#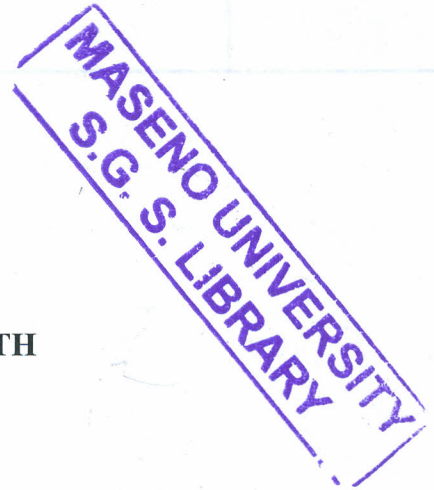 EXTENT OF IMPACT OF SELECTED STRESS FACTORS ON STUDENTS' ACADEMIC ACHIEVEMENT IN TECHNICAL INSTITUTIONS IN KISUMU COUNTY, KENYA

BY

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION IN GUIDANCE AND COUNSELING

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ABSTRACT

Examination records in the technical institutions in Kisumu County indicate that out of the 517 (2010), 543 (2011) and 653 (2012) candidates who sat for KNEC technical examinations, only 180 (34.8%), 206 (37.9%) and 206 (31.5%) passed respectively, while over 60% failed in the three examination years. Further, records at the Guidance and Counseling (G&C) departments in these institutions revealed that 153 (86%) of the students who were attended to between 2012 and 2013 had stress related to finances, academics and relationships, which could have impacted on students' academic achievement. Purpose of this study was therefore to determine the extent of impact of selected stress factors on students' academic achievement in technical institutions in Kisumu County, Kenya. Objectives of the study were to; determine the extent of impact of financial stress on students' academic achievement, determine the extent of impact of academic stress on students' academic achievement, and to determine the extent of impact of relationship stress on students' academic achievement. A conceptual framework was used to show the interaction between the selected stress factors and academic achievement. The study adopted descriptive survey and correlational research designs. Population of the study comprised 2 heads of G&C departments and 1008 students from two technical institutions in Kisumu County. Saturated sampling was used to select 2 heads of G&C departments while stratified random sampling based on gender was used to select 299 students. Instruments of data collection were questionnaire and interview schedule. Piloting was carried out among 101 (10%) third year students. Reliability of the instruments was determined using test-retest and its coefficient index was determined at .82. Content and face validity of the instruments were ascertained by experts from the department of Educational Psychology, Maseno University. Quantitative data was analyzed using frequency counts, percentages and Spearman's rho. Qualitative data was transcribed, and recorded in text form in an ongoing process. Findings indicated that academic achievement had significant correlations with financial stress (rho = -.640; p = .000) and academic stress (rho = -.721; p = .000). The researcher concluded that financial stress had moderate negative impact; academic stress had strong negative impact while relationship stress had no significant impact. It was recommended that the institutions should give financial support and education to students and also carry out curriculum reviews to reduce the level of financial and academic stress. Findings of this study would help students improve in academic achievement.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Stress is a part of the normal fabrics of human existence. Every individual regardless of race or cultural background, social and occupational status and even college students experience stress in many ways (Rajesh, 2015). It is an inevitable part of challenges that prompt mastery of new skills and behaviour patterns. However, when stress becomes excessive, difficulties occur and the individual experiences disrupted emotional, cognitive and physiological functioning. The cost of stress in terms of human suffering, social and occupational impairment and mental illness is enormous (Awofodu & Emi, 2013).

Lazarus and Folkman (retrieved 2013) explained that stress results from a relationship between personal resources and environmental demands. If a balance exists between the individual's resources and his or her environment, he or she is able to control the situation without being overwhelmed. However, if the environmental demands either exceed the individual's resources or endanger his or her well-being, the individual may be unable to effectively cope with the situation, resulting in stress.

According to Kadapatti and Vijayalaxmi (2012), stressors like academics, social, emotional and financial have an impact on the academic achievements of a college student. A study conducted in India revealed that factors associated with curriculum and workloads combined with economic deprivation are accountable for academic stress.

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Further, low academic achievement of some students can be a consequence of improper time management, economic hardships, lack of sleep, and societal engagements .This is also seen in students with children (Maheshwari & Deepa, 2013)

Over the years researchers in the education field have since discovered that student poor performance on academic work can be attributed to chronic stress. Taylor and Owusi-Banahana (2010) concluded that stress had a negative impact on the academic achievement of college students. According to a study conducted by American College Health Association (2006), respondents indicated that stress was the number one factor that impacted on academic performance.

In the USA, Womble (2013) found that college students had many obstacles to overcome in order to achieve their optimal academic performance. These obstacles included stressors such as sleep deprivation, time management, financial problems, having problems with room-mate, and social activities ranked in this order. The study however, found that there was no significant relationship between stress and academic achievement. Womble used all the stressors as identified by the perceived stress scale to examine the relationship between stress and academic performance. However, the current researcher studied the stressors selectively; financial, academic and relationship with a view to determining the extent to which each stressor was associated with college students' academic achievement (See Appendix A).

Finance is the avenue through which college bills are paid. If their finances are not adequate the situation may tend to affect the students' academic performance adversely. If on the other hand, their financial needs are met adequately, probably their academic performance may be enhanced (Ebenuwa-Okoh, 2010). Results of prior studies suggest that financial burdens could be a potential stress factor for college students, which contribute to low academic performance (Andrews & Wilding, 2004; Kariv & Heiman, 2005; Misra & Castillo, 2004; 2004; Smith & Renk, 2007) as cited in Okoh (2010). Pfeiffer (2012) highlighted that there were many students who had to work while attending college in order to pay for their fees. Time spent working consumed a lot of students' academic time. Although these study results imply that financial stress impacted on academic achievement, they never showed the extent of impact. The current study therefore carried out a correlational analysis to determine the extent to which financial stress impacted on students' academic achievement.

According to Groux (2012), the 2012 National Survey of Student Engagement (NSSE) showed that about one-third of college students confirmed that financial concerns had negatively impacted on their academic performance or progress, while 20 percent said they had to drop courses to deal with these stressors. The study concluded that there was a clear link between financial stressors, academic progress and performance. The 2012 Inceptia National Survey of College students found that 74 percent of the respondents were working during the academic year and this had a negative impact on academic performance. However, unlike the national surveys that described the students' financial

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situation and its effects on students' academic performance, the current study carried out a correlational analysis to establish the extent to which financial stress impacted on students' academic achievement.

In the United Kingdom, Harding (2011) investigated the effect of financial difficulties on achievement among undergraduates and found that those students from low-income backgrounds were working long hours during the term, which had negative consequences on their academic achievement. Further, those students with no debts achieved more favorable academic results while some form of debts were linked to negative academic experiences. Although the study results imply that financial difficulties had negative effects on students' academic achievement, Harding used descriptive design and never highlighted the level of impact. In order to address this gap, the current study carried out a correlational analysis so as to establish the extent to which financial stress impacted on academic achievement among third year students in technical institutions.

Academic pressure is a significant source of stress for many college students according to researchers such as Hashim, 2003; Olpin, 1997 and Tyrrell, 1992. Identified sources of academic-related stress have included fear of falling behind with coursework, finding the motivation to study, time pressures and concern about academic ability (Tyrrell, 1992). Additionally, students report stress over struggling to meet academic standards, time management worries, and concerns over grades (Olpin, 1997). These sources may exist

easily throughout the span of college students' academic careers and may result in college students' experiencing a great deal of stress during their college career.

Researchers have shown different stress levels among students at different levels and different courses. Rajesh (2015) examined stress levels among nursing students and found that 34 percent of the respondents experienced moderate stress, while 33 percent each experienced mild and severe stress respectively. Sulaiman, Hassan, Sapian and Abdullah (2009) investigated a sample of 155 secondary school students and indicated that 42 (29%) of the respondents experienced medium stress while 110 (71%) experienced low stress. However, in both cases the researchers did not establish the extent to which these stress levels impacted on students' academic achievement. This gap was addressed by carrying out a correlational analysis in the current study.

In Pakistan, Sohail (2013) concluded that first year medical students experienced high levels of stress which came from varied sources (i.e. traffic jams, inadequate air-conditioning, tiredness, poor quality food, illness, overcrowded rooms and lack of facilities). Furthermore, higher level of stress was associated with poor academic performance. The study by Sohail lumped up all the stress sources together and carried out a correlational analysis to get its relationship with academic performance. In contrast, the current study used a more comprehensive instrument that categorized stressors into financial, academic and relationship stressors with a view to establishing the extent of relationship between each stress factor and academic achievement.

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Siraj, Salam, Hassan, Jin and Othman (2014) examined stress levels and its association with academic performance on a sample of 179 fourth year medical students in Malaysia. It was concluded that academic related stressors caused severe and high stress level, and that those respondents with severe and high stress level were observed to have higher cumulative grade point average. The results imply that medical students can still perform well in their academics despite high levels of academic stress. The current study replicated the study by Siraj et al., on a sample of 299 third year students in technical institutions to see if the association would be the same as with the fourth year medical students.

Nandamuri and Ch (2015) examined sources of academic stress among postgraduate management students in India and concluded that curriculum and instruction aspects were largely responsible for academic stress at 86 percent; placement matters at 63 percent; assessment related aspects at 41 percent and team work related issues at 24 percent. Agolla and Ongori (2009) investigated academic stress among undergraduates in Botswana and found that 81% of respondents agreed with the statement that academic workload was stressful. Although the researchers were able to establish the sources of academic stress, their studies did not attempt to find out the extent to which stress from the identified academic sources impacted on academic achievement among these students.

Early adulthood is a period when interactions and the influence of parents and peers wane and are to some extent supplanted by the support and influence of romantic partnerships (Giordano, Phelps, Manning, & Longmore, 2008). While romance may be an important aspect of development, these relationships often have a downside. Romance is an arena for potentially physical and emotional consequences, particularly since they are "the single largest source of stress for adolescents" (Crissey, 2013).

At a minimum, romantic involvement is likely to require at least some investment of time and energy from the participants, but this can range up to a nearly all-consuming level of investment (Crissey, 2013). Due to these investments, dating potentially distracts students from other areas of their lives, most notably school. Romantic activity is also particularly fraught with the potential for rejection, conflict, and anxiety. Although learning to deal with these stressors is thought to be an additional contribution of dating to the developmental process, these experiences are likely to be painful and disruptive to adolescents' lives, Joyner and Udry (cited in Crissey 2013).

