 Other problems associated with poor KCSE scores

2.9.1 Unemployment

Falling off the map in regards to education trajectory forces many youths, beginning from adolescent stage, to look for alternatives. The first choice is always to look for employment to cater for their up-keep or even support their families of origin (World Development Report, 2007). This is especially the case among the poor in Kenya. However, this group of individuals is faced with many job constraints that limit their chances of getting decent employment. For instance, lack of job-relevant skills, such as insufficient basic skills, technical skills mismatch, behavioral skills mismatch, or deficient entrepreneurial skills, all of which pertain to the Kenyan labour market (Kenya Economic Report, 2014). It becomes clear that without higher education or post-secondary school training, the options for a well-paying job are minimized. To add to the problem, lack of labour demand characterized by an increased working-population, and repressed job creation (Kenya Economic Report, 2014), makes the few available jobs highly competitive.

Currently in Kenya, 35% of the total population is aged between 15-34 years (Kenya Economic Report, 2014). According to this same report 48.6% of this population, between the ages of 15-34, is underemployed, unemployed or underpaid; nearly 33% are
full-time students. Among those who do not further their education after high school, a vast majority hold any form of employment, mostly underpaid employment. The stability of these underpaying jobs is also unsure. This means that they are constantly seeking new; better remunerated and stable jobs hence constitute the group of job-seekers together with the post-secondary educated and unemployed individuals. This state of uncertainty and the swelling numbers of both the new entrants into the job-seekers brackets coupled with a low rate of job creation constitutes an overwhelming number of discouraged job-seekers (Kenya Youth Fact Book, 2010).

According to the Kenya Youth Fact Book, (2010): “A large proportion of young adults and a rapid rate of growth in the working-age population (15-64 years) exacerbate unemployment, prolong dependency on parents, diminish self-esteem and fuels frustrations, which increase the likelihood of violence or conflict.”

The World Development Report (2013) describes jobs as more than just earnings and key drivers of poverty reduction. They are a great contributor to the mental well-being of a person. Not having a job undermines mental health of an individual in several ways. Firstly, joblessness can lead to low self-esteem and a drop in social status, both of which are pertinent to a person’s mental health (Björklund, 1985). Secondly, happiness and life satisfaction, which are personal and societal aspirations, are also affected. Various reports show that a large number of the unemployed are generally unhappy and dissatisfied with life compared to their employed counterparts (Blanchflower & Oswald, 2011). Thirdly, research has pointed out the association of unemployment with stress, depression, alcoholism and heart disease (World Development Report, 2013).
Apart from the above problems, unemployment and underemployment also raise another issue among this same age group; inactivity. Inactivity, as described in the Kenya Youth Fact Book (2010) can either be voluntary, where one chooses to remain at home or be in school instead of working, or involuntary, where one desires to work but is discouraged by the lack of or scarce employment opportunities. The latter is mostly the case for those who do not get to pursue higher education. Involuntary inactivity yields certain societal ills such as crime and delinquency (Omboto, Ondiek, Odera & Ayugi, 2012).

2.9.2 Crime

There is a notion held that education suppresses delinquency among adolescents. Maguin and Loeber (1996) observed that adolescents with low academic achievement are more likely to engage in crime and from an early age. They observed that low social economic status was one, among many, causes of poor academic performance and delinquency.

A vast majority of the youth who engage in crime at an early age do so because of various inter-related reasons. Among these are school related factors such a school culture that emphasizes on high achievement expectations but engages low praise in achievements accomplished (Prior & Paris, 2005). Ojo (2012) observed that low education attainment is also one of the causes of delinquency as most of the adolescents who engage in criminal activities are drop-outs, either because of circumstances such as poverty or broken families.
The Kenya Youth Fact Book (2010), reports that 56% of the crime committed between 2001 and 2009 were committed by young people aged 16 – 25 years. This age bracket marks the period from high school to university levels which highlights the fact that these adolescents and young adults were either not in school for whatever reason or the crimes were school-based. More research showed that a majority of juvenile offenders in Kenya state that their involvement in crime was influenced by family deficiencies such as lack of basic needs provision, while others indicated money (67%), peer pressure (13%) and survival (13%) as causes (Assiango, Stavron, Ravestijn & Jackson, 2001).

Strict regulations for admittance into universities (Anami & Oriedo, 2011), high competition, few spaces in the universities and a struggling economy leaves the youth of Kenya, especially those from poor backgrounds, with very few options for a better life. It is no wonder that they would turn to crime. Recently, it’s thought that many Kenyan youths have been recruited into Alshabaab terror group due to the allure of money and a better life. Although the act of terrorism is a complex, it is not a farfetched thought that this could be one of the avenues of income generation for adolescents who are unable to further their education and lack skills for self-reliance (Sunday Nation, 2009).

2.10 Chapter Summary

Adolescence is a critical period of transition not just physically but also in academics. It is in this period that many adolescents sit for their final high school exams in preparation for higher education in the universities. Several countries’ education systems require that these adolescents attain certain score(s) in order to secure a place in the universities. This expectation puts a lot of pressure for academic achievement
especially the final high school exam. This pressure, while it can serve to motivate these adolescents to read, may have several negative consequences before, during and after the results of these examinations. Such consequences include anxiety, depression, low self-esteem and even suicide/suicide ideation. This chapter reviewed literature from various countries on the subject of high stakes exams and their consequences as well as the probable effects of such an exam, K.C.S.E, in Kenya.

The next chapter will provide the methodology for this study. It will include the research design used; the sampling technique and the sample selection; data collection procedures and ethical considerations as well as the data analysis method to be used.
CHAPTER THREE

3.0 METHODOLOGY

3.1 Introduction

This chapter gives a description of the proposed research design used, the population and sample of the study. It also includes data collection procedures used, an explanation on data analysis procedures and measurements of variables.

3.2 Research Design

The aim of this study was to investigate the relationship between K.C.S.E examination scores and symptoms of anxiety, depression, and suicide ideation among adolescents in selected areas in Nairobi. The study adopted a correlational research design. This research design is used to determine the relationship that may exist between two variables in addition to describing the characteristics of the population.

The correlational technique was the most appropriate design for this study as it assisted in establishing how the outcomes of KCSE results related to an individual’s symptoms of anxiety, depression, and suicide ideation.

3.3 Population

The population of this study consisted of adolescents who were 16-19 years of age, had taken the KCSE examinations in October and November of 2015 and finished high school. The study commenced promptly after this population received their examination results, on 3rd March 2016. The number of students who sat for this KCSE examination in Kenya was 519,607 according to Kenya National Examination Council
(2015), which was ideally the target population for this study. However, it would have been impractical to study the whole population due to limited resources and accessibility, therefore the researcher settled for a population sample size of 100 (one hundred) participants. For this study, a convenience sample was used.

Nairobi County accounts for the largest population of adolescents who have reached high-school according to the Kenya Youth Fact Book (2010). This study population consisted of adolescents, aged 16, 17, 18 and 19, who sat for their KCSE examination in October and November 2015, and received their results on 3rd March 2016. The data collection for this study commenced after official announcement was made of the KCSE exam results by the Ministry of Education within the Kenyan Government.

The participants included were from mid to lower socio economic areas within Nairobi County. These included the communities from some parts of Eastlands, Southlands, and Westlands, which are all very near to the city of Nairobi. The target population for this study included 100 (one hundred) students who attended high school in Nairobi or in various institutions around the country, but lived in Nairobi County, hence the participants had an array of characteristics typical of a high-school student in Kenya.

3.4 Sampling technique

This study used convenience sampling which is a form of non-probability sampling that is quick, economical and easy to obtain. Specifically, convenience sampling is more appropriate when it is difficult to access the target population either
because it is very large and/or scattered; as was the case in this study. The researcher opts to select participants who are easily and conveniently available on volunteer basis (Mugenda & Mugenda, 2003). Convenience sampling therefore involves selecting respondents as they become available.

3.5 Sample

In this study, the participants included adolescents aged 16, 17, 18 and 19 years of age who currently attend various social groups at local churches such as Deliverance church and their affiliations in their communities. The churches are located in Eastlands, Southlands, and Westlands areas near the city of Nairobi, Kenya. The reason for selecting these particular church locations was because they offered free venues for meeting and had functions already underway for these adolescents as they awaited their KCSE results. At least 100 participants formed the sample for the study.

3.6 Data Collection Procedures

3.6.1 Ethical Considerations

3.6.1.1 Institutional & Parental consent

The researcher was expected to first submit the proposal to the Institutional Review Board at U.S.I.U- A for approval of the study before the collection of data. Once approved (see Appendix A), the researcher approached the youth pastors of several Deliverance Churches and their affiliations in Eastlands, Southlands and Westlands, where data was to be collected. The researcher was required to submit an official application letter to the pastors (see Appendix B), accompanied by an introductory letter from the University, requesting for permission to collect data from the social groups that
meet in those churches. A sample notice of invitation to potential participants (see Appendix C) was also to accompany the researcher’s letter to the pastor, requesting posting on notice boards in the church, upon approval to collect data. Once permission was granted (See Appendix D), the researcher through the assistance of the youth leaders was to hand out the parental consent forms (see Appendix E) to the parents of the potential participants aged 16 and 17 years. After the parents signed, these forms were to be returned by either the parent/guardian or the participant (16 and 17 years) before or on the data collection day.

3.6.1.2 Confidentiality

The researcher’s aim was to assure the parents and the potential participants that the study was purely for academic purposes and that confidentiality of the information disclosed was to be maintained.

To ensure that confidentiality was maintained, the researcher assigned a number to all the questionnaires and the respondents were duly instructed not to write their names on the questionnaires. The researcher solely collected the data. Once the data had been collected, it was to be under the safe custody of the researcher at the U.S.I.U research office, under lock and key, only accessible by the researcher and her supervisor for this study’s purpose. The data was thereafter to be entered and analyzed, by the researcher, and the filled-out questionnaires finally destroyed after the study was complete.

3.6.1.3 Participant selection and Inclusion criteria

The participants were selected from the various Deliverance churches and their affiliations in the Eastlands, Southlands and Westlands areas located near the city of
Nairobi, Kenya. The reason for selecting these particular church locations was because they offered free venues for meeting and had functions already underway for the adolescents as they awaited their KCSE results.

Upon the pastor’s approval, the candidates were invited to participate in the study. The inclusion criteria identified participants, both male and female, that were 16, 17, 18 and 19 years of age, literate in the English language, completed the KCSE examinations in October and November of 2015 and had received their results on 3rd March 2016. The sample for this study included 100 (one hundred) participants.

3.6.1.4 Participant consent and assent

Before the start of the study, the researcher explained the purpose of the study and obtained a voluntary written consent from the participants aged 18 years and above (see Appendix F). For the participants aged 16 and 17 years, as mentioned earlier, their guardians or parents had been contacted and requested to give their consent before the data collection day. Thereafter, on the data collection day, the participants aged 16 and 17 years were given the assent forms to sign (see Appendix G).

Once the consent forms had been handed-in, all the participants were informed by the researcher of their discretion to participate or drop from the study at any point. Thereafter, the researcher handed-out the all questionnaires and pencils for self-administration to the participants. The participants were required to complete the questionnaires and once done to remain seated until all the questionnaires had been collected. The researcher collected the filled-out questionnaires and a debrief session was conducted.
A standardized debriefing form (see Appendix H) was given to all the participants during the debrief session. The form included referral sites such as Amani Counseling Centre and their contacts. However, due to the nature of the study, respondents who displayed emotional disturbance were offered immediate free counseling and follow-up if they so wished.

Participation in the study did not attract any monetary rewards for the respondents. The questionnaires were all administered by the researcher according to a schedule confirmed with the various church pastors and upon announcement of the KCSE results by the Ministry of Education. The participants were informed in advance on which days the study was to be conducted. Enough time was allocated to ensure high response rate.