Studies conducted in the USA (e.g. Quatman, Sampson, Robinson & Watson, 2001; and Luqman, 2015) investigated the relationship between dating status and academic performance amongst students and found that there were significant differences between dating involvement and academic performance. These study findings were inconsistent with that of others (e.g. Pham, 2015; and Kopfler, 2013), who found no significant differences. Pham, Keenan and Han (2013) conducted a similar study and showed that

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adolescent romance had both negative and positive effects on academic outcomes. The inconsistencies evidenced in these findings therefore call for more research to investigate the association between dating relationships and academic achievement.

Sgobbo, (cited in Kopfler, 2013) examined the disadvantages and advantages of dating among college students, and found that one hundred percent of the fifty male participants surveyed agreed that dating in college provided benefits. It was also shown that males who dated while in college felt a higher level of self- esteem through social interactions. Dating gave them an opportunity to interact with members of the opposite sex. This research mainly focused on the benefits of these relationships in college as it related to the individuals' self-esteem and interactions but, never highlighted the extent to which stress arising from these relationships impacted on students' academic achievement.

Umar, Shaib, Aituisi, Yakubu and Bada (2010), examined a sample of 120 college students in Nigeria and concluded that romantic relationships were a psychological barrier to effective learning process. Similar investigations by Budeba and Neema (2015) among secondary school students in Tanzania showed that most sexually active students performed poorly and also faced several challenges that compromised their studies. The results imply negative associations. The current study noted that Budeba and Neema never highlighted the extent to which romantic relationships impacted on academic performance. To address this gap, the current study carried out a correlational analysis to

find out the extent of impact of romantic relationship on academic achievement among students of technical institutions.

In Kenya, studies on stress and academic performance among students have not received much attention. A few studies on stress have concentrated on effects of stress on professionals. For example, Ayoti and Poipoi (2011) investigated factors contributing to stress among public secondary school teachers in Vihiga District, while Yambo, Kindiki and Tuitoek (2012) examined high school principals' stress in relation to their job experience in Southern Nyanza region.

Studies however, have highlighted the plight of students in difficult financial circumstances. Mwinzi (2014) on a sample of undergraduates showed that financial challenges had made students in Kenyan public Universities to engage in income generating activities within their campuses, which more than seventy percent of the respondents felt, was affecting their academic achievement negatively. Juma, Simatwa and Ayodo (2012) using a sample of high school girls concluded that girls from poor families were always sent home from school for school fees, which indirectly affected their academic achievement. This implies that financial difficulties affected students' academic achievement. The current study however, was conducted on students in technical institutions.

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Ndirangu, Muola, Kithuka and Nassiuma (2009) found that there was no significant relationship between academic stress academic achievements on a sample of secondary school students in Nyeri District. However, unlike the study by Ndirangu et al. that confined academic stress to test anxiety which is just one of the aspects of academic stress, the current study considered academic stress in terms of all anxiety causing academic activities in college (e.g. assignments, test taking, attending lectures etc) and used a more comprehensive measure based on 10-items (see Appendix A).

A study conducted on a sample of 476 university students revealed that 32.3 percent and 30.0 percent of the respondents were perpetrators and victims of physical dating respectively. Verbal violence was perpetrated by 53.7 percent while 46.1 percent were victims. Sexual abuse was perpetrated by 43.6 percent while victims were 43.8 percent (Mbagaya, 2008). The study by Mbagaya described the status of dating violence among these university students. However, it did not highlight the extent to which dating violence (which is an aspect of relationship stress) impacted on these students' academic achievement.

In Kisumu County, records at the Guidance and Counseling (G&C) offices of the technical training institutions indicate that all the 178 students who visited these offices in 2013 had stress related cases as shown in Table 1.1

Table 1.1: Stress Related Cases in Technical Institutions in Kisumu County in 2013

Nature of Cases	Frequency	Percentage
Financial related cases	**101**	**57**
Academic related cases	**29**	**16**
Theft or lost item cases	10	6
Alcohol related cases	08	4
Relationship related cases	**23**	**13**
Assault related cases	05	3
Attempted suicide cases	02	1
	N= 178	100

Source: College Guidance & Counseling Department Records

From Table 1.1 it can be seen clearly that students in technical institutions in Kisumu County encounter a number of stresses while in college. However, something worth noting is the fact that out of all the 178 cases recorded, financial related cases were the most common at 101 (57%) while academic related cases and relationship related cases followed at 29 (16%) and 23 (13%) respectively.

Technical and Vocational Education and Training (TVET) in Kenya, has been identified as one of the main drivers of transforming Kenya into a newly industrialized nation as envisaged in vision 2030. In order to achieve this enormous task, technical training institutions are expected to train a critical mass of qualified artisans, technicians, technologists and engineers (MOHEST, 2012).

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Despite the various interventions and massive investments that have gone into enhancing TVET, the number of students who achieve certification after sitting KNEC technical examinations is worryingly low. According to a study by Karumba (2015), less than one third of all students who sat for KNEC examinations in electrical engineering and building technology managed to pass in any sitting each year in technical institutions in three counties (Kiambu, Nyeri and Nakuru). This study however, investigated performance in only two subjects. Records held in the examination offices of technical institutions in Kisumu County reveal that the trends were not any different for the years 2010, 2011 and 2012 as shown in Table 1.2.

Table 1.2: KNEC Technical Examination Results for 2010, 2011 & 2012 for Kisumu County

Name of Institution	2010			2011			2012		
	Entry	Passed	%	Entry	Passed	%	Entry	Passed	%
Kisumu Polytechnic	379	129	34.0	358	140	39.1	354	112	31.6
Ramogi Institute	138	51	36.9	185	66	35.6	299	94	31.4

Source: College Examination Office Records (Kisumu Polytechnic & Ramogi Institute)

These KNEC results in Table 1.2 clearly show that in the three examination years, less that 40% of the candidates passed in Kisumu County. Though this could look higher than that of students in Kiambu, Nyeri and Nakuru, the study by Karumba investigated only two subject areas (Electrical engineering and Building technology).

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From the foregoing, it is evident that stress is a reality among college students and its effects are numerous, and several gaps have been identified in the existing studies. At the same time in Kisumu County, academic achievement of learners in technical institutions had not received any attention in relation to the level of stress experienced by these learners.

1.2 Statement of the Problem

Technical and Vocational Education and Training (TVET) in Kenya, has been identified as one of the main drivers of transforming Kenya into a newly industrialized nation as envisaged in vision 2030. In order to achieve this enormous task, technical training institutions are expected to train a critical mass of qualified artisans, technicians, technologists and engineers (MOHEST, 2012).

Despite the various interventions and massive investments that have gone into enhancing TVET, the number of students who achieve certification after sitting KNEC technical examinations is worryingly low. Examination records held in technical institutions in Kisumu County show that out of the 517, 543 and 653 candidates who were registered for KNEC technical examinations in 2010, 2011 and 2012 respectively, only 180 (34.8%), 206 (37.9%) and 206 (31.5%) passed. This translates to less than 40% pass in the three years examinations.

Important to note also, is the fact that students in technical institutions in Kisumu County experienced high levels of stress. Records held in the Guidance and Counseling (G&C) departments of these institutions revealed that financial stress rated high at 57%, academic stress at 16%, while relationship stress was at 13%. These three stressors were the most dominant as displayed on the list of stress related cases, a fact that motivated this study. The current study therefore sought to determine the extent of impact of selected stress factors (financial, academic and relationship) on students' academic achievement in technical institutions in Kisumu County, Kenya.

1.3 Purpose of the Study

The purpose of this study was to determine the extent of impact of selected stress factors (financial, academic and relationships) on students' academic achievement in technical training institutions in Kisumu County, Kenya.

1.3.1 Objectives of the Study

Objectives of the study were to:

i. Determine the extent of impact of financial stress on students' academic achievement in technical institutions in Kisumu County.

ii. Determine the extent of impact of academic stress on students' academic achievement in technical institutions in Kisumu County.

iii. Determine the extent of impact of relationship stress on students' academic achievement in technical institutions in Kisumu County.

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1.3.2 Research Questions

The study was guided by the following research questions:

i.   What is the extent of impact of financial stress on students' academic achievement?

ii. What is the extent of impact of academic stress on students' academic achievement?

iii. What is the extent of impact of relationship stress on students' academic achievement?

1.4   Scope of the Study

This study focused on the extent of impact of selected stress factors (financial, academic and relationships) on students' academic achievement in public technical institutions in Kisumu County, Kenya. The three stress factors were selected because they rated high among the issues that caused stress to students as indicated by student records in the G&C offices of the technical institutions in Kisumu County.

Third year students were targeted in the study because they are at a critical stage where they are almost exiting college into the field of work, where they are expected to put the knowledge acquired and the learned skills into practice.

1.5   Limitations of the Study

i.   The study was carried out in the two public technical institutions in Kisumu County (Kisumu Polytechnic and Ramogi Institute) out of a total of 47 technical institutions in Kenya. Therefore, the findings may be unique to Kisumu County and may be generalized to the rest of the 45 technical institutions in Kenya.

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ii.   Issues of performance, relationships, and finances are sensitive. Therefore, the respondents may have failed to give the true picture on these issues due to fear of stigmatization. However, it was assumed that the respondents gave genuine responses. In future studies similar to the current study should use a convenient sample to include only identified cases affected by the selected stressors.

iii.   The study did not control for the intervening variables (such as social support, college support mechanisms and government policies). It was not possible to quantify the level of social support, college support mechanism and compliance with the set government policies within the institutions. In future, studies similar to the current study should strive to develop a mechanism of controlling the impact of these intervening variables on financial stress, academic stress and relationship stress.

1.6 Assumptions of the Study

The study was based on the following assumptions:

i.   Several factors contribute to students' stress.

ii.   Stress impacts on students' academic achievement.

1.7   Significance of the Study

The study findings may help the Ministry of education gain insight on the extent of impact of stress factors (finances, academics and relationships) on students' academic

achievement and be able to develop and implement policies geared towards reducing these stressors, thus enhancing academic achievement.

Managers and administrators of tertiary institutions may gain understanding on the extent of impact of stress factors on students' academic achievement and be encouraged to initiate institutional based activities and programs that would assist students to effectively cope with these stressors so as to enhance academic achievement of learners in their institutions.

The G&C departments in tertiary institutions may gain knowledge on the extent of impact of stress factors on students' academic achievement and be able to come up with comprehensive programs to educate students on the need to seek for support during stressful moments so as to effectively manage stress, remain focused in their studies and improve their academic achievement.

Parents may gain understanding on the extent of impact of stress factors on academic achievement of college students may be able to understand why it is important for them to support college students fully so as to cushion them against the effects of these stressors and help them improve their academic achievement.

The study findings may help students to understand the extent of impact of stress factors on academic achievement and be able to deliberately choose to have a positive attitude towards the programs put in place by the college administration through the G&C

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departments and be able to effectively manage stress and improve their academic achievement. The study may also provide a basis for further research on stress and students' academic achievement in Kisumu County and Kenya.

1.8 Conceptual Framework

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┌─────────────────────────┐                    ┌─────────────────────────┐
│ Independent Variables   │                    │ Dependent Variables     │
│                         │                    │                         │
│ Financial Stress        │                    │ Academic                │
│                         │───────────────────▶│ Achievement             │
│ Academic Stress         │          ▲         │                         │
│                         │          │         │                         │
│ Relationship Stress     │          │         │                         │
└──────────┬──────────────┘          │         └──────────────▲──────────┘
           │          ┌──────────────┴──────────┐             │
           │          │ Intervening Variables   │             │
           │          │                         │             │
           │          │ Social Support          │             │
           │          │                         │             │
           │          │ College Support         │             │
           │          │ Mechanisms              │             │
           │          │                         │             │
           │          │ Government Policies      │             │
           │          └─────────────────────────┘             │
           └───────────────────────────────────────────────────┘
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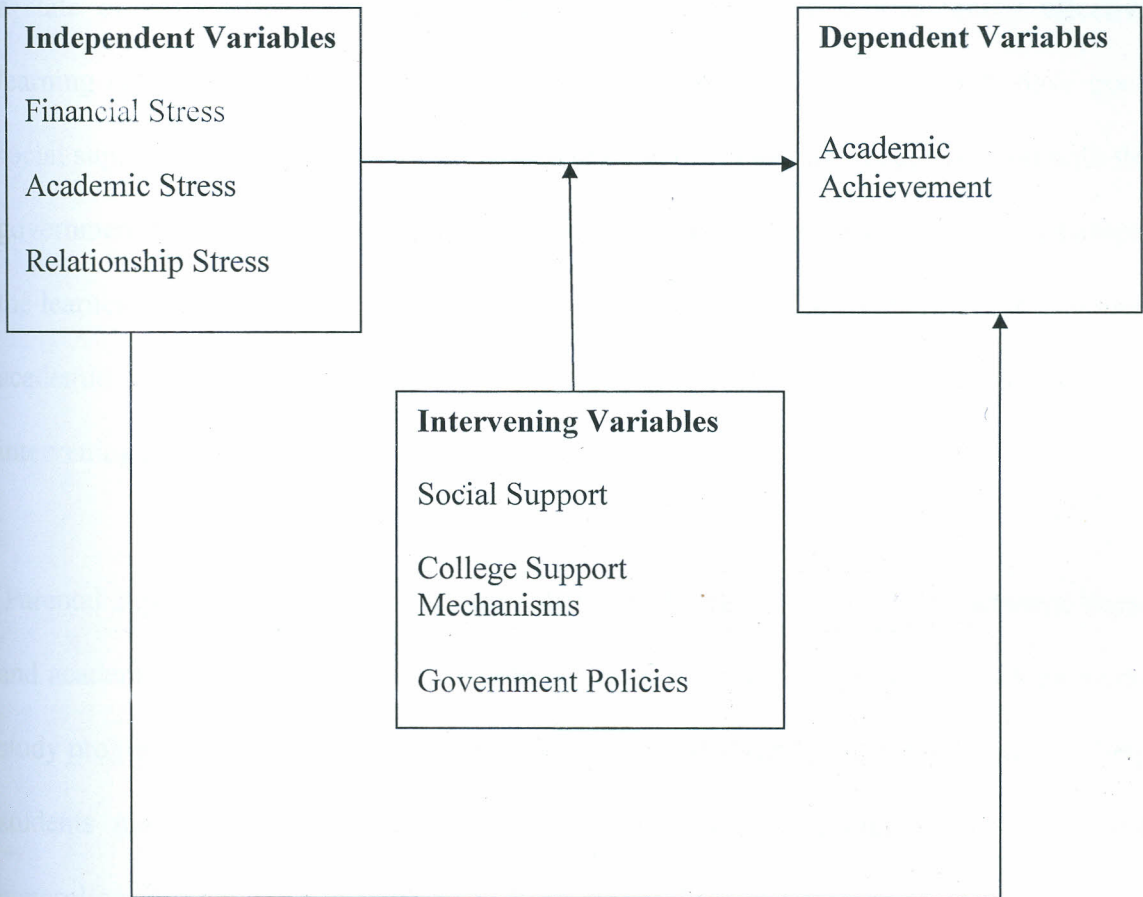
Figure 1: A Conceptual Framework showing the relationships between the selected stress factors; financial, academic and relationship (Independent variables) and academic achievement (Dependent variable)

The current study was based on the concept that students' academic achievement can be improved by proper management and reduction of financial stress, academic stress and

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relationship stress, taking into account social support, college support mechanisms and government policies as the intervening variables.

The current study therefore conceptualized that if students are overwhelmed by stress from these stressors (financial, academic workload and relationships), this would result in a state of psychological imbalance. The state of imbalance would hinder effective learning and result in low academic achievement. However, when students have good social support networks, and are able to access college management support, and with the government policy guidelines on G&C and bursary awards schemes well implemented, the learners would be cushioned against the adverse effects of stress thus enhancing their academic achievement. Figure 1 gives the level of interaction between independent, intervening and dependent variables.

Parental support and other support are able to moderate the relationship between stress and academic achievement among students. College support mechanisms such as work-study programs, internal bursary schemes and counseling services are put in place to help students manage stress. On the same note, government policies on guidance and counseling, bursary awards and the teaching of life skills in learning institutions are also meant to help reduce effects of stressors on students. It was presumed that when these intervening variables are in place, then they are likely to moderate the effects of stress on students thus improving their academic achievement.

Financial stress is associated with lowered self- esteem, an increasingly pessimistic look on life and reduced mental health. These are attributes that are likely to affect academic achievement negatively. The current study conceptualized that a student who is financially stressed is likely not to complete fee payment at the start of the term and also, such a student is likely not to purchase the required course materials. This would lead to low academic achievement. However, if the student has supportive social networks, and the colleges put in place support mechanisms as well as compliance with the set government policies, the students would be cushioned against the effects of financial stress and have improved academic achievement.

Academic stressors such as constant pressure of studying, writing of term papers, class assignments and examinations are known to cause a lot of anxiety in the life of many college students. Receiving low grades and fear of failure in relation to academic grades are also known academic stressors. The current study conceptualized that when students experience high levels of academic related anxiety, they are not able to concentrate on their studies. At the same time they find themselves in a mental state that is not conducive to learning. This may lead to low academic achievement. However, if students are taught life skills as stipulated by the government policies, then this would cushion the students against the adverse effects of academic stress and help improve their academic achievement.

College time is the period when students begin to form relationships some of which may become permanent in later adulthood. The current study conceptualized that when students are deeply involved in these relationships they tend to dedicate substantial amount of time in them at the expense of their study time. These relationships also have their downside with highly charged emotions, disappointments and heart breaks which are likely to interfere with the learners' thought processes thus resulting in lowered academic achievement. However, if the colleges implement the policy guidelines on guidance and counseling, this would cushion the students against the effects of relationship stress and help the students improve on the academic achievement.

1.9 Operational Definition of Terms

Academic Achievement in this study refers a measure of students' level of academic performance as measured by KNEC module two examinations overall results.

Academic Stress in this study refers to stress arising from academic workload comprising of set course requirements, assignments and term papers with set deadlines, tests and examinations to be done at specific times in their academic calendar.

Financial Stress in this study refers to stress arising from financial difficulties experienced by students in college.

Module Two Examinations in this study refers to examinations done by the students at the end of second year of study to enable them proceed to third year.

Relationship Stress in this study refers to stress arising from the intimate heterosexual relationships among college students.

Selected Stress Factors in this study are; Financial stress, Academic stress and Relationship Stress

Technical Training Institutions refers to post secondary non-university institutions training in technical and vocational education programs.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This study reviewed literature based on the selected stress factors which were academic stress, relationships and financial stress of the students, academic achievement or performance.

2.2 Financial Stress and Academic Achievement

Finances can be a strain for college students. Smith and Renk (2007) found that financial concerns cause significant stress for college students and produce high levels of stress. When students begin to have financial troubles, their outlook on life may be dramatically affected. Finance is the avenue through which college bills are paid. If their finances are not adequate the situation may tend to affect the students' academic performance adversely. If on the other hand, their financial needs are met adequately, probably their academic performance may be enhanced (Okoh, 2010).

Results of prior studies suggest that financial burdens could be a potential stress factor for college students' which contribute to low academic performance (Andrews & Wilding, 2004; Kariv & Heiman, 2005; Misra & Castillo, 2004; 2004; Smith & Renk, 2007) as cited in Okoh (2010). They have found that financial problems during college study were strongly related to psychological distress, and that financial constraints are a reality for almost all college students. Other studies have also revealed that financial stress is

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associated with lowered self- esteem, an increasingly pessimistic look on life, and reduced mental health; particularly an increase in depression and hostility. There is also a link between financial stress and suicidal tendencies and increased alcohol consumption. Declining physical health such as increases in headaches, stomachaches and insomnia have also been linked to financial stress (Davis & Mantler, 2014).

Concerns about money often hinder individuals from succeeding in college. A report by Groux (2012) on a survey of college students revealed that about one-third of college students confirmed that finances have negatively impacted their academic performance or progress, while 20 percent said they had to drop courses to deal with these stressors. The study concluded that there is a clear link between financial stressors, academic progress and performance. The study reported by Groux described the status of financial stress among college students, but did not reveal the extent to which it impacted on students' academic achievement. The current study however carried out a correlational analysis to determine the relationship between financial stress and students' academic achievement.

Poverty directly affects academic achievement due to the lack of resources available for student success. Low achievement is closely correlated with lack of resources, and studies have documented the correlation between low socioeconomic status (SES) and low achievement (Caro, McDonald & Willms, 2009). Children that come from a low socio-economic background in their early school years experience more problems as they grow older. These children tend to drop out of school early and are less likely to seek

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college education (Ibid). It is believed that low SES negatively affects academic achievement because low SES prevents access to vital resources and creates additional stress at home (Eamon, 2005). The economic hardships that are caused by low SES lead to disruptions in parenting, an increasing amount of family conflicts, and an increased likelihood of depression in parents and single-parent households (Eamon 2005). SES provides additional student information that includes parents' educational attainment and family income. Knowing financial status of a student helps institutions determine whether a student needs to work in addition to receiving financial aid. Students having financial problems who need to work may be at a greater risk of dropping out of college than those who are more financially secure (Pathways to College Network, 2012; Lotkowski, Robbins & Noeth, 2012).

Tombitas (2012) investigated the impact of financial stress on college students and found that 34 percent of the respondents said that financial stress had negatively impacted on their academic performance or progress while another 20 percent reported that they reduced their course load due to financial stress. Seventy-four percent of respondents were working during the academic year and that 15 percent of those working held full-time jobs.