3.6.2 Instrumentation

The data collected in this study was primary data. The instruments used for data collection included a questionnaire with the researcher's own questions (see Appendix I), self-report inventories such as the Center for Epidemiological Studies Depression Scale (CES-DS) (see Appendix J), the Columbia-Suicide Severity Rating Scale (C-SSRS) (see Appendix K), and the Beck Anxiety Inventory (BAI) (see Appendix L) with Likert-type scale questions. These instruments included behavioral and affect dimensions in which participants reported how they acted or felt in the recent past (Phillips, Shadish, Murray, Kubik, Lytle & Birnbaum, 2006; Ayala, Carlson & Kim, 2005).
3.6.2.1 Centre for Epidemiological Studies Depression Scale (CES-DS)

The Centre for Epidemiological Studies Depression Scale (CES-DS) created by Dr. Lenore Sawyer Radloff, is a 20-question multiple choice self-report inventory designed to measure depressive symptomatology in the general population (Philips et al., 2006). The self-report inventory was first published in 1977 (Philips et al., 2006; Baldwin & Shean, 2006). The reasons for selecting the CES-DS for this study included the fact that all the items in the scale were appropriate for the older adolescent population (Phillips et al., 2006; Cheung & Bagley, 1998) compared to the mostly used Beck Depression Scale which included a section on “sexual interests” that the researcher thought was not appropriate for the sample population under study. The CES-DS inventory also works better for a nonclinical sample which is not the case for the Beck Depression Scale according to Skorikov and Vandervoort (2003). CES-DS could also be easily answered by the respondent, rapidly scored and easily applied by the researcher.

There are several studies that have used the CES-DS instrument with slight modifications to check for the reliability of this instrument as well as suit their targeted populations (Gellis, 2010; Gomez & McLauren, 2015; Edwards, Cheavens, Heiy & Cukrowicz, 2010). For the sake of this research the CES-DS inventory was slightly modified to extend the evaluation period to “the past one month” as opposed to the original “past week” period. Attempts to reach Dr. Lenore Sawyer Radlof for consent to this modification were unsuccessful due to lack of email contact details.

The CES-DS inventory used consisted of questions that required the respondent to evaluate feelings they had in the previous month. Each question had a set of at least four possible scores, ranging in intensity and scored as follows:
0 = “Not At All” or rarely (less than 1 day)
1 = “A Little” or some or a little of the time (1-2 days)
2 = “Some” or occasionally or a moderate amount of time (3-4 days)
3 = “A Lot” or all of the time (5-7 days)

For items 4, 8, 12, and 16, the scoring is normally reversed due to the fact that these items are positively phrased. Therefore the scoring was as follows:

3 = “Not At All”
2 = “A Little”
1 = “Some”
0 = “A Lot”

The higher the CES-DS scores, the higher the levels of depression. The developer of the scale put a cut-off of 15 points and above as an indicator of depressive symptoms in adolescents (Baldwin & Shean, 2006; Cheung & Bagley, 1998; Philips et al., 2006).

The CES-DS has been found to have high internal consistency and adequate test-retest reliability (Baldwin & Shean, 2006; Cheung & Bagley, 1998; Philips et al., 2006; Skorikov & Vandervoort, 2003). It was therefore expected that this study would determine whether there were any psychological symptoms of depression among the participants within this sample using CES-DS. This instrument was expected to take approximately 5-10 minutes to complete.

3.6.2.2 Columbia-Suicide Severity Rating Scale (C-SSRS)

The Columbia-Suicide Severity Rating Scale (C-SSRS) was created by Dr. Kelly Posner and his colleagues from Columbia University, University of Pennsylvania and University of Pittsburgh (Brooks, 2011). The lifetime scale was designed to not only
identify and distinguish suicide ideation and behaviour but also to quantify the severity of suicide ideation and behaviour.

According to Posner (n.d), the C-SSRS has several versions; the lifetime/recent version scale used mostly by practitioners to assess the lifetime history of suicidality and recent suicidal ideation and/or behavior; the since-last-visit version scale used to assess suicidal ideation in individuals since their last visit to the clinic and the screener version which is a shortened version of the lifetime scale. The lifetime version and the since-last-visit version consist of four measurable constructs namely, Suicide ideation, Intensity of ideation, Suicidal behaviour and Actual attempts. The screener version consists of a maximum of six questions commonly used by non-clinical populations and often includes all the necessary information for an informed intervention. Question 1-5 of the screener version assess suicidal ideation, while question 6 assesses the range of suicidal behaviour (Posner, n.d).

For the sake of this study, the screener version was used. This was because the population was non-clinical and the study included other instruments therefore a truncated version best fit the time allocated for data collection. In regards to scoring, the screener version’s response format was on a Yes or No basis. This instrument was expected to take 4-6 minutes to complete.

In terms of validity and internal consistency, the C-SSRS was used in 3 separate studies alongside other suicide assessment tools such as the Columbia Suicide History Form that assesses behaviour and the Beck Scale for Suicide Ideation. The results found the C-SSRS to have “good convergent and divergent validity with other multi-informant suicidal ideation and behavior scales” (Posner et al., 2011, p. 1266; Brooks, 2011). These
findings therefore meant that the scale could be adapted as a worthy assessment instrument in both clinical and research settings.

3.6.2.3 Beck Anxiety Inventory (BAI)

The Beck Anxiety Inventory (BAI) was created by Dr. Aaron T. Beck is a 21-question self-report inventory designed to measure the construct of anxiety in an individual (Ayala et al., 2005). The researcher chose this inventory because of it is the most widely used instrument in measuring anxiety (Ayala et al., 2005; Contreras, Fernandez, Malcarne, Ingram & Vaccarino, 2004). It could also be easily applied by the researcher and rapidly scored.

BAI consisted of questions that required the respondent to evaluate common anxiety feelings they have had in the previous month. Such feelings included numbness, dizziness, difficulty breathing, shaking or even nervousness. Each question had a set of at least four possible choices arranged in columns and answered by a cross or tick in the corresponding space (Ayala et al., 2005). These choices included:

(0) Not at all
(1) Mildly, but it didn’t bother me much
(2) Moderately – it wasn’t pleasant at times
(3) Severely – it bothered me a lot

The BAI was scored by adding each column to arrive at a total score; the maximum score being 63. A sum between 0-21 indicated low anxiety, 22-35 indicated moderate anxiety and above 36 indicated a potential cause for concern (Ayala et al., 2005). This instrument was expected to take 5-10 minutes to complete.
The BAI has shown to be reliable, evidenced by a high internal consistency with coefficient alpha values of at least .83 and mean alphas of .88 (Ayala et al., 2005). It was therefore expected to capture any psychological symptoms of anxiety in the sample population.

### 3.7 Risk assessment for participants

The nature of the study was voluntary and anonymous, using paper and pencil self-report inventories. In regards to risk assessment, psychological risk could, for some participants, range from low to moderate risk in terms of emotional disturbance. It was estimated that participants who may have received lower KCSE scores may have low to moderate emotional disturbance while those who may have received high KCSE scores may have low to no emotional disturbance. The researcher was available to briefly talk with any participant after the data collection as well as provide additional debriefing and referrals for counseling.

### 3.8 Participant debrief and referrals

After the questionnaires had been collected, the researcher provided a verbal debrief with the participants. This included a reminder of the purpose of the study and a question and answer session with the participants. Where the researcher noticed any form of emotional or psychological disturbance in any of the participants, a brief support session was offered followed by referrals for further counseling and/or communication with parents/guardians.
3.9 Data Analysis

The data collected from this study was analyzed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics were used to summarize the data in frequencies and percentages. Pearson product-moment correlation (r) was used to compute the relationship between the variables under study. Cross-tabulation was used to assess the percentage of anxiety, depression and suicide ideation symptoms in each grade category. This study aimed to find out how KCSE scores related to symptoms of anxiety, depression and suicide ideation. Data was presented in tables.

3.10 Chapter Summary

This study assumed a correlational research design. It summarized the data in frequencies and percentages as well as revealed relationships that may exist between the variables under study. This was the most suitable design for this study as it informed the relationship between KCSE scores and symptoms of anxiety, depression and suicide ideation among adolescents drawn from various church groups in Nairobi.

The accessible population consisted of participants who sat their KCSE examinations in 2015 and currently live in Nairobi. Since the accessible population was large and scattered, this study used convenience sampling technique to select the sample population. The participants included adolescents aged 16, 17, 18 or 19 years of age who currently attend various social groups at local churches in their communities located in Eastlands, Southlands, and Westlands areas near the city of Nairobi, Kenya.

Primary data was collected using questionnaires on specific days according to the meeting days of each group. Both descriptive and correlational analyses was conducted
on the data to describe the sample population and to establish the relationship between the variables respectively. The aim of this study was to find out the relationship between KCSE scores and symptoms of anxiety, depression and suicide ideation among 2015 KCSE candidates in Nairobi.

The next chapter will provide the results of the study. The results will be presented in tables with brief descriptions.
CHAPTER FOUR

4.0 ANALYSIS OF DATA AND INTERPRETATION OF RESULTS

4.1 Introduction

This chapter presents both the descriptive and analytic results gathered from the respondents. The descriptive results include demographics of the study population such as gender, age and residential area. The descriptive results also include expected grade vis-a-vis grade obtained, participant’s interest in joining university, options other than joining University and the impact of the grade obtained either positive or negative. The analytic results involve correlations between the scoring on the scales of depression, anxiety and suicide, and the KSCE score obtained by the participant. Tables have been used to present the results.

4.2 Demographic Information

Gender

There were a total of 100 respondents as represented in the table below. Majority were female (55%) while the minority were male (45%).

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>55</td>
<td>55.0</td>
</tr>
<tr>
<td>Male</td>
<td>45</td>
<td>45.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.1
Age

This study targeted 16, 17, 18 and 19 year olds. The following table shows the distribution of the ages of respondents. A majority of the respondents were 18 years old (63%), followed by 19 year olds (21%), 17 year olds (15%) and 16 years old (1%).

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 years</td>
<td>63</td>
<td>63.0</td>
</tr>
<tr>
<td>19 years</td>
<td>21</td>
<td>21.0</td>
</tr>
<tr>
<td>17 years</td>
<td>15</td>
<td>15.0</td>
</tr>
<tr>
<td>16 years</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.2

Residential area

Data in this study was collected from participants residing in Eastlands, Southlands and Westlands areas of Nairobi County. The following table indicates that 71% of the respondents reside in Eastlands, followed by 16% who reside in Southlands and 13% from Westlands.

<table>
<thead>
<tr>
<th>Residential Area</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastlands</td>
<td>71</td>
<td>71.0</td>
</tr>
<tr>
<td>Southlands</td>
<td>16</td>
<td>16.0</td>
</tr>
<tr>
<td>Westlands</td>
<td>13</td>
<td>13.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.3
**Interest in joining University**

A majority of the respondents (74%) were very interested in joining university regardless of the grade they scored. Another 18% of the same population indicated that they were interested while 6% were somewhat interested. Only 2% of the population was somewhat not interested or not interested at all.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very interested</td>
<td>74</td>
</tr>
<tr>
<td>Interested</td>
<td>18</td>
</tr>
<tr>
<td>Somewhat interested</td>
<td>6</td>
</tr>
<tr>
<td>Not interested</td>
<td>1</td>
</tr>
<tr>
<td>Somewhat not interested</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 4.4

**Impact of grade obtained on the respondent**

A total of 97 participants responded to this section. Of these, 69% had a positive impact regardless of the grade the participant obtained, while 27% had a negative impact and 1% felt no impact whatsoever.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>69</td>
</tr>
<tr>
<td>Negative</td>
<td>27</td>
</tr>
<tr>
<td>Neither positive nor negative</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>97</strong></td>
</tr>
</tbody>
</table>

Table 4.5
Some of the reasons given in regards to the impact KCSE score had on the participant included:

- It was a waste of time as I am repeating
- At least I did not get a Y (i.e. cancelled results)
- At least I got the opportunity to attend campus through Joint Admissions Board and save my guardians the cost of catering for everything
- At least I have a say at home, my parents also treat me well, friends and relatives are happy and wish that their children should become like me
- At least I got a chance to go to university and do a course I wanted
- At least I know there's a foundation where I can start building on
- It seems that the grade can't help me
- At least I will not miss a chance to join the university and do a career course though I did not get the grade I expected
- I will not get a chance to do the course I wanted; law
- Before I got my results I asked God to enable me to use me with the grade that he will give me and I have faith that He is always there for me
- I am stressed out for not joining university

Other options apart from joining university were varied as shown below. However, most of the population preferred to start their own business.