The study by Tombitas further indicated that those who worked 20 hours per week during the academic year were significantly more likely to report that financial stress had negatively impacted on their academic performance and that they reduced their course

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load due to financial stress. This study did not indicate the extent of impact. Unlike this survey, the current study adopted a correlational design to enable the researcher to determine the relationship between financial stress and academic achievement.

A National Survey of Students' Engagement (NSSE) (2012) investigated college students' financial situations and how it affected students. The survey results revealed that 59 percent of freshmen and 53 percent of seniors said they were worried about paying for college; 60 percent of college freshmen and 62 percent of seniors reported that they were concerned about having enough money to pay for their regular expenses.

The NSSE survey further reported that about one third of both college freshmen and seniors agreed that their financial concerns had interfered with their academic performance. About one – quarter of college freshmen and one – third of seniors said that they had not purchased required materials due to their high costs. The survey also revealed that 60 percent of students who worked for more than 20 hours per week believed that their job interfered with their academic performance. This study used descriptive survey design and therefore did not reveal the extent to which financial stress impacted on students' academic achievement. The current study however, carried out correlational analysis to determine the extent of impact of financial stress on students' academic achievement in technical institutions in Kisumu County, Kenya.

In Nigeria, Okoh (2010) examined the influence of age, financial stress and gender on academic achievement among selected 175 undergraduates. Findings showed that though there was a positive relationship between age (.240), gender (.904), financial stress (.105) and academic performance, the relationship was not statistically significant. The study used multiple regressions and found that all the three variables accounted for only 1% of variance in academic performance. This study did not highlight the extent of impact of the individual variables on academic achievement. However, the current study used correlational research design to determine the extent of impact of financial stress on academic achievement of students in technical institutions.

In Botswana, Agolla and Ongori (2009) found that lack of resources and financial problems were viewed as major stressors during their college life. The study showed that student' stressors included; academic workload, inadequate resources, poor performance, continuous poor performance in academics, overcrowded lecture halls and uncertainty of getting a job after graduating from college. This study looked at students' stressors in one group and did not highlight the extent of impact of these stressors on students' academic achievement. To address this gap, the current study focused on selected stressors (financial, academic and relationships), then used correlational research design to find out the relationship between each stress category and students' academic achievement

Mwinzi (retrieved, 23/04/2014) investigated the impact of cost-sharing policy on the living conditions of university students in Kenyan public universities and found that

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financial challenges had made students to engage in income generating activities (IGAs) within their campuses which in turn caused them to: miss lectures; be inattentive in class; fail to complete academic projects; miss continuous assessment tests (CATs); feel fatigued and depressed and even fail examinations. This study used descriptive research design to investigate the impact of IGAs on students' academic work. The researcher did not establish the extent of impact of IGAs on students' academic achievement. The current study however, used correlational research design to determine the extent of impact of financial stress experienced by college students on their academic achievement.

A study carried out to investigate the impact of family socio-economic status on girl students' academic achievement in Kisumu County indicated that students from high family income performed better than those from low family income (Juma, Simatwa & Ayodo, 2012). The study showed that girl students from rich families were never sent home from school due to financial requirements while those from poor families were always sent home to bring school fees, a fact which affected their academic achievement either directly or indirectly. This study however, did not examine the extent to which these socio-economic factors impacted girls' academic achievement. The current study adopted correlational design to determine the extent of impact of financial stress on students' academic achievement in technical institutions in Kisumu County.

2.3 Academic Stress and Academic Achievement

Academic pressure is a significant source of stress for many college students Hashim, cited by Smith &Renk (2007). Identified sources of academic-related stress have included fear of falling behind with coursework, finding the motivation to study, time pressures, financial worries, and concern about academic ability (Smith &Renk, 2007). Further, students report stress over struggling to meet academic standards, time management worries, and concerns over grades. Additionally, these sources may exist easily throughout the span of college students' academic careers and may result in college students' experiencing a great deal of stress during their college career. If prevention efforts are to be developed to assist students in dealing with and avoiding academic-related stress, a greater understanding of the relationships among college students' use of coping strategies, social support, experiences of being parented, and academic-related stress needs to be gained. Academic problems have been reported to be the most common source of stress for students (Smith &Renk, 2007).

Ninh and Thao (2012) examined the relationship between academic stress levels and academic achievement on a sample of 66 graduate students. Their findings revealed that the top five academic stressors were; thesis 61 (92%), papers 60 (90%), time management 56 (84.4%), excessive homework/reading 52 (78.8%) and tuition cost 48 (72.8%). While this study examined the levels of academic stress on these students, it did not highlight the extent of impact of academic stress on academic achievement. To address this gap, the current researcher carried out a correlational analysis on a sample of

299 third year students of technical institutions to determine the relationship between academic stress and academic achievement.

Bean and Hammer, cited by Kausar (2010) examined students' level of stress in relation to their academic workload and found that 55 percent of students reported that they ignored one subject for the preparation of the other subject, 42.5 percent of students reported moderate level of stress whereas 27 percent of the students had stress levels that were beyond manageable levels. Similar results were reported by a research conducted by Polychronopoulou and Divaris (2009) on students in dental education. Their findings indicated that, assigned workload, performance pressure, and self-efficacy beliefs constituted the most stress-provoking factors. These studies described students' academic stress levels but, they never highlighted and possible relationships between students' academic stress levels and their academic achievement. To address this gap, the current study used a correlational research design which enabled the researcher to establish the extent of impact of academic stress on students' academic achievement.

Sulaiman, Hassan, Sapian and Abdullah (2009) investigated the relationship between academic stress levels and academic achievement on a sample of selected 155 form four students from two secondary schools in Malaysia. Their study findings showed that 45 (29%) of the respondents experienced medium stress, 110 (71%) experienced low stress while none experienced high levels of stress. It was further revealed that male and female students had significant difference in stress levels and, that urban and rural students also

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had significant difference in their stress levels. This study did give the relationship between academic stress and academic achievement. To address this gap, the current study carried out correlational analysis to establish the extent of impact of academic stress on students' academic achievement on a sample of 299 students of technical institutions.

Nandamuri and Ch (2015) carried out a study on sources of academic stress among a selected sample of 500 postgraduate management students in India and found that curriculum and instruction aspects were largely responsible for academic stress (86%). Placement related issues followed (63%), assessment matters (41%), and team work related issues (24%). This study identified the sources of academic stress among the selected respondents but did not show the relationship between academic stress and academic achievement. In the current study, the researcher used correlational analysis to show the extent of impact of academic stress on students' academic achievement.

Kadapatti and Vijayalaxmi (2012) investigated academic stressors of academic achievement among a selected sample of 360 pre-university students. Their findings showed that high aspirations, poor study habits, more study problems, change in medium of instruction and low socio-economic conditions were the factors responsible for academic stress and therefore, academic stressors among these students. Apart from highlighting the academic stressors, the study failed to show the extent of impact these stressors had on students' academic achievement. The current study has however

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addressed this gap by using correlational research design to show the relationship between academic stress and academic achievement.

Rajasekar (2015) examined the impact of academic stress on a conveniently selected sample of 100 management students in AMET University Business School. The findings showed that 53% of the respondents were stressed by faculty, 45% were stressed by parents while 2% of the respondents were stressed by peer groups. This study used convenient sampling technique that is quite biased and cannot be representative of a given population. The study also described the sources of academic stress based on the responses from the respondents, but did not give the extent of impact of academic stress on the students. To address these gaps, the current study selected a sample of 299 students using random sampling and also used correlational research design to find out the extent of impact of academic stress on students' academic achievement.

Siraj, Salam, Hassan, Jin and Othman (2014) examined stress levels ant its association with academic performance on a selected sample of 179 fourth year medical students. The findings showed that academic related stressors caused severe and high stress levels in 84% of the respondents. Further, results indicated that respondents with severe and high stress levels had higher cumulative grade point average. This implies that stress affected students' grades positively.

The study by Siraj et al. used descriptive research design to identify the sources of stress and the perceived stress levels among the fourth year medical students, but it did not

show whether there was any relationship between the higher stress levels and the higher performance levels. To address this gap the current study used correlational research design to establish the relationship between academic stressors and academic achievement on a sample of 299 third year students in technical institutions.

Rafidah, Azizah, Norzaidi, Chong, Salwani and Noraini (2009) examined the relationship between stress factors (health, social and academic), and their impact on academic performance on a sample of 154 pre-Diploma science students at the university of Technology MARA (UiTM). Their findings showed that students experienced moderate levels of stress with a score of 38.4 out of a total score of 70. Furthermore, it was indicated that there was a significant correlation (rho = -0.206; p = .000) between perceived stress level and academic performance at the end of the semester. This implies that when the level of perceived stress is higher, academic performance is lower.

The study by Rafidah et al used a total stress score from the three stress factors to correlate with students' academic scores to establish the impact of stress on academic performance. Their study never established the extent of impact of individual stress factors on students' academic achievement. To address this gap the current study correlated separate scores for the different stress factors (financial, academic and relationship) to determine the extent of impact of each stress factor on students' academic achievement.

In addition, the study by Rafidah et al used convenient sampling technique to select a sample of 154 respondents which may not be an accurate representation of the population from which the sample was drawn. This gave rise to a biased sample. To address this gap, the current study used random sampling technique to select 299 third year students from technical training institutions.

Gupta, Gupta, Mishra and Sharma (2011) carried out a study to investigate the relationship between academic stress and academic achievement among secondary students and found relationship was not significant, with a correlation coefficient of $r = -0.04$. Although no significant level of correlation was found, the negative correlation between these two variables could be taken to suggest that academic stress is related to poor academic achievement. This study was carried out among secondary school students.

The study by Gupta, Gupta, Mishra and Sharma measured academic stress using four components namely: academic frustration, academic conflict, academic pressure and academic anxiety. The current study on the other hand measured academic stress in terms of class assignments, class projects, course content, academic programs and examination. At the same time the current study used a study sample from technical institutions. These students are more emotionally mature compared to the sample drawn from among secondary school students.

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Rana and Mahmood (2010) explored the relationship between test anxiety and academic achievement on a sample of 414 randomly selected postgraduate students from various departments in a public university in Pakistan. Their findings showed a significant negative relationship ($r = -0.67$; $p = 0.000$). They concluded that test anxiety was one of the responsible for student underachievement and low performance.

The study by Rana and Mahmood looked at academic stress in terms of only one aspect (test anxiety). Therefore it excluded a lot of academic issues that affect students. To address this gap the current study used a more comprehensive measure of academic stress to determine the extent of impact of academic stress on students' academic achievement (see appendix A).

Awofodu and Emi (2013) investigated the relationship between stress and academic achievement on a sample of 164 Biology students in Nigerian universities. The study results showed that the amount of stress perceived by the surveyed students was not significantly correlated with their academic achievement ($r = -.088$; $p = 0.389$). Further, the study indicated that the students perceived more stress from their academics with regard to inadequate laboratory facilities, academic workload, few practical lessons, boring practical classes, not getting enough sleep, unclear assignments, duality of responsibility, finance, class attendance and examination anxiety.

This study by Awofodu and Emi put all the stress sources together; therefore it could not highlight the extent of impact of specific stressors on students' academic performance.

To address this gap the current study selected stress categories (financial stress, academic stress and relationship stress), analyzed the relationship between each category and academic achievement, and determined the extent of impact of each category by carrying out a correlational analysis.

In Botswana, Agolla and Ongori (2009) investigated the stressors, symptoms, and effects that are likely to be experienced by undergraduate students. The study revealed that academic workload, inadequate resources, low motivation, continuous poor performance in academics, overcrowded lecture halls, and uncertainty of getting job after graduating from the University lead to stress among students.

The study by Agolla and Ongori used descriptive research design and as a result could not establish the extent of impact of these academic stressors on students' academic performance. To address this gap, the current study used correlational design, which allowed the researcher to perform linear regression to establish the extent of impact of academic stress on college students' academic achievement by using a correlational approach.

Ndirangu, Muola, Kithuka and Nassium (2009) examined the relationship between test anxiety which is a form of academic stress and academic performance of secondary school students. Their study results did not show any significant relationship between test anxiety and students' academic performance ($r = 0.06$; $p = 0.928$). Test anxiety is only

one aspect of academic stress. There are other factors of academic stress that were not included in this study and this may have made the results biased. To address this gap, the current study, used a more comprehensive measure of academic stress in order to determine the relationship between academic stress and academic achievement (see appendix A).

2.4 Relationship stress and Academic Achievement

Early adulthood is a time period when interactions and the influence of parents and peers wanes and are to some extent supplanted by the support and influence of romantic partnerships (Giordano, Phelps, Manning, & Longmore, 2008). Thus, in early adulthood romantic partners are expected to play a large role that may have long-term, consequential implications on work and education prospects.

Romance and dating have long been central features on the adolescent landscape (Crissey, 2013). From a developmental perspective, dating is an important element in the formation of the adult self (Zimmer-Gembeck, Siebenbruner, and Collins, 2001) as quoted by Crissey (2013). Erikson's (1968) as quoted by Crissey (2013) classic description of identity formation locates adolescence and young adulthood as the period where people learn about emotional intimacy, and even cautions that if this is not accomplished, the individual will become emotionally isolated.

Participation in romantic relationships can have other positive consequences, such as enhancing social status in the peer group (Crissey, 2013). Furthermore, romantic experiences may help prepare adolescents for the transition to adulthood and adult romantic relationships, including feeling attractive to the opposite sex and gaining experience with emotional intimacy. This may in part be why adolescent romantic experiences are associated with both thinking about marriage and actually forming unions in early adulthood (Crissey, 2013).

While romance may be an important aspect of development, these relationships often have a downside. Romance is an arena for potentially physical and emotional consequences, particularly since they are "the single largest source of stress for adolescents" (Crissey, 2013). At a minimum, romantic involvement is likely to require at least some investment of time and energy from the participants, but this can range up to a nearly all-consuming level of investment (Crissey, 2013). Due to these investments, dating potentially distracts students from other areas of their lives, most notably school.

Romantic activity is also particularly fraught with the potential for rejection, conflict, and anxiety. Although learning to deal with these stressors is thought to be an additional contribution of dating to the developmental process, these experiences are likely to be painful and disruptive to adolescents' lives (Joyner and Udry, 2000) as cited by Crissey (2013). A focus on a romantic partner may also isolate adolescents from networks of social support (Manning, Phelps, Giordano, & Longmore, 2008).

Dating may also be one way that adolescents distance themselves from their families, as they may form close emotional bonds with their romantic partners (Manning et. al, 2008). If this is the case, then parents may lose some ability to monitor and support their children. Finally, dating may contribute to risky behavior, especially sexual activity since much of adolescent sexual behavior occurs within romantic relationships Crissey (2013). Sexual activity may have further consequences for emotional well-being, and also carries the potential for pregnancy and sexually transmitted infections (Meier, 2003) as quoted by Crissey (2013). While dating contains both potential benefits and pitfalls, these are not necessarily distributed equally between boys and girls.

The social and academic lives of high school students are likely to clash to some extent because they reflect competing demands (Crissey, 2013). Romance and dating are important components of the adolescent social world, and the investment of time and energy may therefore be a distraction from school. Adolescents who date may also open themselves up for disruption to their psychological and emotional well-being because these relationships can produce anxiety, and may involve conflict or even a break-up. This may lead adolescents to feel worse about them, be depressed, or lose confidence and may disrupt their academic well-being (Giordano, Phelps, Manning and Longmore, 2006).

Kopfler (retrieved 2013) carried out a study on effects of romantic relationship on academic performance on a selected sample of 75 undergraduate college students and

found that students involved in romantic relationships faced higher stress levels in meeting set deadlines but, there was no significant relationship between dating status and academic performance. This study used a small sample size which was selected using convenient sampling technique, thus lacking accurate representation of the target population from which the sample was drawn. To address this gap, the current researcher replicated the study but used random sampling technique to select 299 students from technical institutions as the study respondents.

Pham, Keenan and Han (2015) investigated the effects of early adolescent romance on academic performance among grade 9 students. The study findings revealed mixed effects of early adolescent romance on students' performance. While frequent dating and early sexual experiences showed significant negative impacts on academic performance ($r = -.35$ and $r = -.26$), moderate dating activities had an estimated positive impact on students' academic performance. This implies that early adolescent romance has both negative and positive effects on academic performance of grade 9 students.

This study by Pham, Keenan and Han targeted early adolescents. Early adolescence is a period that is characterized by less emotional maturity; hence they may not able to handle the challenges that come with dating and sexual relationships. The current researcher therefore, carried out similar investigations on a more mature sample of 299 college students drawn from technical training institutions to see if the findings would be replicated. At the same time while this study used high school graduation and college

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enrollment as measures of academic performance, the current study used students' grades obtained in KNEC module two examinations which are done at the end of their second year of study as a measure of academic achievement.

In Nigeria, Umar, Shaib, Aituisi, Yakubu and Bada (2010) in their study conducted on a selected sample of 120 college students showed that there was a significant negative relationship between romantic relationships and academic performance ($r = -0.934$; $p = 0.020$). The researchers concluded that romantic relationships were a psychological barrier to an effective learning process. This study used a small sample of 120 respondents and got a very strong correlation coefficient ($r = -0.934$), the current researcher however, carried out a similar investigation on a larger sample size of 299 respondents from technical institutions to find out if the linear regression model used would yield similar results.

In Tanzania, Budeba and Neema (2015) investigated the relationship between students' sexual relationship and its effects on academic performance on a selected sample of 172 respondents from secondary school. The study findings showed that most sexually active students performed poorly in their studies and faced several problems which compromised their academic lives. It was noted that sexual relationship in schools was common, however, students tried as much as possible to hide this from teachers or parents.

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The study also indicated that several reasons were associated with students' involvement in sexual relationship with the most common one being self – desire or satisfaction of sexual urges and peer pressure. Furthermore, several problems were associated with students' sexual relationship including shame and psychological disturbances which resulted from handling students' sexual relationship cases in schools. Risky sexual relationship exposed students to sexually transmitted infections including HIV/AIDS or led to unplanned premarital pregnancies.

The study by Budeba and Neema used descriptive survey design to describe the status of students' involvement in sexual relationships among the studied sample. The study however, failed to show the extent of impact of these relationships on students' academic achievement. To address this gap, the current study adopted correlational research design which enabled the researcher to perform linear regression so to determine the extent of impact of relationship stress on students' academic achievement.

In Kenya, Mbagaya (2008) carried out a study on a sample of 476 University students and showed that 32.3 percent and 30.0 percent of the respondents were perpetrators and victims of physical dating violence respectively. Verbal violence was perpetrated by 53.7 percent while 46.1 percent were victims. Sexual abuse was perpetrated by 43.6 percent while victims were 43.8 percent. This study investigated prevalence, patterns and risk factors of dating violence amongst Maseno University students. Dating violence is one aspect of relationship stress.

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The study by Mbagaya described the status of dating violence among these students, but it did not show the extent of impact of dating violence on students' academic achievement. To address this gap, the current study used correlational research design which enabled the researcher to perform correlational analysis on the data so as to establish the extent of impact of relationship stress on students' academic achievement.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, area of study, population, sample and sampling techniques, instruments of data collection, validity and reliability of the instruments, data collection procedures and methods of data analysis.

3.2 Research Design

The study adopted both descriptive survey and correlational research designs. In descriptive research design information concerning opinions or practices is obtained from a sample of people representing a population through the use of questionnaires or interview techniques (Wimmer and Dominick, 2013). Descriptive survey was used in the current study to get the students' opinions and feelings on the selected stress factors; financial, academic and relationships. Correlational design was used to assess the relationship between the selected stress factors and students' academic achievement in technical institutions.

3.3 Area of Study

The current study was carried out in Kisumu County, Kenya. It is located between latitudes 0° 15'N and 1° 45'S, longitudes 35° 15'E and 34°E. It is bordered by Vihiga County to the North, Nandi County to the North East, Kericho County to the East, Nyamira to the South, Homa-Bay to the South West and Siaya to the west. The county is

divided into seven sub-counties namely; Kisumu East, Kisumu West, Kisumu Central, Seme, Nyando, Muhoroni, and Nyakach (KNBS, 2012), see appendix D.

The 2009 National census showed that the County covers a total area of 2,085.9 Km^2, with a total population of 968,909. The County has a population density of 465 people per square kilometer compared to 401.1 which is the population density for Kenya (KNBS, 2012). Kisumu County has several public and private colleges and universities. The County has a literacy level of 65.8% compared to 66.4% which is the national level, with those attending school between 15-18 years being at 77.8% against 70.9% nationally.

The headquarter for the County is in Kisumu City which is a home to a bustling transportation hub, lying at the intersection of the Trans-African Highway (connecting the north, west and southern parts of Africa), as well as hosting ports on Lake Victoria shorelines, linking to neighboring Uganda and Tanzania. The major economic activities in the area include wage employment, fishing, business and subsistence farming. The County has an absolute poverty rate (proportions of people living on less than $1 a day) of 46.8% against 45.9% and is ranked in position 21 out of the 47 Counties in the Republic of Kenya (KNBS, 2012).