- Agribusiness
- Bridging of some subjects
- College/ Diploma course
- Community work
- Diploma
- University is not an option, it's a must! It's a do or die; university i must attend
- Focus on perfecting my drawing skills and maybe selling them for an income
- Get a job / Look for work
- Go abroad and do any suitable job
- Go back to high school
- I don’t know
- Investing in my skills and talents
- Join a band do music / Joining arts school or a school for instruments
- Play football as career
- Self-employment/ Start a business
- Stay at home and probably wait for someone to tell me what to do
- This would actually break my heart. I might fail in life
4.3 Objectives Analysis

4.3.1 Attitude towards the KCSE examination

<table>
<thead>
<tr>
<th>Attitude</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score as determinant of successful future</td>
<td>33</td>
<td>30</td>
<td>10</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Score as a reflection of intellectual ability</td>
<td>44</td>
<td>22</td>
<td>16</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Passing was very important to me</td>
<td>4</td>
<td>5</td>
<td>35</td>
<td>14</td>
<td>42</td>
</tr>
<tr>
<td>Passing was very important to parents/guardians</td>
<td>4</td>
<td>4</td>
<td>25</td>
<td>7</td>
<td>60</td>
</tr>
<tr>
<td>Satisfaction of score</td>
<td>13</td>
<td>21</td>
<td>28</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>Re-sit for a better grade</td>
<td>77</td>
<td>11</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>KCSE is marked fairly</td>
<td>32</td>
<td>30</td>
<td>24</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>KCSE is a tough exam</td>
<td>19</td>
<td>28</td>
<td>24</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td>Scores should not be used in university selection</td>
<td>9</td>
<td>9</td>
<td>22</td>
<td>11</td>
<td>47</td>
</tr>
</tbody>
</table>

Table 4.6

Key: 1 strongly disagree, 2 Somewhat disagree, 3 Agree, 4 Somewhat agree, 5 Strongly agree

The table above is a summary of the attitude that students have on the KCSE examination and scores.

- Out of the 100 participants, 63% disagreed with the idea that KCSE score is a determinant of a successful future, while 37% agreed that the score actually determines success in future;
- Thirty four percent of the population believed that the score is a reflection of intellectual ability, while 66% disagreed with the notion;
- Passing the examination was important to 91% of the population compared to 9% to whom passing the examination was not that important;
- According to 92% of the students, their parents/guardians felt it was very important for them to pass the examination while only 8% of the students reported that their parents/guardians did not feel that way;
- Sixty six percent of the participants were satisfied with their score compared to 34% who were not;
- Out of the 100 participants, 88% did not support the idea of re-sitting the examination for a better score; 12% agreed that they would re-sit the examination for a better grade;
In regards to the examination itself, 47% thought that the exam was not tough while 53% believe that it is a tough examination.

Eighty two percent of the participants agreed with the idea that KCSE scores should not be used as a determinant for university admission; 18% believe it should.

4.3.2 Expected Grade versus Grade obtained

Cross-tabulation is done to show the distribution of particular variables in a sample. A cross-tabulation done on the respondents’ expected grade and the grade they scored showed that 34.3% of those who expected an “A” actually achieved it, followed by 19.2% who expected an “A-“ and 22.2% of those who expected a “B+”, and so forth as indicated in table 4 below.

<table>
<thead>
<tr>
<th>Grade expected</th>
<th>Grade scored</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>A-</td>
</tr>
<tr>
<td>A</td>
<td>3.0%</td>
<td>14.1%</td>
</tr>
<tr>
<td>A-</td>
<td>4.0%</td>
<td>6.1%</td>
</tr>
<tr>
<td>B+</td>
<td>4.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td>B</td>
<td>4.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td>B-</td>
<td>4.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>C+</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>C</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>C-</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>D+</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

Table 4.7

Correlation between KCSE grade expected and grade scored

Further correlation as shown in the table 4.8 below indicate that there was a high positive correlation between the expected grade and the actual grade scored. The Pearson correlation coefficient of 0.713 confirms that these two variables (Grade expected and Grade Scored) mutually affected each other. For most of the participants, the grade they
expected was achieved or almost achieved. Out of the 100 participants, 51% scored their expected grade while 49% did not.

<table>
<thead>
<tr>
<th>Grade expected</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
<th>Grade scored</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade expected</td>
<td></td>
<td></td>
<td></td>
<td>Grade scored</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>99</td>
<td>.713**</td>
<td></td>
<td></td>
<td>99</td>
</tr>
</tbody>
</table>

Table 4.8

4.3.3 The relationship between KSCE examination scores and symptoms of depression

Table 4.9 shows a breakdown of the depression scores from the participants in regards to how they felt on the depression scale (Centre for Epidemiological Studies Depression Scale – CES –DS) after they received their KCSE results.

<table>
<thead>
<tr>
<th>Depression Score</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 60</td>
<td>64</td>
<td>64.0</td>
</tr>
<tr>
<td>0 – 14</td>
<td>36</td>
<td>36.0</td>
</tr>
</tbody>
</table>

Table 4.9

The possible score range on the CES-DS is 0 to 60. A cut-off score of 15 was suggestive of depressive symptoms whereas a score of 14 and below suggests no significant depressive symptoms other than what is within normal day to day stress. Scores higher than the cut-off score of 15 indicate increasing levels of depression.
(Baldwin & Shean, 2006; Cheung & Bagley, 1998; Philips et al., 2006). Out of the 100 participants, 64% scored 15 and above while 36% scored 14 and below.

The determination of possible depressive symptom category such as mild, moderate and severe is not part of the CES-DS scoring. The interpretation is based on the algorithm that the higher the depressive score is from the cut-off point of 15 the more severe the depressive symptoms (CESD-R, 2016). For specific diagnosis and severity of a depressive disorder following the scores of the CES-DS, the number of symptoms and their duration is required. Such a diagnosis follows the specifications outlined in the DSM 5 criteria (CESD-R, 2016).

**Correlation between KCSE grade scored and depressive symptoms score**

Though a higher number (64%) of the participants displayed depressive symptoms above the cut-off point of 15, the Pearson correlation coefficient was 0.133 with a significance level of 0.186. Statistically, this was not significant enough to indicate any relationship between depressive score and grade scored. Therefore, in this population, there was no relationship found between participants’ KCSE scores and their depression scores; table 5.0 below illustrates this correlation.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Grade scored</th>
<th>Depression Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade scored</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.133</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.186</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Depression Score</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.133</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.186</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 5.0
The percentage score of those who experienced significant depressive symptoms was 64%. This percentage was at odds with the results from the correlation done between the depressive score and the grade scored. This correlation revealed that there was no relationship between the two variables (depression score and grade scored). More analysis was necessary to explain this disparity.

Further analysis was done by way of cross-tabulation to show the distribution of depression score among the different grades scored. Table 5.1 below illustrates this distribution.

<table>
<thead>
<tr>
<th>Grade scored</th>
<th>Depression score</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-14</td>
<td>15-60</td>
</tr>
<tr>
<td>A</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A-</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>B+</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>B</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>B-</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>C+</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>C-</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 5.1

In regards to those who managed to score the minimum requirement for university entry in Kenya (C+), the results indicated the following:

- Out of the 3 participants who scored A, 2 showed significant depressive symptoms at/or above the cut-off point of 15;
- Out of 18 participants who scored A-, 11 displayed significant depressive symptoms above the cut-off point of 15;
• Those who scored B+ were 14 and 9 of them exhibited significant depressive symptoms above the cut-off point of 15;

• Those who scored B were 13, and 6 of them showed significant depressive symptoms at/or above the cut-off point of 15;

• Those who scored B- were 17 and 11 of them showed significant depressive symptoms at/or above the cut-off point of 15;

• Out of the 17 who scored C+, 10 displayed significant depressive symptoms above the cut-off point of 15.

The above analysis show that depressive symptoms were not just experienced among those who performed poorly but also, among those who scored highly; in this case C+ and above. This finding led the researcher to infer that, it may not have necessarily been a poor grade that determined depressive symptoms but perhaps the unmet expectation for a certain anticipated grade. This inference was supported by the correlation done between participants’ expected score and grade scored (Table 4.8). Forty nine percent of the participants reported that they were not content with what they scored regardless of whether it was C+ and above, grades that in Kenya ideally qualify one to secure a place in public or private University. This finding dismisses the belief that only poor performers are prone to depressive symptoms.

It could also be that some of the participants reported depressive symptoms because of other reasons other than unmet expectations for a particular grade. These reasons, as discussed earlier in literature review, include lack of fees for further education due to poverty or even missed opportunities to pursue desired courses at the university because of high cut-off points and cut-throat competition for these courses. Lack of fees to further
one’s education could lead one to miss out on the opportunity to join university despite good grades. The cut-throat competition for the limited courses could mean that one joins university but is forced to pursue a course that was not their choice especially in the public university. These circumstances could lead to depressive symptoms despite good grades, in this case C+ and above.

4.3.4 Relationship between KSCE examination scores and suicidal ideation

The Columbia-Suicide Severity Rating Scale screen version – recent (C-SSRS) was used to screen for any suicide ideation, plans and intent, following the announcement of the KCSE examination results. The table below shows a summary of the findings.

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you wished you were dead or wished you could go to sleep and not wake up?</td>
<td>100</td>
<td>9</td>
<td>91</td>
</tr>
<tr>
<td>2. Have you actually had any thoughts of killing yourself?</td>
<td>99</td>
<td>4</td>
<td>95</td>
</tr>
<tr>
<td>3. Have you been thinking about how you might kill yourself?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Have you had these thoughts/plans and had some intention of acting on them?</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>5. Do you intend to carry out this plan(s)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Have you ever done anything, started to do anything, or prepared to do anything to end your life? (for whatever reason apart from your recent KCSE results)</td>
<td>98</td>
<td>17</td>
<td>81</td>
</tr>
</tbody>
</table>

Table 5.2

For those whose response to item 2 was YES on table 5.2 above, they were required to answer item 3, 4, 5, and 6. Those whose response to item 2 was NO, they were instructed to skip items 3, 4, 5 and answer item 6. Items 1 and 2 checked for any suicide ideation while items 3, 4 and 5 checked for thoughts, plan and intent. Item 6 checked for past suicidal or self-injurious behavior. As illustrated in table 5.2 above:
- Nine participants (9%) in the study wished they were dead following the announcement of the KCSE results;
- Four participants (4%) reported to have actual thoughts of killing themselves;
- The four participants who reported having actual thoughts of killing themselves, also reported to have thought of a plan of killing themselves and had some intention of acting on the plan;
- Only two participants out of the four who had thoughts, plans and intention of killing themselves reported precise intention of carrying out those plans.
- Seventeen of the participants reported past suicidal or self-injurious behavior.

Items 1 and 2 on the C-SSRS checked for any suicide ideation which was part of this study. From the responses of these two items, 11 participants showed present suicide ideation as shown in table 5.3 below. This 11% is a lower rate of suicide ideation compared to 17% of the reported suicidal ideation among adolescents in high schools in the U.S in 2013 (Centre for Disease Control, 2015).

<table>
<thead>
<tr>
<th>Suicide ideation score</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td>89</td>
<td>89.0</td>
</tr>
<tr>
<td>Present</td>
<td>11</td>
<td>11.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Table 5.3**

**Correlations between KCSE score and suicide ideation**

A correlation was done between the score on suicide ideation (items 1 & 2) and the KCSE score obtained. The Pearson correlation coefficient was -0.07 with a significance level of 0.491. Statistically, this was not significant enough to indicate any relationship
between suicide score and grade scored. Therefore, in this population, there was no
relationship found between participants’ KCSE scores and their suicide ideation; table 5.4
below illustrates this correlation.