3.4 Study Population

The target population for the study comprised of 1008 third year students and two heads of guidance and counseling department from two technical institutions in Kisumu County. The third year students were targeted in the study because they are in their final year when they are about to be released into the world of work where they will be expected to put into practice the knowledge gained and the skills acquired. At this stage critical decisions about placement are made based on their academic achievement in college. It was also noted that the selected stress factors were more rampant among the third year students. The heads of G&C departments were selected to participate in the study since they were the custodians of the institutional counseling records that indicated the nature of issues that students reported as stressful in their live while in college.

3.5 Sampling Techniques and Sample Size

Saturated and stratified random sampling techniques were used in the study. Saturated sampling technique was used to select the 2 heads of G&C departments from the two institutions because they were too few to be sampled and the researcher had to use all of the in the study sample.

The third year students were selected using stratified random sampling technique. The students were first of all stratified into two sub- groups of 565 male students and 342 female students. The researcher then used simple random sampling technique to select one third or 33 percent of the population from each sub-group.

To select for the male students, all the 565 third year male students in the two institutions were numbered 1 to 565. The numbers were written on bottle tops. The bottle tops were then placed in a container and mixed sufficiently. From the container, 186 bottle tops were drawn randomly one at a time. The 186 male students whose numbers corresponded with the drawn numbers were selected for the study.

To select for female students, all the 342 third year female students from the two technical institutions were numbered 1 to 342. The numbers were written on bottle tops which were then placed in a container and mixed sufficiently. From the container, 113 bottle tops were randomly drawn, one at a time. The 113 female students whose numbers corresponded with the numbers on the drawn bottle tops were selected to participate in the study. In total a sample size of 299 third year students comprising of 186 males and 113 females were selected for the study alongside the two heads of G&C department.

Stratified random sampling was used in the current study because the researcher took into account the fact that the population comprised of male and female students. Therefore, the researcher needed a sample that would accurately represent the students' population in terms of males and females. According to Jackson (2014), a stratified sample allows the researcher to take into account the different sub groups of a population. This guarantees accurate representation of the population.

Sampling was done randomly to give all the elements in the population an equal opportunity to participate in the study, thus enabling the researcher to generalize the findings of the study. According to Lodico, Spaulding and Voegtle (2010), random selection of a sample allows the researcher to generalize the results of the study to the population from which the sample was drawn.

Table 3.1: Study Population and Sample Size

Respondents	Population	Sample Size	%
Heads of G&C Departments	02	02	**100**
Male Students	565	186	**33**
Female Students	342	113	**33**

Source: Enrollment Register Technical Training Institutions (2013) Kisumu County, Kenya

3.6 Instruments of Data Collection

The study used a questionnaire and an interview schedule for data collection. According to Gay (2004), a questionnaire may be open ended which allows the respondents more freedom of response or closed ended, which facilitates consistency of responses across respondents. The current study used a closed ended questionnaire to gather information from students. According to Mugenda (2003), an interview schedule allows interviewees to express opinions and ideas in their own words and provides in-depth data which is not possible to get using a questionnaire. In the current study, interview schedule was used to gather information on financial, academic and relationship stress from heads of G&C departments.

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3.6.1 Student Questionnaire (SQ)

This was based on closed ended questions that sought to collect data on the students' feelings and opinion on the impact of selected stress factors on academic achievement among students. According to Mugenda and Mugenda (2003), closed-ended questions have an advantage in that, they are easy to administer, analyze and are economical.

The student questionnaire was divided into part A and B. In part A, the students were required to indicate the overall result they attained in KNEC module two examinations. The expected responses were as follows; distinction, credit, pass, referral, fail or course requirement not met (CRNM). These are the only possible result outcomes that a student can attain after sitting for any of the modularized KNEC technical examinations.

Part B of the students' questionnaire was further divided into sections I, II and III which captured information on financial stress, academic stress and relationship stress respectively. Each section had 10 items relating to the specified stressor. The items were Likert-type rating scale with five response categories namely; strongly disagree, disagree, undecided, agree and strongly agree, see appendix A.

In each of the three sections, students were required to indicate the most appropriate response category for the 10 items. The student responses were then scored by the researcher as follows; strongly disagree = 1, disagree = 2, undecided = 3, agree = 4 and strongly agree = 5. The scores for each student for the 10 items in each section were then summed up separately to produce a measure for financial stress, academic stress and relation stress respectively. The highest possible score in each section was 50 and the lowest possible score was 10. Any score range of 10 - 30 for each section implied lower

stress levels while score range of 31 - 50 implied higher stress levels in each of the specified stress categories.

3.6.2 Interview Schedule for Heads of G&C

In-depth interview schedule was administered to heads of G&C through a face-to-face interview. This gave the researcher the chance to record expressive or emotive non-verbal responses that may indicate importance of particular questions. It was used to probe on issues relating to the opinion of the respondents on the extent of impact of financial stress, academic stress and relationship stress on students' academic achievement, see appendix B.

3.7 Pilot Study

Piloting was done to pre-test the study instruments and enhance them for validity and reliability. A pilot study was carried out among 101 (10%) of the third year students who were not included in the actual study sample.

3.7.1 Validity of the Instruments

The students' questionnaire (SQ) and the interview schedule were presented to experts in the department of Educational Psychology, Maseno University for purposes of content and face validity. Their independent advice was used in the revision and subsequent improvement of the study instruments. According to Amin (retrieved 2015), content and construct validity of an instrument is ascertained by expert judgement.

3.7.2 Reliability of the Instruments

The researcher established the reliability of the study instruments through the test re-test method and application of the Pearson's Product Moment Correlation. The reliability of the students' questionnaire (SQ) was based on a pilot study carried out among 101 (10%) of the students. The questionnaire was administered twice to the same respondents within an interval of two weeks. The two sets of scores obtained were then correlated using Pearson's Product Moment Correlation Coefficient. The SQ was accepted as reliable with a coefficient index of 0.82 which was above the recommended reliability of .70 for Social Sciences (Jackson, 2014).

3.8 Data Collection Procedures

The researcher sought permission for data collection from the National Commission for Science, Technology and Innovation (NACOSTI) through the School of Graduate Studies (S.G.S), Maseno University. The researcher sent notification letters to the Kisumu County Technical Training Office (KCTTO) and to the relevant institutions. The researcher then visited the sampled institutions to meet the principals and briefed them about the intended study and to set the date for data collection. Finally, the researcher visited the institutions on the agreed date, met the respondents, talked to them about the study and then administered the questionnaires, conducted the interviews and gathered relevant information from the students and heads of G&C departments respectively.

3.9 Data Analysis

Data collected was sorted, edited, coded, classified and tabulated. Quantitative data analysis involved the use of descriptive and inferential statistics. Descriptive statistics used included frequency counts and percentages which were presented in form of tables. Inferential statistics in form of Spearman's rank order correlational analysis was done to enable the researcher to make inferences about the study population from the study sample. Qualitative data obtained from the interview schedule was transcribed, organized thematically and reported in text form.

In part A of the students' questionnaire (SQ), the respondents were asked to indicate the overall grade attained in KNEC module two examinations. Analysis of KNEC module two examination results for each of the 299 students was done using descriptive statistics to work out the means with a view to establishing the students' academic achievement status. In this study the researcher assigned codes for academic achievement as follows; an overall result of distinction was assigned a score of 6, credit Pass was assigned a score of 5, ordinary Pass was assigned a score of 4, referral a score of 3, Fail a score of 2, and Course Requirement Not Met (CRNM) a score of 1.

A 5-point Likert-type rating scale was used to measure the respondents' attitudes, feelings and opinions on the selected stress factors. The score values were coded as follows: Strongly Agree (SA) – 5; Agree (A) – 4; Undecided (U) – 3; Disagree (D) – 2; and Strongly Disagree (SD) – 1. For negatively stated statements the score values were

reversed as follows: Strongly Disagree (SD) – 5; Disagree (D) – 4; Undecided (U) – 3; Agree (A) – 2; and Strongly Agree (SA) – 1.

For purposes of data analysis, the researcher used Statistical Package for Social Sciences (SPSS) to compute separate single scores for the variables students' financial stress (SFS), students' academic stress (SAS) and students' relationship stress (SRS) from the 10 questionnaire items in sections I, II and III of the students' questionnaire (SQ) see appendix A. Correlational analysis was done using Spearman's Rho at 95% confidence level. Qualitative data was reported in text form according to thematic areas addressed by the study objectives.

3.10 Ethical Considerations

In the current study the researcher met and talked to the prospective participants before issuing out the questionnaires. The researcher informed the prospective participants on the purpose of the intended study so that they could make informed consent. The prospective respondents were also informed that participation was voluntary and one was free not to participate or to discontinue his or her participation. The researcher assured the prospective respondents of their confidentiality by asking them not to indicate their names on the questionnaires for purposes of anonymity. The researcher ensured that the returned questionnaires were safely kept under lock and key.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents quantitative and qualitative results and discussions on the study's findings based on the objectives that were set.

4.2 Extent of Impact of Financial Stress on Students' Academic Achievement

The research question that targeted this objective was, 'what is the extent of impact of financial stress on students' academic achievement?' To obtain scores on financial stress, each respondent was asked to indicate their level of agreement or disagreement with the 10 items in section I of part B of the students' questionnaire (see appendix A). Their responses were then scored as follows: strongly disagree =1; disagree =2; undecided =3; agree = 4, and strongly agree = 5.

For each respondent, scores from the 10 items were summed up. Each of the 10 items on financial stress had possible maximum score of 5 and a minimum score of 1. Therefore the possible total scores on financial stress ranged from 10 to 50. In the current study, any score range of 10 – 30 implied lower financial stress levels while any score range of 31 – 50 implied higher levels of financial stress. The students' scores on financial stress are shown in Table 4.1.

Table 4.1: Students' Financial Stress Scores

Financial Stress Scores	Frequency (f)	Percentage (%)
13 - 14	13	4.4
15 - 16	20	6.6
17 - 18	16	5.3
19 - 20	03	1.0
21 - 22	25	8.3
23 - 24	26	8.7
25 - 26	03	1.0
27 - 28	26	8.7
29 - 30	19	6.4
31 - 32	52	17.5
33 - 34	16	5.3
35 - 36	40	13.4
37 - 38	7	2.3
39 - 40	11	3.7
41 - 42	03	1.0
43 - 44	19	6.4
Total	**299**	**100.0**

According to Table 4.1, the respondents' scores on financial stress varied and ranged from 13 to 44. While 148 (49.5%) of the respondents had a score range of 31 to 44, the remaining 151 (50.5%) of the respondents had scores ranging from 13 to 30. This implies

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that 49.5% of students in technical institutions in Kisumu County had higher financial stress levels while 50.5% of the students had lower financial stress levels.