<table>
<thead>
<tr>
<th></th>
<th>Grade scored</th>
<th>Suicide score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade scored</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td>Suicide score</td>
<td>Pearson Correlation</td>
<td>-0.070</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.4

Further analysis by way of cross-tabulation was done to show the distribution of
suicide ideation scores across the grades. The results are shown in the following table 5.5.

<table>
<thead>
<tr>
<th>KCSE scores * Suicide ideation score Cross-tabulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicide ideation score</td>
</tr>
<tr>
<td>None Item 1</td>
</tr>
<tr>
<td>Grade scored</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>A-</td>
</tr>
<tr>
<td>B+</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>B-</td>
</tr>
<tr>
<td>C+</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>C-</td>
</tr>
<tr>
<td>D</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 5.5
Suicidal ideation in relation to KCSE scores was present among those who scored grades A- (2 participants), B (3 participants), C+ (4 participants), C (1 participant) and C- (1 participant). Out of a total of 11 participants who reported suicide ideation associated with their KCSE score, 9 participants scored C+ and above.

These cross-tabulation results indicate that suicidal ideation in relation to KCSE scores was present not only among poor performers (C and below) but also among good performers (C+ and above). The possible reasons for this outcome could be linked to what the researcher inferred earlier. This inference was that, it was not necessarily a poor grade that determined suicidal ideation but perhaps unmet expectation for a certain anticipated grade. This inference was supported by the correlation done between participants’ expected score and grade scored (Table 4.8). Forty nine percent of the participants were not content with what they scored regardless of whether it was C+ and above, grades that in Kenya ideally should secure one a place in public or private University. This dismisses the belief that only poor performers are prone to suicidal symptoms.

It could also be that some of the participants were suicidal because of other reasons in addition to KCSE performance. These reasons, as discussed earlier in literature review, include lack of fees for further education due to poverty or even missed opportunities to pursue desired courses at the university because of high cut-off points and cut-throat competition for these courses. Lack of fees to further one’s education could lead one to miss out on the opportunity to join university despite good grades. The cut-throat competition for the limited courses could mean that one joins university but is forced to
pursue a course that was not their choice especially in the public university. These circumstances threaten one’s future and could lead to suicidal thoughts.

4.3.5 The relationship between KCSE examination scores and symptoms of anxiety

In chapter 2, the anxiety effects of a high-stakes examination were discussed. Using the Beck’s anxiety scale, a score between 0 -21 indicates very low anxiety, while a score between 22 – 35 indicates moderate anxiety and a score exceeding 36 indicates severe anxiety that is a potential cause for concern (Ayala et al., 2005). Out of the 100 participants, 59% (59 participants) displayed low anxiety symptoms, 26% (26 participants) showed moderate symptoms of anxiety while 15% (15 participants) presented with severe anxiety symptoms.

The following table 5.6 shows a breakdown of these anxiety scores during the past few weeks as the participants waited for the results and shortly after receiving them.

<table>
<thead>
<tr>
<th>Anxiety Score</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>59</td>
<td>60.0</td>
</tr>
<tr>
<td>Moderate</td>
<td>26</td>
<td>26.0</td>
</tr>
<tr>
<td>Severe</td>
<td>15</td>
<td>14.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 5.6
Correlations between KCSE scores and anxiety score

The results showed that there was a weak positive correlation of +0.238 between participants’ KCSE score and anxiety score as shown in table 5.7 below.

<table>
<thead>
<tr>
<th></th>
<th>Grade scored</th>
<th>Anxiety score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade scored</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td>Anxiety score</td>
<td>Pearson Correlation</td>
<td>.238*</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.017</td>
</tr>
</tbody>
</table>

Table 5.7
The Pearson correlation coefficient of +0.238 illustrated that:

1) These two variables (Grade scored and Anxiety score) affect each other positively. This means that level of anxiety increased as the participant waited for his/her results and even shortly after they received their score.

2) The relationship between the KCSE grade scored and symptoms of anxiety was weak. This means that the anticipation of results from KCSE examination and the grade scored did affect the participants’ anxiety levels. However, this association was faint.

Further analysis was done by way of cross-tabulation to show the distribution of anxiety score across the grades. The results showed that some level of anxiety was experienced across all participants; those who performed well and those who didn’t. Those whose score was a B+ reported more on severe anxiety while those who scored C+ reported more on low anxiety. The following table 5.8 illustrates these results.
4.4 Chapter summary

This study sought to answer the following research questions:

1) What are students’ attitudes toward the KCSE examination?

2) What is the relationship between KSCE examination scores and symptoms of depression?

3) What is the relationship between KSCE examination scores and suicidal ideation?

4) What is the relationship between KCSE examination scores and symptoms of anxiety?

Several instruments were used to measure the variables depression, suicide ideation and anxiety in relation to KCSE scores. These were Centre for Epidemiological Studies Depression Scale (CES-DS), Columbia-Suicide Severity Rating Scale (C-SSRS) and Beck Anxiety Inventory (BAI).
The study consisted of 100 participants from the Eastlands, Westlands and Southlands area of Nairobi. A correlation done between expected score and grade scored showed that 51% of the participants achieved the grade they expected to score.

In regards to depressive symptoms 64% of these participants displayed depressive symptoms. The Pearson correlation coefficient was 0.133 with a significance level of 0.186. Statistically, this was not significant enough to indicate any relationship between depressive score and grade scored. Further cross-tabulation was done on the depressive scores and KSCE scores. This showed that participants who scored C+ and above, grades that ideally qualify one to join university, displayed significant depressive symptoms. This also meant that depressive symptoms were not just experienced among those who performed poorly but also, among those who scored highly.

In regards to suicide ideation, 9% of the population (9 participants) in the study wished they were dead following the announcement of the KCSE results. Four Percent (4 participants) had thoughts of killing themselves and had a plan. Of those who had thoughts and plans of killing themselves, 2% (2 participants) had the intention of carrying out those plans. The Pearson correlation coefficient was -0.07 with a significance level of 0.491. Statistically, this was not significant enough to indicate any relationship between suicide score and grade scored. A cross-tabulation on KCSE scores and suicide ideation indicated that out of a total of 11 participants who reported suicide ideation, 9 participants scored C+ and above. This indicates that even good performers had suicide ideation either related to the scores they got or other factors not part of this study.

Out of the 100 participants, 59% displayed low anxiety symptoms, 26% showed moderate symptoms of anxiety while 15% presented with severe anxiety symptoms.
There was a weak positive correlation of 01.238 between the level of anxiety and the KSCE score. However it was noted that some level of anxiety was experienced across all participants; those who performed well and those who didn’t.

The following chapter will discuss these findings, arrive at conclusions based on these findings and propose appropriate recommendations.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter will begin with a summary of the study. The summary will be followed by a discussion and conclusions of the study’s findings with respect to the results analyzed and reported in chapter four. Thereafter, some recommendations will be made.

5.2 Summary

The purpose of this study was to investigate the relationship between KCSE examination scores and symptoms of anxiety, depression and suicidal ideation among adolescents in Nairobi. In addition, the study aimed at looking at the attitude that students have towards the KCSE examinations. To achieve this purpose, the study was guided by the following research questions:

1) What are students’ attitudes toward the KCSE examination?
2) What is the relationship between KSCE examination scores and symptoms of depression?
3) What is the relationship between KSCE examination scores and suicidal ideation?
4) What is the relationship between KCSE examination scores and symptoms of anxiety?

A correlational research design was used to determine the relationship that existed between KCSE scores and psychological symptoms of anxiety, depression and suicide
ideation. The researcher used self-report instruments namely: the Center for Epidemiological Studies Depression Scale (CES-DS), the Columbia-Suicide Severity Rating Scale (C-SSRS) and the Beck Anxiety Inventory (BAI). In addition to these instruments, the researcher included some questions on attitude towards the KCSE examination. All these were combined to form one questionnaire that was self-administered by a participant sample of 100 adolescents aged 16, 17, 18 and 19 years. This sample was randomly selected from 3 areas in Nairobi County namely: Eastlands, Southlands and Westlands.

5.3 Discussion

5.3.1 Challenges of this study

One of the challenges met earlier on in the study was getting the consent forms signed by parents/ guardians of participants aged 16 and 17 years. Most of them were curious to know what the study was about and any potential harm to their children. They also wanted to know whether the study was for commercial purposes and if so what monetary gain their children would receive for participation. Most of these concerns were clarified on phone. A few requested to meet the researcher in person. The process of addressing the parents/guardians’ concerns delayed the anticipated data collection day by two days. It also necessitated out-of-the –budget trips to some of the guardians/parents’ places of work. The youth leaders were very helpful in getting the parents/guardians’ buy-in to the study. The letter from U.S.I.U Institutional Review Board’s also assisted in legitimizing the study and proving that the study was academic based.
The short delay in getting the consent forms meant that the researcher was also pressed for time as the data was to be collected immediately after the KCSE results had been announced. The two days spent in collecting consent forms from parents were recovered by collection of data on consecutive days of the following the announcement of KCSE results week (9th and 10th March, 2016). This meant that the researcher had to request the youth leaders to convene meetings on days that were not their usual meeting days. Luckily, this was possible as most of the participants were available and there was space at their respective churches to conduct the study on the given dates.

Another challenge was getting all the participants who had signed up for the study to show up on the day of data collection. Some did not show up and efforts to reach them were futile. This meant that the researcher had to look for more participants to meet the desired sample size of 100 participants. Others showed up for the study but had not signed-up to be part of it when the notice was put-up. Given the short time and the requirement for signed consent forms, the researcher was limited to engaging with 18 - 19 year olds of those who hadn’t previously signed-up but came on the data collection day.

The other challenge faced in this study was getting adolescents to sit long enough to fill-out the questionnaire. The questionnaires were filled-out in silent classroom settings with each participant on their desk. However, many of the participants displayed short attention spans. They would get easily distracted and wanted to talk to their neighbors. This made data collection per group take longer than the 20 minutes anticipated.

Another challenge was incomplete questionnaires. Feedback from some of the participants was that the questionnaire was too long. Three instruments were combined in
one questionnaire and were to be filled-out in one sitting. The length of the questionnaire coupled with the fact that the participants had short attention span meant that some participants did not complete their questionnaires. A follow-up research should consider administering the instruments separately and maybe at short intervals.

5.3.2 Successes of this study

The instruments used for this study were easily accessible, free and reliable scales for use in this study. Dr. Kelly Posner, the creator of the Columbia-Suicide Severity Scale was particularly open and helpful to the use of this instrument for this study (see Appendix M). Pearson Assessment, managers of the Beck inventory scales, also gave permission to use the Beck Anxiety Scale for student research (see Appendix N). Attempts to reach Dr. Lenore Sawyer Radlof for consent to use the Center for Epidemiological Studies Depression Scale were unsuccessful due to lack of email contact details. However, the instrument was readily available from internet sources and had been used in various studies since its creation in 1977.

The youth leaders from the various churches were very cooperative. They openly welcomed the idea of conducting the research on the relationship between KCSE scores and psychological symptoms of depression, anxiety and suicide ideation among the adolescents in their churches. They mentioned that this was a concern for them and the fact that someone was willing to do the study was very encouraging. The leaders requested for the researcher to share the findings once the study was done.
Participants who showed-up for the study had no problems with signing the consent and assent forms. This helped in ease of data collection and also in creating rapport between the researcher and the participants.

During the debrief session, some of the feedback received was that majority of the participants were not aware of psychological symptoms that may result from unmet expectations in their KCSE performance. After the data collection, some participants mentioned that they could now put a name to what they were experiencing. Others felt that the questions touched on inner-most feelings that they had not shared with anyone. The research opened a channel for discussion with their leaders and hopefully their parents.