The researcher used KNEC module two examination results as a measure of students' academic achievement. The respondents were asked to indicate the overall grade attained in KNEC module two examinations (see appendix A). The possible overall grades attainable at KNEC module two examinations are; distinction; credit; pass, referral, fail and course requirement not met (CRNM). The students' grades were then scored as follows: distinction = 6; credit = 5; pass = 4; referral = 3; fail = 2 and CRNM = 1. The students' examination grades are shown in Table 4.2.

Table 4.2: KNEC Module Two Examination Results

Overall Result Scores	Frequency	Percent
1	15	5.0
2	48	16.1
3	113	37.8
4	89	29.8
5	26	8.7
6	8	2.7
Total	**299**	**100.0**

1= Course Requirement Not Met (CRNM); 2= Fail; 3= Referral;

4= Pass; 5=Credit; 6= Distinction

Results in Table 4.2 indicate that 8 (2.7%) of the respondents had a score of 6 which is distinction, 26 (8.7 %) had a score of 5 which is credit, 89 (29.8%) had score of 4 which is ordinary pass, 113 (37.8%) had a score of 3 which is referral; 48 (16.1%) had a score of 2 which is fail, while 15 (5%) scored 1 which denoted course requirements not met. The KNEC module two examination results show that majority of third year students in technical institutions in Kisumu county 113 (37.8%) got an overall result of a "referral" which is poor achievement by Kenya National Examination Council (KNEC) standards.

According to KNEC, a candidate who has sat for Post School Examinations is awarded a 'referral' as an overall result when such a candidate fails to score a minimum of 40% in any one or two of the examination papers done. In terms of percentage pass, these examination results imply that only 123 (41.2%) of third year students in public technical institutions in Kisumu County passed these examinations leaving a failure rate of 59.8%.

For purposes of performing a correlational analysis, the KNEC module two examination result scores and the students' financial stress scores were ranked to enable the researcher to use Spearman's rank order correlation (rho). Results of this analysis are presented in Table 4.3. The interpretation of correlational analysis results in the current study are guided by Jackson's (2014) interpretation for strong, moderate and weak correlation coefficient values (see Appendix C).

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Table 4.3: Spearman's Correlation of Students' Financial Stress Scores with

KNEC Module Two Examination Results

			Rank of Grade	Rank of SFS
Spearman's rho	Rank of Grade	Correlation Coefficient	1.000	-.640[**]
		Sig. (2-tailed)	.	.000
		N	299	299
	Rank of SFS	Correlation Coefficient	-.640[**]	1.000
		Sig. (2-tailed)	.000	.
		N	299	299

**. Correlation is significant at the 0.01 level (2-tailed).

Grade = KNEC Module Two Examination Results

SFS = Students' Financial Scores

Table 4.3 shows that the correlation between students' financial stress and academic achievement (rho = -.640; p = .000), is significant and negative. According to guidelines by Jackson (2014) shown in appendix C, this is a moderate relationship. This means that the relationship between financial stress and students' academic achievement is moderately. This implies that an increase in the level of financial stress is associated with a decrease in students' academic achievement among third year students in technical institutions in Kisumu County, Kenya.

When the correlation coefficient is squared $(-.640)^2$ it gives a coefficient of determination of 0.409. This implies that financial stress accounted for 41% of variance in students' academic achievement. The current study has therefore found a moderate negative

relationship between financial stress and academic achievement of third year students in technical institutions in Kisumu County, Kenya.

In the USA, Tombitas (2012) found that, thirty- four percent of the respondents said that financial stressors had a negative impact on their academic performance. Seventy- four percent of the respondents were working during the academic year, and 15 percent of those working were in full – time jobs. It was also shown that students who worked for more than 20 hours per week during the academic year were significantly more likely to report that financial stress had a negative impact on their academic performance and they had to reduce their academic course load.

As shown in Table 4.3, the current study found a negative relationship (rho = -.640; p = .000) between financial stress and academic achievement among third year students in technical institutions in Kisumu County, Kenya. The current study finding concurs with the findings by Tombitas. However, unlike the current study, Tombitas did not carry out a correlational analysis to show the relationship between financial stress and students' academic achievement. Therefore, findings of the current study, not only supports the survey results, but further highlights the extent of impact of financial stress on college students' academic achievement.

Groux (2012) highlighted reports of the 2012 National Survey of Students' Engagement (NSSE). The survey results showed that one- third of both college freshmen and seniors agreed that financial concerns interfered with their academic performance in that they could not afford required course materials including textbooks. It was further shown that more than sixty percent of those who worked for more than 20 hours per week believed that their jobs interfered with their academic performance.

The current study found a negative relationship (rho = -.640; p = .000) between financial stress and students' academic achievement as shown in Table 4.3. This implies that academic achievement decreases with the increase of financial stress. Therefore the current study finding is in agreement with the 2012 NSSE survey results. However, unlike the NSSE survey report that described the status of financial stress and its impact on college students, the current study carried out a correlational analysis to highlight the extent of impact of financial stress on students' academic achievement among third year students in technical institutions in Kisumu County, Kenya.

In Nigeria, Ebenuwa-Okoh (2010) examined the influence of age, gender and financial status on selected 175 undergraduate students. Results of this study showed that the relationship between the combination of the three independent variables (age, gender and financial status) and academic performance was not significant with a positive correlation coefficient r = .095. This implies that all the three variables in the study accounted for only about 1% of variance in the academic performance of the respondents. It was

concluded that age, gender and financial stress were not significant predictors of academic performance.

Contrary to the findings by Ebenuwa-Okoh, the current study found a significant negative relationship (rho = -.640; p = .000) between financial stress and students' academic achievement among third year students in technical institutions in Kisumu County, Kenya as shown in Table 4.3. However, unlike the study by Ebenuwa-Okoh, the current study separately analyzed the relationship between financial stress and students' academic achievement. This enabled the researcher to determine the extent of impact of financial stress on students' academic achievement which the reviewed studies did not highlight.

The two heads of guidance and counseling departments from the two technical institutions were interviewed about financial stress using the interview schedule for the heads of guidance and counseling departments. During the interviews, the HODs were asked to comment generally on the level financial difficulties as reported by the students who visited the departments to seek for assistance. This question highlighted the level of financial stress among third year students in technical institutions in Kisumu County, Kenya.

The HODs gave different comments regarding the level of financial stress among students. Some of the responses that were common in both institutions are captured here:

"The students who come to us with financial difficulties generally have high levels of financial stress as a good number of them come from poor households."
"Others have to fend for their other siblings who are also in other learning institutions and the parents cannot afford to pay all their fees." "Some of these students are orphans who also have to take care of their younger siblings." "But, there are also other students who just lack financial management skills."

These responses imply that these students do experience financial difficulties. The heads of departments were also asked to state how these financial problems affected students' academic performance in their view. The common responses in both institutions included the following:

"Students with financial problems reported to college late at the beginning of a new term." "Students with financial difficulties failed to buy the required course materials including text books." "Some students with financial difficulties have dropped out of college while others stay in college longer than the stipulated course duration."

This implies that financial difficulties experienced by these students affect their academic achievement negatively. This is in line with the results from quantitative data that showed a significant negative relationship (rho = -.640; p = .000) between financial stress and students' academic achievement among third year students in technical institutions in Kisumu County, Kenya.

4.3 Extent of Impact of Academic Stress on Students' Academic Achievement

In objective two, the researcher sought to determine the extent of impact of academic stress on students' academic achievement at. To obtain academic stress scores, each respondent was asked to indicate his or her level of agreement or disagreement with the 10 items in section II of part B of the students' questionnaire (see appendix A). Their responses were then scored as follows: strongly disagree = 1; disagree = 2; undecided = 3; agree = 4; strongly agree = 5.

For each respondent, the scores were summed up. Each of the 10 items on academic stress had a possible maximum score of 5 and minimum score of 1. Therefore the possible total scores on academic stress ranged from 10 to 50. In the current study, a score range of 10 to 30 implied lower levels of academic stress while a range of 31 to 50 implied higher levels of academic stress. These results are shown in Table 4.4.

Table 4.4: Students' Academic Stress Scores

Academic Stress Scores	Frequency (f)	Percentage (%)
11 -12	2	.7
13 -14	33	11.0
15-16	40	13.4
17-18	16	5.3
19-20	9	3.0
21-22	2	.6
23-24	1	.3
25-26	10	3.3
27-28	11	3.6
29-30	30	10.0
31-32	28	9.3
33-34	30	10.0
35-36	26	8.6
37-38	25	8.4
39-40	14	4.7
41-42	13	4.4
43-44	6	2.0
45-46	3	1.0
Total	**299**	**100.0**

Study findings in Table 4.4 shows that the students' scores on academic stress ranged between 12 and 46. The findings further reveal that 145 (48.5%) of the respondents scored between 31 and 46 while 154 (51.5%) scored between 12 and 30 out of a possible maximum score of 50. This implies that more than a half of the third year students 51.5% in public technical institutions in Kisumu County had lower levels of academic stress.

In order to determine the extent of impact of academic stress on students' academic achievement, data on academic stress was ranked then a correlational analysis done using students' academic stress scores as the independent variable and students' academic achievement scores as the dependent variable. Results for this analysis are presented in Table 4.5.

Table 4.5: Spearman's Correlation of Students' Academic Stress Scores with

KNEC Module Two Examination Results

			Rank of Grade	Rank of SAS
Spearman's rho	Rank of Grade	Correlation Coefficient	1.000	-.721[**]
		Sig. (2-tailed)	.	.000
		N	299	299
	Rank of SAS	Correlation Coefficient	-.721[**]	1.000
		Sig. (2-tailed)	.000	.
		N	299	299

**. Correlation is significant at the 0.01 level (2-tailed).
Grade= KNEC Module Two Examination Results
SAS = Students' Academic Stress scores

Results in Table 4.5 indicate that the correlation coefficient is negative and significant (rho = -.721; p = .000). According to guidelines by Jackson (2014) shown in appendix C, this is a strong relationship. This implies that academic stress has a strong negative relationship with the academic performance of third year students in technical institutions in Kisumu County, Kenya.

A negative relationship implies that an increase in the level of academic stress is associated with a decrease in academic achievement among these students. When the correlation coefficient is squared $(-.721)^2$, it gives a coefficient of determination of 0.519. This implies that academic stress accounts for up to 52% of variance in students'

academic achievement. The current study has therefore revealed a strong negative relationship between academic stress and students' academic achievement in technical institutions in Kisumu County.

In Malaysia, Rafidah, Azizah, Norzaidi, Chong, Salwani and Noraini (2009) examined the impact of perceived stress and stress factors on academic performance of pre-Diploma science students. The stress factors investigated by this study were health, social and academic. The study findings showed that there was a significant though weak negative relationship (rho = -0,206; $p < 0.05$) between the level of perceived stress at the end of the semester and students' academic performance. This is in agreement with the current study which found a significant strong negative relationship (rho = -.721; p = .000) between academic stress and academic achievement among students in technical institutions in Kisumu County, Kenya as shown in Table 4.5.