The fact that this study enabled the participants to identify some of the psychological problems they were facing was an indication of the benefits of access to counselling and psycho-education among this population. It showed that there is need to have counseling before; during and even after KCSE results are announced. It is necessary for leaders of these groups, teachers and parents/guardians to link up counselors and adolescents to avert some of the undesirable psychological effects that KCSE examination yield.

At the out-set of this study the researcher anticipated the findings that there is a relationship between KCSE scores and psychological symptoms of anxiety, depression and suicide ideation. However there was no evidence in research. Conducting this study clarified the kind of relationship that existed between these variables among selected adolescents in Nairobi. Further research on this study can aid in recognition of how this high stakes examination, KCSE, impacts adolescents in Kenya to the point of depression, suicide ideation as well as anxiety.
5.3.2 Students attitude towards the KCSE examination

Ninety one percent of the participants reported that passing KCSE examination was important to them. This belief was also held by their parents/guardians as 92% of the candidates reported that passing this examination was very important to their parents/guardians. Out of this same population, 98% indicated that they were interested in joining university. These findings support two observations made in literature review:

1) That the community has heavily invested in this examination in terms of preparation such as extra tuition, prayers and high expectations for good performance. These are indications of this exam’s importance to the community.

2) That it is important for most students to perform well on high school exit exams in order to secure places in higher education institutions because majority would want to pursue further education at university.

Another important observation in regards to the attitude towards KCSE examination was that 53% of the population in the study agreed that this examination is a tough one. Eighty eight percent would not agree to re-sit the examination for a better score. These findings confirm the notion discussed in literature review that high-stakes examinations such as the KCSE yield so much stress, especially if they carry with them high performance expectations. It’s no wonder that majority would rather not re-sit the examinations.

Some of the responses given by some participants indicate that the KCSE score had a negative impact on them because they did not perform well enough to secure a place at a
public university. On the other hand, the KCSE score had a positive impact on some because they scored a grade that would enable them join University through the Kenya Universities and Colleges Central Placement Service, formerly the Joint Admissions Board; hence save the guardians the cost. These responses further illustrate the importance of this examination to the adolescents and their parents/guardians. It also demonstrates how vital it is for some of these adolescents to pass the examination because this would mean a possibility for higher education level which the parents/guardians cannot afford. This situation can lead to a lot of distress among adolescents especially before, during and after KCSE examination. Such distress can lead to psychological symptoms of anxiety, depression or even suicide ideation as discussed in literature review.

5.3.3 The relationship between KSCE examination scores and symptoms of depression

According to the analysis done in chapter four, 64% of the participants in this study reported significant depressive symptoms while 36% had no significant depressive symptoms other than what is within normal day to day stress. On running the correlation between the grade scored and depression score, the Pearson correlation coefficient was 0.133 with a significance level of 0.186. Statistically, this was not significant enough to indicate any relationship between depressive score and grade scored. The percentage of those who reported depressive symptoms was at odds with the results from the correlation done between the depressive score and the grade scored. This disparity necessitated more analysis.
Further analysis done by way of cross-tabulation between specific grades and the depression score showed that, out of the 64% who reported significant depressive symptoms, 49% scored C+ and above, grades that should secure one a spot in public or private university in Kenya. The question that remained was: why a good performer, in this case one who has managed to score the minimum entry grade for university in Kenya, C+, experience the same level of depressive symptoms as a poor performer, i.e. C and below? For instance, why would a participant who scored an A-, experience the same level of depressive symptoms as a participant who scored a C? It is this researcher’s belief that the answer may be associated with the candidate’s expectations.

This conclusion, that unmet expectations could have contributed to depressive symptoms among some of the participants, was supported by the correlation on grade expectation versus grade obtained (Table 4.8). The correlation between grade expected and grade scored revealed that 49% of the participants did not get the grade they expected. So, for instance, if a participant who scored an A- had anticipated getting a straight A, the unmet expectation may have led this participant, though having scored a good grade, to feel as depressed as a participant who scored a C. Or a participant who expected to score a C and actually scored a C would be less depressed compared to one who expected an A but scored an A-. Therefore, in this population, it may not necessarily be poor grades that determined their depressive symptoms but the unmet expectation for an anticipated grade. This conclusion can form the basis for further research in future.

Of particular interest also were the participants who scored A, the highest possible score. These participants still reported depressive symptoms. This may be an indication that there were other factors which may have contributed to depressive symptoms
Alongside unmet expectations for certain anticipated grade. For instance, lack of fees due to poverty and the inability to get funding to further one’s education through Higher Education Loans Board. This kind of lack could lead one to miss out on the opportunity to join university despite good grades. Such an eventuality, even the thought of it, could actually lead one to feelings of hopelessness regarding the future due to the missed opportunities. This could result in depressive symptoms. This was a probable circumstance for some of the participants seeing as they came from middle to lower income areas of Nairobi. A follow-up interview with each participant may have revealed potentially other factors contributing to symptoms of depression as well as add clarity to the conclusions made.

5.3.4 The relationship between KSCE examination scores and suicidal ideation

A correlation done between the suicide ideation score and the grade scored showed that the Pearson correlation coefficient was -0.07 with a significance level of 0.491. Statistically, this was not significant enough to indicate any relationship between suicide score and grade scored. This meant that there was no relationship between suicide ideation and grade scored in this population. Further analysis by way of cross-tabulation between suicide ideation score and the grade scored revealed that suicidal ideation was present among those who scored grades A- (2 participants), B (3 participants), C+ (4 participants), C (1 participant) and C- (1 participant).

In regards to the correlation between grade scored and suicide ideation, the findings were did not support the idea discussed earlier in literature review; that poor performance may contribute to thoughts of suicide among some adolescents. Cross-tabulations done indicated that even students with good scores (C+ and above) also reported symptoms of
suicide ideation. These findings were contrary to the belief that those who perform well (in Kenya, grade C+ and above) are not prone to psychological symptoms of suicide ideation. It appeared that the suicide ideation score was not only in relation to the grade scored but also other factors that may or may not have been part of this study.

It was this researcher’s inference, supported by the correlation on grade expectation versus grade obtained, that unmet expectations could have contributed to suicide ideation among some of the participants. The correlation between grade expected and grade scored revealed that 49% of the participants did not get the grade they expected. So, for instance, if a participant who scored a B anticipated scoring a B+, the unmet expectation may have led this participant, though having scored a good grade, to have suicidal ideation comparable to a participant who scored lower.

These findings further support the researcher’s inference that, it may not have been poor grades that caused a participant to think of suicide but maybe the unmet expectation for an anticipated grade. The unmet expectation for an anticipated grade could trigger feelings of hopelessness regarding the further opportunities; resulting in ideas of ending one’s life. This conclusion, in addition to other factors that may have contributed to suicidal ideation alongside unmet expectations for anticipated grades, can form the basis of further research in this population. An interview with each participant may have revealed potentially other factors contributing to symptoms of suicidal ideation.

5.3.5 The relationship between KCSE examination scores and symptoms of anxiety

In the study, 59% displayed low anxiety symptoms, 26% showed moderate symptoms of anxiety, while 15% presented with severe anxiety symptoms. There was a
weak positive correlation of 0.238 between participants’ KCSE score and anxiety score. This meant that there is a relationship between anxiety and KCSE examination scores (both before and shortly after the results are announced), however this relationship is faint. Upon further analysis by way of cross-tabulation between the grade scored and the anxiety scored, the results showed that some level of anxiety was experienced across all participants; those who performed well (C+ and above) and those who didn’t (C and below).

In regards to the relationship between anxiety and KCSE examination scores, these findings confirm what was discussed in literature review. High-stakes examinations do yield some level of anxiety, regardless of performance. However in regards to good performance, the cross-tabulation done showed that those whose score was a B+ reported more on severe anxiety while those who scored C+ reported more on low anxiety. This difference in anxiety levels among these two groups could be as a result of reasons discussed earlier in literature review. The reasons ranged from uncertainty of whether one will get to do the course they wanted in university or not; whether one gets space in the university of choice or not; or even other factors such as lack of fees for university education. In deed some of the responses given as to why some participants’ grade might have had a negative impact on the participants’ reveal that some were worried that they would not get to pursue their career of choice at the university, even though they qualified to join a university. An interview with each participant may have revealed potentially other factors contributing to symptoms of anxiety.
5.4 Conclusion

The conclusion drawn from this study is the fact that poor scores from high stakes examinations such as the KCSE may not solely be the cause for depressive, anxiety and suicidal symptoms. Unmet expectations for a certain anticipated grade alongside other factors could contribute to these psychological symptoms among adolescents. This conclusion was arrived at based on observations such as; participants who scored A-displayed symptoms of depression, anxiety and suicide ideation alongside those who scored C+ and below.

The study’s objectives were met in that the indicators of psychological symptoms of depression, anxiety and suicide ideation were identified adequately through the self-report instruments namely the Center for Epidemiological Studies Depression Scale (CES-DS), the Columbia-Suicide Severity Rating Scale (C-SSRS) and the Beck Anxiety Inventory (BAI). As evidenced by studies by Phillips et al., 2006 & Skorikov et al., 2003, regarding the CES-DS; Psoner et al., 2011, with regard to the C-SSRS and Ayala et al., 2005 in their use of the Beck Anxiety Inventory, this study utilized these three inventories to identify the psychological symptoms of depression, suicide ideation and anxiety among adolescents who had just received their KCSE scores on 3rd March 2016. These instruments indicate that the measures were valid and reliable.

The results from this study revealed an interesting finding to other possible causes of anxiety, depression and suicide ideation among adolescents in Nairobi other than the KCSE scores: unmet expectations. An interview with each participant may have revealed potentially other factors contributing to these psychological symptoms. Or perhaps utilization of another instrument such as Beck’s Depression Inventory may have given
more in-depth information to the triggers for depression. The inventory used in this study did not allow specification for mild versus moderate versus severe depressive symptoms, which would be helpful to understand the degree of depressive symptoms more clearly. Understanding the degree of depressive symptoms could support recommendations for appropriate types of interventions such as psychotherapy or counseling toward prevention, stabilization and remission. This is significant in terms of prevention of suicide ideation or intention, which is commonly associated with depressive symptoms.

5.5 Recommendations

Adolescence is an age when individuals seek an identity (Santrock, 2012). This identity is partially informed by academic achievement and what this achievement means for their future. According to Piaget (1971), adolescents are capable of thinking about the ideal future they want to have and the possibilities thereof; higher education is one of the entry points to that ideal future. This is especially true for adolescents in developing countries such as Kenya (Ambaa, 2015).

High-stakes examinations such as KCSE carry with them the pressure of good performance because this means a chance to pursue higher education which in turn means better job prospects and future (Ambaa, 2015). Pressure to perform well may cause psychological symptoms (Hassanzadeh, 2013; Readon et al., 2010; Sharp, 2013; Holme et al., 2010). This study revealed that 64% of the participants had significant symptoms of depression that warrant intervention. In regards to anxiety associated with KCSE results, 59% displayed low anxiety symptoms, 26% showed moderate symptoms of anxiety while 15% presented with severe anxiety symptoms. Symptoms of suicide ideation in relation to KCSE scores were reported in at least 11 of the participants. These
symptoms were evident in both good performance (C+ and above) as well as poor performance (C and below). This is evidence that KCSE examination and the expectations that come along with it do affect the mental well-being of adolescents in Nairobi.

These findings coupled by other factors not part of this study such as poverty, limited opportunities in public and private universities as well as lack of jobs compound the problem. What this means is, adolescents taking the KCSE exams in Nairobi are at risk of serious mental issues.

According to a study done by Ndetei, Khasakhala, Nyabola, Ongecha-Owuor, Seedat, Mutiso, Kokonya & Odhiambo, 2008, the prevalence of anxiety and depression among adolescents in Kenya was above 40% with the possibility of an increase if appropriate policies, clinical practices and other interventions were not made. The stakeholders such as the Kenya ministry of education, institute of curriculum developers, school administrators, parents/guardians of these adolescents and even clinicians should bear in mind these psychological risks associated with KCSE examination. Some of the necessary interventions that these stakeholders should start considering are discussed below.

5.5.1 Education policies

The current system of education in Kenya requires that at the end of high school education, one should sit for the KCSE examination. The score from this examination is used to determine whether one is eligible for university education or not. From this study, majority of the participants (98%) reported interest in joining university. This means that
almost everyone in this population wanted to proceed to higher education. It is well known that the Kenya universities especially the public institutions have limited capacity to absorb all the qualified candidates therefore the cut-off points for university admission are normally raised, locking out a majority who ideally have qualified to join university (Oduor, 2016; KUCCPS, 2016). This increases the pressure to perform well and with increased pressure to perform well, psychological symptoms of anxiety, depression and suicide ideation are bound to occur.

Some of the changes that should be considered by the ministry of education and curriculum developers include:

1) Finding alternative high-school curriculums whose focus is not on academic scores but on attainment of skills for self-reliance. The goal for self-reliance is to enable one, whether good at academics or not, to fend for themselves because they are armed with necessary skills that do not require university education.

2) Redefining of the criteria for university admissions. A single score from an annual exam should not define a person’s eligibility to university. This is because anything can influence the performance of a single exam from illness to non-conducive environment at the time of taking the exam. Students who were preparing for the 2015 KCSE examination had to go home for at least 3 weeks before the exam commenced because their teachers went on strike. This interrupted their preparation and possibly disturbed their focus on the examination. A cumulative Grade Point Average system is a better criterion for consideration for university admission.
3) Expansion of universities without compromising the quality of education and training should be considered. The number of students who perform well each year keeps rising; however the universities spaces do not increase at the same rate (Oduor, 2016). This means more candidates are locked out each year. This forces the adolescents to work harder so that they meet the qualifications. This pressure may be contributing to the psychological symptoms of depression, anxiety and suicide ideation. I think it’s a high time the government and relevant bodies considered expansion or multiplication of universities.

4) Partnerships with other countries’ universities. The government should consider coming up with a system in which they partner with other countries whose education sector is not as overwhelmed as Kenya’s in order to secure spaces for qualified candidates to get university education. Through scholarships and other government sponsorships, KCSE candidates who qualify to join university could study abroad. This option could ease the psychological distress associated with KCSE scores that do not meet the high cut-off points for local universities admission.

5.5.2 School administration and Clinicians Interventions

Apart from education policy re-structuring, preventative measures as opposed to curative ones should be employed especially by school administrators. These include:

1) Guidance and counseling should be offered to students at all levels of education and especially before and after a candidate sits for their KCSE examination. Schools should employ counselors who are conversant with the psychological problems that affect these adolescents. For instance, results from this study
indicated that symptoms of depression among the 2015 KCSE candidates were as a result of more factors other than KCSE scores. Maybe poverty, unmet expectations, poor support systems etc. Some of the pressure caused by KCSE examinations can be lessened by proper career guidance, life-skills training, emotional intelligence, coping skills and support systems. An adolescent may have a myopic view of what success in life means and this could lead to serious psychological disturbance such as those that arise from unmet expectations and/or poor KCSE scores.

2) This study revealed that both the poor performers and good performers reported symptoms of anxiety, depression and even suicide ideation. The major finding here was that unmet expectation for a particular anticipated grade could have contributed to these symptoms among those who ideally performed well. Clinicians, in treating this population should be aware that both the good performers and poor performers require help in processing the outcomes of KCSE examinations. It is easy to overlook the good performers because it is assumed they are okay with their scores.

5.5.3 Parental/Guardian and community interventions

The community, especially parents/guardians, plays a critical role in adolescents’ lives. This was especially true in the population that was studied. According to 67% of the participants, their parents/guardians felt it was very important for them to pass the KCSE examination. Some of the recommendations for parents/guardians and the community include:
1) Parents/guardians should be involved in their adolescents’ lives not as an addition to the pressure for good performance, as was evident from this study, but for support and encouragement. Parents/guardians may not be aware of the effects of the pressure to perform well on their children. This study serves as an eye-opener for parents/guardians on the relationship between KCSE scores and psychological symptoms of anxiety, depression and suicide ideation among adolescents in Nairobi.

2) Some of the feedback received from the participants was that they had not shared their feelings or what they were going through with anyone. Parents/guardians ought to take an active role in the mental health of their adolescents especially at critical times such as when KCSE results have been announced. Some psychological symptoms could be avoided or alleviated by parents/guardians talking to their adolescents and letting them know that not all is lost. Some of the parents/guardians have gone through this education system so they can relate to what their adolescents may be going through. They need to create time for engaging with their adolescents. They need to be keen on any emotional changes that may occur in their adolescents especially during this period when KCSE results are announced. Adolescents need a support system not just in critical times but throughout just like we all do.

3) It was clear that the community has heavily invested in KCSE examination in terms of extra tuition, involvement in prayer days for their children and high expectations for good performance. This preparation is an indication of this exam’s importance to the community. However, it is equally important for the
community to be aware of the psychological symptoms associated with KCSE scores. This way they are better placed to instruct the adolescents that good performance is desirable however a poor score or unmet expectation for a certain score is not the end of life. This study offers the community knowledge of psychological issues they should address to help make preparation for KCSE examination more holistic.

4) The media play a huge role in shaping the mind-sets of a community. What they choose to highlight is taken as what is desirable especially among the adolescents who are impressionable. This study informs the media of the risks of psychological symptoms of anxiety, depression and suicide ideation related to KCSE scores. This knowledge will hopefully create awareness among the media houses on how to highlight the success and failures of KCSE examination. The media should modify their approach to include success stories of those who did not perform very well in KCSE exam but went ahead and became successful in life through other channels other than university. This may serve to lessen the psychological distress experienced among the adolescents who do not qualify to join university.

5.5.4 Recommendation for further research

1) A follow up study of these participants about 6 months and 1 year after the study is necessary. An interview could be done on how these participants are doing in terms of whether they hold the same attitude towards KCSE examinations as reported in this study; what they decided to do with their lives; if those who had not qualified to join university found other ways of furthering their education; for
those who qualified to join university, whether they pursued their courses of choice. A repeat of the measures of anxiety, depression and suicidal ideation could also be done to review any change in these symptoms. Time lapse and exposure could have changed the participants’ outlook of life and success.

2) Future research on this topic should consider an interview with each participant. This may revealed potentially other factors contributing to symptoms of depression, anxiety or suicidal ideation among KCSE candidates.

3) Future research on this topic could also consider the utilization of another instrument such as Beck’s Depression Inventory that may give more in-depth information to the triggers for depression.

4) Follow-up research could also consider testing the hypothesis that unmet expectations for a certain anticipated grade could cause psychological symptoms of depression, anxiety and suicide ideation among adolescents who have taken a high stakes examination such as KCSE.

5) There is need to further this research to other counties for a more comprehensive look at the relationship that exists between this nation-wide examination, KCSE, and psychological symptoms of anxiety, depression and suicide ideation.

5.6 Chapter summary

Passing or failing KCSE examination is not the end of life. This is easier said in retrospect. Adolescents may not have the privilege of this hindsight however, parents/guardians, clinicians, school administrators and even the ministry of education know that this is true. Proper guidance of adolescents before and even after KCSE examination is a necessity. This study reveals that adolescents who sit for KCSE
examination in Nairobi are at risk of mental health issues. There is therefore urgency to provide counseling support to candidates. This can be done up to 3 months prior to the exam to address cognitive distortions and self-defeating beliefs that candidates in this study reported such as “It’s a must I join university”, “I will be stressed out if I don’t make it to join university”. Career guidance and exposure to various things that they can do to earn a living can also help at this time. About 2 weeks before the exam, counseling could focus on equipping candidates with necessary skills such as relaxation techniques for stress management. A follow-up after the exam is also necessary in order to manage expectations that candidates may have as was the case in this study. Any psychological symptoms that may have arisen due to the rigorous examination process, anticipation of results or unmet expectations can be managed with counseling before it gets to chronic levels.

Psychological symptoms of anxiety, depression and suicide ideation have been managed before and can still be managed if knowledge of their source is known. Further research needs to be done to ascertain other factors that may have contributed to depression, anxiety and suicide ideation alongside KCSE scores in this population. More research also needs to be done to test the idea the idea that, in this population, it may not have been poor grades that caused psychological distress but the unmet expectation for a certain anticipated grade.

The results from this study are limited to KCSE candidates within Nairobi. They cannot be generalized to all KCSE candidates because there are certain geographical, economical as well as exposure differences that exist in different counties in Kenya. There is need to further this research in other counties for a more comprehensive look at
the relationship that exists between this nation-wide examination, KCSE, and psychological symptoms of anxiety, depression and suicide ideation.

Finally, it is very important that counseling services are set up and provided to this population in order to prevent or intervene on potential psychological disturbances, particularly with regard to symptoms of anxiety, depression and suicidal ideation.
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APPENDIX A:
INSTITUTIONAL REVIEW BOARD APPROVAL U.S.I.U – A

3rd March 2016
USIU-A/IRB/16/S01

Jennifer Micere Ngondi,
M.A Clinical Psychology Student,
Email: jmicer@gmail.com.

IRB-RESEARCH APPROVAL

The USIU-A IRB has reviewed and granted ethical approval for the research proposal titled ‘The relationship between K.C.S.E examination scores and symptoms of anxiety, depression and suicide ideation among adolescents in Nairobi’. The approval is for six months from the date of IRB. Please submit a completed copy of the study to the IRB office, soft copy is acceptable.

You are advised to follow the approved methodology and report to the IRB any serious, unexpected and related adverse events and potential unanticipated problems involving risks to subjects or others.

Should you or study participants have any queries regarding IRB’s consideration of this project, please contact irb@usiu.ac.ke.

Paul Ruto,
IRB Coordinator, USIU-Africa
Tel: +254 20 3606621
Email: pruto@usiu.ac.ke

Cc: IRB Chair
    : Research Office

USIU-A Institutional Review Board (IRB)
APPENDIX B:

Sample Letter Requesting Permission to Conduct Research

The Youth Pastor,

...................................................... (Address/location)
Nairobi, Kenya.

Dear Pastor,

RE: REQUEST TO CONDUCT RESEARCH AMONG THE ADOLESCENTS IN YOUR CHURCH

My name is Jennifer M. Ngondi, a graduate student pursuing Masters of Arts in Clinical Psychology from United States International University – Africa. As part of my degree requirements, I am completing a research thesis on the relationship between KCSE examination scores and symptoms of anxiety, depression and suicide ideation among adolescents in Nairobi. My primary supervisor at USIU-A for this research is Dr. Carol J. Watson who may be reached at cwatson@usiu.ac.ke or office telephone number +254 20 3606 303.

The study findings will be purely for academic purposes and confidentiality will be maintained. Participation will be voluntary. The study will involve the use of questionnaires and is expected to take approximately one hour per participant group. The potential participants will be aged 16, 17, 18 and 19 years, who sat for their KCSE exams in October and November 2015 and received their results in February 2016.

I kindly request for your permission to post a notice of invitation for potential participants (see attached sample). I would like to conduct this research at your church at a time of your convenience beginning mid-February 2016. If granted, I would like to meet with you on............. (Date) to discuss further on the details of the research and answer any questions you may have on the same.

I look forward to your response.

Sincerely,

Jennifer M. Ngondi
MA Clinical Psychology Student – USIU-A
(0735169117 / jngondi@usiu.ac.ke)
Sample Invitation Notice to Potential Participants

**Invitation for research participation**

Greetings,

My name is Jennifer Ngondi, a graduate student pursuing a Masters of Arts in Clinical Psychology from United States International University- Africa. I am seeking volunteers who are 16, 17, 18, or 19 years of age who sat for their KCSE examination in the year 2015 to participate in a research study.

The study’s aim is to find out reactions to 2015 KCSE scores among adolescents in Nairobi.

The study will involve the filling of questionnaires that will take approximately 20 minutes of your time. Should you choose to participate, you will not be required to identify yourself in any of the questionnaires; the study will be anonymous. Any information gathered will be kept confidential.

Are you interested? Kindly contact me by …………………… (Date) on mobile number 0735169117 or email jmicere@gmail.com
APPENDIX D: CHURCH APPROVAL TO CONDUCT RESEARCH

Christ is the Answer Ministries,
NPC Woodley, Joseph Kangethe Rd,
P.O. Box: 42254-00100,
Nairobi GPO.

Jennifer Micere Ngondi,
P.O. Box 52014-00200,
Nairobi, Kenya.

RE: PERMISSION TO CONDUCT RESEARCH

Following the request to conduct research on the relationship between KCSE examination scores and symptoms of anxiety, depression and suicide ideation among adolescents in Nairobi,

I................(youth leader/pastor) from CITAM Woodley Church, grants Jennifer Micere Ngondi, an M.A. Clinical Psychology student from United States International University- Africa, permission to collect data from the ex-candidates group........(name of group) of CITAM Woodley on 10th March 2016.

You are expected to carry out the research in an ethical manner and the church would wish that you share the findings once you have completed the study.

Sincerely,

George Muricchu
Youth Leader/Pastor
CITAM - Woodley.
Deliverance Church Umoja,
Umoja Estate, Kangundo Road Branch,
P.O. Box 62644 – 00200,
Nairobi.

Jennifer Micere Ngondi,
P.O. Box 52014-00200,
Nairobi, Kenya.

RE: PERMISSION TO CONDUCT RESEARCH

Following the request to conduct research on the relationship between KCSE examination scores and symptoms of anxiety, depression and suicide ideation among adolescents in Nairobi,

Jennifer Micere Ngondi, grants

University- Africa, permission to collect data from the ex-candidates group

Doulos Leadership Experience

(name of group) on 9th March 2016.

You are expected to carry out the research in an ethical manner and the church would wish that you share the results of your findings once you have completed the study.

Sincerely,

Mugeci Githaiga,
Program Co-ordinator,
Doulos Leadership Experience,
Deliverance Church - Umoja.
APPENDIX E:

Sample Parental Informed Consent Form

I am Jennifer Micere Ngondi, a graduate student at United States International University-Africa, where I am pursuing a Master of Arts in Clinical Psychology. As part of my degree requirements I am completing a research study and I seek your consent to include your child in the study.

The purpose of this research is to gain further understanding of candidate’s reaction to KCSE results. Your child’s participation will involve filling of a questionnaire. The amount of time required for your child’s participation should be about 20 minutes.

There are likely low to no risks for participation in this study. Participants who have received lower than expected KCSE scores might have minimal emotional reactions. However, all participants will be involved in a debrief session by the researcher. There are no monetary benefits that would result from participation in this research. This research may help us to understand if there were any psychological symptoms that may have ensued from the announcement of the K.C.S.E results among adolescents in Nairobi.

Your child’s name or identity will not be given in any report or publication neither will it be indicated in any of the questionnaires he/she will fill out. All information obtained in this study will be kept confidential; a number will be assigned to any research forms to ensure your child’s privacy is protected.

Participation in this research study is voluntary. You may refuse to allow your child to participate or withdraw your child from the study at any time. Your child will not be penalized in any way should you decide not to allow your child to participate or to withdraw your child from this study.

If you have any questions or concerns about this study or if any problems arise, feel free to contact my research chair at USIU-A, Dr. Carol Watson, by email at cwatson@usiu.ac.ke or office phone (20)3606303 or the researcher, Jennifer Micere Ngondi by email at jmicere@gmail.com or phone 0735169117.

Consent

I have read this parental permission form and have been given the opportunity to ask questions. I give my permission for my child to participate in this study.

_______________________________              _________________
(Parent/Guardian Signature)                                       (Date)

_______________________________             _________________
(Child’s Name)                                                          (Age)

______________________________
(Principal Researcher Signature)                                  (Date)

Participant Number to be used on all other documents: ______________
Sample Participant Consent Form

I am Jennifer Micere Ngondi, a graduate student at United States International University-Africa, where I am pursuing a Master of Arts in Clinical Psychology. As part of my degree requirements I am completing a research study and I would like to include you in the study. My research chair at USIU-A Dr. Carol Watson may be contacted by email at cwatson@usi.ac.ke or phone (20)3606303 if you have any questions at any time. I can also be contacted by email at jmicere@gmail.com or phone 0735169117.

Your written consent is required to participate so that I can confirm that you have been informed of the study and that you agree to participate. You are free to decline or discontinue your participation at any time during the study if you wish to do so. All information obtained in this study will be kept confidential; a number will be assigned to any research questionnaire to ensure your privacy is protected. Your name or identity will not be given in any report or publication.

The purpose of the research is to gain further understanding of participant’s reactions to the K.C.S.E results. You will be asked to complete a questionnaire answering questions about your current experiences. This is not an exam or a test and there is no right or wrong answers, simply answer the questions as honestly as you can. The questionnaire should take about 20 minutes to complete in one sitting.

The outcome of the information obtained during this research will be summarized and utilized in my thesis study. Participant names will not be utilized, as shown below a number will be assigned to ensure the participant’s identity is kept confidential during and after this study is completed.

My Consent to Participate:

By signing below, I consent to participate in this study.

_________________________________  ____________
(Signature of Participant)  (Date)

_________________________________  ____________
(Principal Researcher)  (Date)

Participant Number to be used on all other documents: ______________
APPENDIX G:

Sample Informed Assent Form

I am Jennifer Micere Ngondi, a graduate student at United States International University-Africa, where I am pursuing a Master of Arts in Clinical Psychology. As part of my degree requirements I am completing a research study and I would like to include you in the study. My research chair at USIU-A, Dr. Carol J. Watson, may be contacted by email at cwatson@usiu.ac.ke or office phone (20)3606303 if you have any questions at any time. I can also be contacted by email at jmicere@gmail.com, or phone 0735169117.

Your assent or agreement is required to participate so that I can confirm that you have been informed of the study and that you agree to participate. You are free to decline or discontinue your participation at any time during the study if you wish to do so. All information obtained in this study will be kept confidential; a number will be assigned to any research forms to ensure your privacy is protected. Your name or identify will not be given in any report or publication.

The purpose of the research is to gain further understanding of participant’s reactions to the K.C.S.E results. You will be asked to complete a questionnaire answering questions about your current experiences. This is not an exam or a test and there is no right or wrong answers, simply answer the questions as honestly as you can. The questionnaire should take between 15 minutes but no longer than about 20 minutes to complete in one sitting.

The outcome of the information obtained during this research will be summarized and utilized in my thesis study. Participant names will not be utilized, as shown below a number will be assigned to ensure your identity is kept confidential during and after this study is completed.

My Assent to Participate:

By signing below, I agree to participate in this study.

______________________________       ___________              __________
(Signature of participant)                             (My Age)                       (Date)

__________________________________                ___________
(Parent or Guardian Signature)                                         (Date)

__________________________________                ___________
(Principal Researcher Signature)                       (Date)

Participant Number now to be used on all research documents: ____________
APPENDIX H:

Sample Participant Debrief Form

Thank you for participating in this research study. The purpose of this study is to gain further understanding on participant’s reaction to the K.C.S.E results. Your participation will help researchers gain more insight into the current experiences of adolescents in Nairobi who have just received their KCSE results.

In the event you have any emotional reaction or concerns regarding the questions presented to you in this study, you may want to seek further support. A list of referrals is being provided to you below, for your reference.

Once again thank you for your participation.

Sincerely,

Jennifer M. Ngondi
0735169117/ jngondi@usiu.ac.ke

Referral Contacts:

<table>
<thead>
<tr>
<th>Amani Counselling Center</th>
<th>Oasis Africa Counseling Center and Training Institute</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Head Office</strong></td>
<td></td>
</tr>
<tr>
<td>Mbagathi Way</td>
<td></td>
</tr>
<tr>
<td>Off Langata Road</td>
<td></td>
</tr>
<tr>
<td>P.O. Box 41738 - 00100, Nairobi, Kenya.</td>
<td></td>
</tr>
<tr>
<td>Tel : +254 02 6002672 / 3</td>
<td></td>
</tr>
<tr>
<td>Fax : +254 02 6002674</td>
<td></td>
</tr>
<tr>
<td><strong>Cell Phone</strong> : Safaricom: 0722 626 590</td>
<td>Regent Court, Suite B7</td>
</tr>
<tr>
<td>Airtel: 0733 263 870</td>
<td>Argwings Kodhek Rd,</td>
</tr>
<tr>
<td><strong>E - Mail</strong> : <a href="mailto:info@amanicentre.org">info@amanicentre.org</a></td>
<td>Opp, Nairobi Women’s Hospital</td>
</tr>
<tr>
<td></td>
<td>Hurlingham, Nairobi, Kenya</td>
</tr>
<tr>
<td><strong>Town Office</strong></td>
<td></td>
</tr>
<tr>
<td>Nairobi CBD Office,</td>
<td></td>
</tr>
<tr>
<td>KCS House 7th Floor,</td>
<td></td>
</tr>
<tr>
<td>Mama Ngina Street</td>
<td></td>
</tr>
<tr>
<td><strong>Cell Phone</strong> : Safaricom: 0718 225 627</td>
<td><strong>Cell Phone:</strong> 254-725 366614/254-733</td>
</tr>
<tr>
<td>Airtel: 0733 388 200</td>
<td>366614</td>
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<tr>
<td><strong>SMS Line</strong>: 0722 797 068</td>
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## APPENDIX I:
### Research Questionnaire

**Part A: Demographics (Tick where applicable)**

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<tr>
<th></th>
<th>Gender:</th>
<th></th>
<th>Female { }</th>
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<tr>
<td>2. Age:</td>
<td>16 { }</td>
<td>17 { }</td>
<td>18 { }</td>
</tr>
<tr>
<td>3. Which residential area/estate do you live?</td>
<td>................................................</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4a. How many times have you sat for KCSE examination? (tick one)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once { }</td>
<td>Twice { }</td>
<td>More than Twice { }</td>
<td></td>
</tr>
<tr>
<td>4b. If more than once, briefly explain why:</td>
<td>……………………………………………………………………………………………………………………………</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. What grade did you expect to score on the Oct/Nov 2015 KCSE exam?</td>
<td>………………</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. What grade did you get?</td>
<td>…………………</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7a. On a scale of 1-5, kindly rate your interest in joining University? (tick one)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>{1} Not interested</td>
<td>{2} Somewhat not interested</td>
<td>{3} Interested</td>
<td>{4} Somewhat interested</td>
</tr>
<tr>
<td>7b. What other options do you have if you do not attend university?</td>
<td>……………………………………………………………………………………………………………………………</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. What impact does your KCSE grade have on you? Is it positive or negative? Briefly explain:</td>
<td>……………………………………………………………………………………………………………………………</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

109
**Part B:** Please indicate your rate on the following statements based on how you view the KCSE examination scores. There is no right or wrong answer, just what you think is true for you.

**CIRCLE** your answer.

E.g. Strongly Disagree  Somewhat Disagree  Agree  Somewhat agree  Strongly Agree

<table>
<thead>
<tr>
<th>No.</th>
<th>Assessment Question</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>KCSE examination score is an important determinant of a successful future</td>
<td>Strongly Disagree  Somewhat Disagree  Agree  Somewhat agree  Strongly Agree</td>
</tr>
<tr>
<td>2.</td>
<td>KCSE scores reflect on a person’s intellectual ability</td>
<td>Strongly Disagree  Somewhat Disagree  Agree  Somewhat agree  Strongly Agree</td>
</tr>
<tr>
<td>3.</td>
<td>Passing of KCSE examination was very important to me</td>
<td>Strongly Disagree  Somewhat Disagree  Agree  Somewhat agree  Strongly Agree</td>
</tr>
<tr>
<td>4.</td>
<td>Passing KSCE examination was very important to my parents/guardians</td>
<td>Strongly Disagree  Somewhat Disagree  Agree  Somewhat agree  Strongly Agree</td>
</tr>
<tr>
<td>5.</td>
<td>I am satisfied with what I scored in KCSE</td>
<td>Strongly Disagree  Somewhat Disagree  Agree  Somewhat agree  Strongly Agree</td>
</tr>
<tr>
<td>6.</td>
<td>I would re-sit the examination for a better grade</td>
<td>Strongly Disagree  Somewhat Disagree  Agree  Somewhat agree  Strongly Agree</td>
</tr>
<tr>
<td>7.</td>
<td>In my opinion, KCSE examination is marked fairly</td>
<td>Strongly Disagree  Somewhat Disagree  Agree  Somewhat agree  Strongly Agree</td>
</tr>
<tr>
<td>8.</td>
<td>In my opinion KCSE is a tough examination</td>
<td>Strongly Disagree  Somewhat Disagree  Agree  Somewhat agree  Strongly Agree</td>
</tr>
<tr>
<td>9.</td>
<td>In my opinion, KCSE scores should not be used as the main factor for selection into university</td>
<td>Strongly Disagree  Somewhat Disagree  Agree  Somewhat agree  Strongly Agree</td>
</tr>
</tbody>
</table>
Part C: In regards to the grade you scored in KCSE, the following is a list of the ways you might have felt or acted. Please check how much you have felt this way during the past few weeks since results were announced. **CIRCLE** your answer E.g. 0 1 2 3

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Not at all</th>
<th>A Little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I was bothered by things that usually don’t bother me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>I did not feel like eating, I wasn’t very hungry</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>I wasn’t able to feel happy, even when my family or friends tried to help me feel better</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>I felt like I was just as good as other age-mates</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>I felt like I couldn’t pay attention to what I was doing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>I felt down and unhappy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7.</td>
<td>I felt like I was too tired to do things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8.</td>
<td>I felt like something good was going to happen</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9.</td>
<td>I felt like things I did before didn’t work out right</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10.</td>
<td>I felt scared</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11.</td>
<td>I didn’t sleep as well as I usually sleep</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12.</td>
<td>I was happy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13.</td>
<td>I was more quiet than usual</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14.</td>
<td>I felt lonely, like I didn’t have any friends</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15.</td>
<td>I felt like the age-mates I know were not friendly or that they didn’t want to be with me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16.</td>
<td>I had a good time</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17.</td>
<td>I felt like crying</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18.</td>
<td>I felt sad</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19.</td>
<td>I felt people didn’t like me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20.</td>
<td>It was hard to get started doing things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
**Part D:** Please carefully read each item in the list below. Indicate how much you have been bothered by the items listed on the left during the past few weeks as you waited for and received your results, including today. **CIRCLE** the number in the corresponding space in the column next to each symptom. E.g. Numbness 0 1 2 3

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Mildly, but it didn’t bother me much</th>
<th>Moderately, it wasn’t pleasant at times</th>
<th>Severely, it bothered me a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Numbness</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Feeling hot</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Wobbliness in legs</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Unable to relax</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Fear of worst happening</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Dizzy or lightheaded</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Heart pounding/racing</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Unsteady</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Terrified/ afraid</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Nervous</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Feeling of choking</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Hands trembling</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>Shaky/unsteady</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Fear of losing control</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>15</td>
<td>Difficulty in breathing</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>Fear of dying</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>Scared</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>Indigestion</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>19</td>
<td>Faint/Lightheaded</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>20</td>
<td>Face flushed</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>21</td>
<td>Hot/cold sweats</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Part E: Since you received your KCSE results, have you had the following thoughts at any point? Tick “YES” or “No”

<table>
<thead>
<tr>
<th>Answer Questions 1 and 2 first</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Have you wished you were dead or wished you could go to sleep and not wake up?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Have you actually had any thoughts of killing yourself?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you answered YES to Question 2 above, continue answering questions 3 to 6.

If you answered NO to Question 2 above, answer question 6 next (and skip 3-5)

<table>
<thead>
<tr>
<th>3) Have you been thinking about how you might kill yourself? (plans)</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>4) Have you had these thoughts/plans and had some intention of acting on them?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Do you intend to carry out this plan(s)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) Have you ever done anything, started to do anything, or prepared to do anything to end your life? (for whatever reason apart from your recent KCSE results)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If YES, How long ago did you do any of these examples below?

Examples: Collected pills, obtained a weapon, gave away valuables, wrote a will or suicide note, took out pills but didn’t swallow any, held a weapon but changed your mind or it was grabbed from your hand, went to the roof but didn’t jump; or actually took pills, tried to harm yourself with a weapon, cut yourself, tried to hang yourself, etc.

- □ Over a year ago?  □ Between three months and a year ago?
- □ Within the last three months?

END
APPENDIX J: Centre for Epidemiological Studies Depression Scale (CES-DS). The following is a list of the ways you might have felt or acted. Please check how much you have felt this way during the past few weeks.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Not at all</th>
<th>A Little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I was bothered by things that usually don’t bother me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>I did not feel like eating, I wasn’t very hungry</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>I wasn’t able to feel happy, even when my family or friends tried to help me feel better</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>I felt like I was just as good as other age-mates</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>I felt like I couldn’t pay attention to what I was doing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>I felt down and unhappy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7.</td>
<td>I felt like I was too tired to do things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8.</td>
<td>I felt like something good was going to happen</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9.</td>
<td>I felt like things I did before didn’t work out right</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10.</td>
<td>I felt scared</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11.</td>
<td>I didn’t sleep as well as I usually sleep</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12.</td>
<td>I was happy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13.</td>
<td>I was more quiet than usual</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14.</td>
<td>I felt lonely, like I didn’t have any friends</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15.</td>
<td>I felt like the age-mates I know were not friendly or that they didn’t want to be with me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16.</td>
<td>I had a good time</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17.</td>
<td>I felt like crying</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18.</td>
<td>I felt sad</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19.</td>
<td>I felt people didn’t like me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20.</td>
<td>It was hard to get started doing things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

(Adopted from the Center for Epidemiological Studies Depression Scale)
APPENDIX J:
Centre for Epidemiological Studies Depression Scale Scoring

The possible scores will range from 0 to 60. Each response to an item is scored as follows:

0 = “Not At All” 1 = “A Little” 2 = “Some” 3 = “A Lot”

However, items 4, 8, 12, and 16 are phrased positively, and thus are scored in the opposite order:

3 = “Not At All” 2 = “A Little” 1 = “Some” 0 = “A Lot”

Higher CES-DC scores indicate increasing levels of depression. A cut off score of 15 is suggestive of depressive symptoms in adolescents.
APPENDIX K:
Columbia-Suicide Severity Rating Scale
*Screen Version - Recent*

<table>
<thead>
<tr>
<th>Answer Questions 1 and 2 first</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Have you wished you were dead or wished you could go to sleep and not wake up?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Have you actually had any thoughts of killing yourself?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you answered YES to Question 2 above, continue answering questions 3 to 6.
If you answered NO to Question 2 above, answer question 6 next (and skip 3-5)

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>3) Have you been thinking about how you might kill yourself? (plans)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Have you had these thoughts/plans and had some intention of acting on them?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Do you intend to carry out this plan(s)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) Have you ever done anything, started to do anything, or prepared to do anything to end your life? (for whatever reason apart from your recent KCSE results)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If YES, How long ago did you do any of these examples below?

Examples: Collected pills, obtained a weapon, gave away valuables, wrote a will or suicide note, took out pills but didn’t swallow any, held a weapon but changed your mind or it was grabbed from your hand, went to the roof but didn’t jump; or actually took pills, tried to harm yourself with a weapon, cut yourself, tried to hang yourself, etc.

- □ Over a year ago?  □ Between three months and a year ago?
- □ Within the last three months?

(Adopted from the Columbia-Suicide Severity Rating Scale screen version – recent)
## APPENDIX L:
**Beck Anxiety Inventory**

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past few weeks as you waited for your results, including today.

**Circle** the number in the corresponding space in the column next to each symptom.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Mildly, but it didn’t bother me much</th>
<th>Moderately, it wasn’t pleasant at times</th>
<th>Severely, it bothered me a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Numbness</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Feeling hot</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Wobbliness in legs</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Unable to relax</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Fear of worst happening</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Dizzy or lightheaded</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Heart pounding/racing</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Unsteady</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Terrified/ afraid</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Nervous</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Feeling of choking</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Hands trembling</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>Shaky/unsteady</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Fear of losing control</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>15</td>
<td>Difficulty in breathing</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>Fear of dying</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>Scared</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>Indigestion</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>19</td>
<td>Faint/Lightheaded</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>20</td>
<td>Face flushed</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>21</td>
<td>Hot/cold sweats</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

(Adopted from Beck Anxiety Inventory)
APPENDIX L:

Beck Anxiety Inventory Scoring

Scoring - Sum each column. Then sum the column totals to achieve a grand score. Write that score here ____________.

Interpretation

A grand sum between 0 – 21 indicates very low anxiety. That is usually a good thing. However, it is possible that you might be unrealistic in either your assessment which would be denial or that you have learned to “mask” the symptoms commonly associated with anxiety. Too little “anxiety” could indicate that you are detached from yourself, others, or your environment.

A grand sum between 22 – 35 indicates moderate anxiety. Your body is trying to tell you something. Look for patterns as to when and why you experience the symptoms described above. For example, if it occurs prior to public speaking and your job requires a lot of presentations you may want to find ways to calm yourself before speaking or let others do some of the presentations. You may have some conflict issues that need to be resolved. Clearly, it is not “panic” time but you want to find ways to manage the stress you feel.

A grand sum that exceeds 36 is a potential cause for concern. Again, look for patterns or times when you tend to feel the symptoms you have circled. Persistent and high anxiety is not a sign of personal weakness or failure. It is, however, something that needs to be proactively treated or there could be significant impacts to you mentally and physically. You may want to consult a physician or counselor if the feelings persist.
Dear Jennifer,

Thank you for contacting the Center for Suicide Risk Assessment. C-SSRS Scales and training are free, available in many languages and easily scalable to your individual or system needs. Training is recommended and there are currently two videotaped trainings available, a 45-minute training on the Full C-SSRS and an 18-minute training on the 3-6 question Screener version. There are multiple ways to get both these taped trainings (training campus website, video download, DVD). We currently have training videos subtitled in many languages that can be accessed on our YouTube channel or downloaded from our Dropbox. There is also a new web-based interactive training for the Full C-SSRS that is being promoted by the National Action Alliance here. The attached document details all of these methods. You may add these training materials to your internal network or current training system.

We are also attaching word documents of the scales so you can add your logo, patient/client/student/subject information, etc. Also below you will find additional information on the development and use of the scale and a link to download copies of the scale.

If you require foreign language translations or other versions of the scales (pediatric, etc.) please let us know.

Thank you,

The Center for Suicide Risk Assessment
Dear Mrs. Ngondi,

Permission to use a Pearson assessment is inherent in the qualified purchase of the test materials in sufficient quantity to meet your research goals. In any event, Pearson has no objection to you using the Beck Anxiety Inventory (BAI) and you may take this email response as formal permission from Pearson to use the test in its as-published formats in your student research.

The BAI is a sensitive clinical assessment that requires a high degree (CL2) to purchase, administer, score and interpret. It also represents Pearson copyright and trade secret material. As such, Pearson does not permit photocopying or other reproduction of our test materials by any means and for any purpose when they are readily available in our catalog. Consequently, you may not simply reproduce the BAI test forms. If you do not yet meet the purchase qualifications, your professor or faculty supervisor may assist you by lending their qualifications.

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As a resident of Kenya your source to qualify for and purchase the BAI test materials you need is our Pearson Clinical Assessment office in the United Kingdom (UK). Please visit the following link to the product page in the UK online catalog:
http://www.pearsonclinical.co.uk/Psychology/AdultMentalHealth/AdultMentalHealth/BeckAnxietyInventory(BAI)/BeckAnxietyInventory(BAI).aspx

That said, we have prepared a couple of sample test items that you may include in your dissertation results and I have attached them herein for your possible use.

Regards,
William H. Schryver
Senior Licensing Specialist