In its measure of academic stress, the current study focused exclusively on aspects of academic workload (such as class assignments, class projects, and examinations) which are directly related to academic achievement. However, the study by Rafidah et al, used scores from of all the three stress factors (such as health and social) some of which are somehow non- academic. This reason probably explains why the current study found a strong relationship while the study by Rafidah et al found a weak relationship.

Studies conducted in Pakistan have concurred with the finding of the current study. Elias, Ping and Abdullah (2011) examined the relationship between undergraduate stress levels and academic achievement. Their findings showed that there was a significant weak negative correlation ($p = 0$, $r = -.195$) between students' stress levels and students' academic achievement. The academic stress levels assessed by this study were based on four aspects namely: academic workload stress, intrapersonal stress, interpersonal stress and environmental stress. Total stress score was obtained by adding scores from the four aspects. Some of these aspects are non-academic in nature.

The current study however, focused strictly on academic workload aspects as a measure of academic stress as shown in appendix A, and found a significant strong negative correlation (rho $= -.721$; $p = 0.000$) between academic stress and academic achievement (see Table 4.5). These academic workload related aspects are closely related to academic achievement; hence their effects could be felt more. This probably explains why the current study found a strong relationship when compared to the study by Elias et al.

Still in Pakistan, Rana and Mahmood (2010) found a significant negative relationship ($r = -.67$; $p = 0.000$) between test anxiety and academic achievement among selected 414 postgraduate students. The researchers concluded that test anxiety is one of the factors responsible for student underachievement and low academic performance. This study finding is in agreement with the current study finding which found a significant negative

relationship (rho = -.721; p = .000) between academic stress and academic achievement as shown in Table 4.5.

The study by Rana and Mahmood, found a moderate relationship (r = -0.67), while the current study found a strong relationship (rho = -.721) according to Jackson's (2014) guidelines for interpretation of strong, moderate and weak correlation coefficients as shown in appendix C. While the current study used a comprehensive measure of academic stress which also included test anxiety as indicated in appendix A, the study by Rana and Mahmood used test anxiety which is just one aspect of academic stress. This is probably the reason why there is only a small difference between the r- values obtained by both the study by Rana and Mahmood and the current study.

In India, Gupta, Gupta, Mishra and Sharma (2011) examined the relationship between academic stress and academic achievement on a selected sample of 200 secondary school students. Their results showed that was a negative non-significant relationship between academic stress and students' academic achievement (r = -0.04). Though the direction of the relationship in this study is in line with the current study results shown in Table 4.5, it was quite weak. This implies that the influence of academic stress on students' academic achievement was almost negligible among the secondary school students.

The study by Gupta, Gupta, Mishra and Sharma measured academic stress through its four components; academic frustration, academic pressure, academic conflict and

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academic anxiety. These components are more closely related to emotions. The current study used a measure of academic stress that focused mainly on academic workload aspects and found a significant strong negative relationship (rho = -.721; p = .000) between academic stress and academic achievement. It is believed that these academic workload aspects are more closely related to achievement and are the most probable reason for the difference in correlation strengths. The results in the current study further revealed that academic stress accounted for up to 52% of variance in students' academic achievement among third year students in technical institutions in Kisumu County, Kenya.

Similar results were indicated by Awofodu and Emi (2013). They conducted a study among students in tertiary institutions in Nigeria and found a weak negative correlation between academic stress and academic achievement (r = -.088). Their study used stress scores obtained from academic workload and other sources like finances, relationships and responsibilities lumped together. However the current study used stress scores strictly from academic workload related issues and found a significant negative correlation (rho = -.721; p = .000) as shown in Table 4.5.

The current study finding is however contrary to findings of other previous researchers. Kumari and Gartia (2012) carried out a study among secondary school students to investigate the relationship between academic stress and academic achievement. The study used a stress inventory scale that was designed to look at five areas of stress namely: physical stress; social, economic and political stress; job and career stress;

family stress; and other stress. Their finding revealed a weak positive correlation ($r = 0.19$) between stress and students' academic achievement. This finding is not in agreement with the current study which found a significant negative correlation ($rho = -.721$; $p = .000$). Unlike the study by Kumari and Gartia, the current study focused on the relationship between a specific stressor (academic stressors) and students' academic achievement. This enabled the researcher to establish the extent of impact of academic stress on students' academic achievement, and not just the relationship between stresses in general and achievement as done by Kumari and Gartia.

Ndirangu, Muola, Kithuka and Nassiuma (2009) conducted investigated the relationship between test anxiety and academic achievement among secondary school students in Nyeri District and found that there was no significant relationship ($r = .06$) between test anxiety and academic achievement. This is contrary to the current study finding that found a significant relationship ($rho = -.721$; $p = .000$) between academic stress and students' academic achievement (see Table 4.5) as well as other research findings like Rana and Mahmood (2010).

The study by Ndirangu, Muola, Kithuka and Nassiuma looked at test anxiety which is just one aspect of academic stress. Test anxiety purely depends on the students' level of preparedness at the time of taking the test, hence may not be a reliable measure of academic stress when used in isolation. However, the current study used a more comprehensive list of academic stressors as highlighted in appendix A.

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The heads of guidance and counseling departments from the two institutions were interviewed on aspects of academic workload which in their view caused stress and anxiety to third year students in their institutions. The HODs identified several factors as indicated by students who visited their departments for assistance. The common responses captured included:

> *"Some of the students come to us complaining of heavy course loads." Others feel that the time they have is not enough for them to attend to their academic work." "Some students feel that examinations are marked unfairly." "Other students complain that lack of textbooks and other course materials stress them." "Students also complain of difficult examinations." "Students complain that some lecturers are unavailable for consultation." "Students complain of long hours of practical lessons." "Other students feel that the assignments being given are too many."*

These responses show that the students experience high levels of academic stress.

The HODs were further asked how these academic stressors affected students' academic performance in their view. The responses common to both institutions were:

> *"Students end up going in for examination when they are not adequately prepared." "Some students hand in incomplete assignments." "Some students are not confident in themselves." "Other students resort to cheating in examinations."*

From the responses it can be deduced that the HODs feel that academic stressors have a negative impact on students' academic achievement among third year students in technical institutions in Kisumu County, Kenya. This is in similar to the results of correlational analysis which revealed that academic stress has a strong negative and significant relationship (rho = -.721; p = .000) with students' academic achievement.

4.4 Extent of Impact of Relationship Stress on Students' Academic Achievement
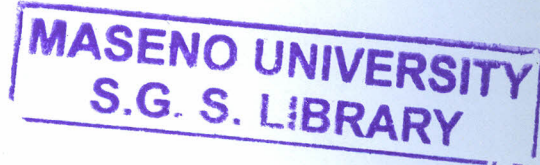
The research question that guided this objective was, "what is the extent of impact of relationship stress on students' academic achievement?" To generate scores on relationship stress, the researcher asked the respondents each to indicate their levels of agreement or disagreement with the 10 items in section III of part B of the students' questionnaire (see appendix A). Their responses were scored as follows: strongly disagree = 1; disagree = 2; undecided = 3; agree = 4; and strongly agree = 5.

For each respondent, the scores were summed up. Each of the 10 items on relationship stress had a possible maximum score of 5 and minimum score of 1. Therefore the possible total scores on relationship stress ranged from 10 to 50. In the current study, a score range of 10 to 30 implied lower levels of relationship stress while a range of 31 to 50 implied higher levels of relationship stress. These results are shown in Table 4.6.

Table 4.6: Students' Relationship Stress Scores

Relationship Stress Scores	Frequency (f)	Percentage (%)
10 - 11	11	3.7
12 - 13	3	1.0
14 – 15	22	7.3
16 – 17	19	6.4
18 – 19	27	9.0
20 – 21	20	6.7
22 – 23	13	4.3
24 – 25	10	3.3
26 – 27	14	4.7
28 – 29	08	2.7
30 – 31	13	4.4
32 – 33	23	7.7
34 – 35	18	6.0
36 – 37	07	2.4
38 – 39	12	4.0
40 – 41	19	6.3
42 – 43	07	2.4
44 – 45	26	8.7
46 – 47	15	5.0
48 – 49	04	1.3
50 – 51	08	2.7
Total	**299**	**100**

Table 4.6 shows that the students' scores on relationship stress varied from 10 to 50 out of a possible maximum score of 50. 152 (50.8%) of the respondents scored between 30 and 50, while 147 (49.2%) of the respondents scored between 10 and 29. This implies more than half of the year three students in technical institutions in Kisumu County, experienced higher levels of relationship stress.

In order to find out the extent of impact of relationship stress on students' academic achievement, the scores on relationship stress were ranked than a correlational analysis was done using the ranked relationship stress scores as the independent variable with ranked scores on students' academic achievement as the dependent variable. The results for this analysis are shown on Table 4.7

Table 4.7: Spearman's Correlation of Relationship Stress with KNEC Module Two Examination Results

			Rank of Grade	Rank of SRS
Spearman's rho	Rank of Grade	Correlation Coefficient	1.000	-.038
		Sig. (2-tailed)	.	.517
		N	299	299
	Rank of SRS	Correlation Coefficient	-.038	1.000
		Sig. (2-tailed)	.517	.
		N	299	299

Grade = KNEC Module Two Examination Results

SRS = Students' Relationship Stress scores

According to Table 4.7, the correlation between relationship stress and academic achievement (rho = -.038; p = .517) is negative and not significant. A negative relationship implies that an increase in relationship stress levels is associated with a decrease in academic achievement levels among students. According to guidelines by Jackson (2014) shown in appendix C, a correlation coefficient of -.038 implies a weak relationship.

When the correlation coefficient is squared $(-.038)^2$ it gives a coefficient of determination of 0.0014. This implies that relationship stress accounted for 1.4% of variance in the academic achievement of these students. The current study has therefore found that there

is no significant relationship between relationship stress and academic achievement of third year students in technical institutions in Kisumu County Kenya.

Pham, Keenan and Han (2015) carried out a study to investigate the causal effects of early adolescent romance on students' academic performance among 9th graders. Their findings revealed that early sexual activity and high dating frequency had significant negative relationship ($r = -.35$, $p < .05$; $r = -.26$, $p < .05$) with high school graduation and college enrollment respectively. The current study results in Table 4.7 show that the relationship between relationship stress and students' academic achievement is weak and negative (rho $= -.038$, $p = .517$). The current study finding is therefore in agreement with the findings by Pham, Keenan and Han.

The study by Pham, Keenan and Han was conducted among secondary school students; however, the current study's respondents were drawn from third year students from technical colleges. These students are more mature emotionally and are better able to handle the stress associated with relationships compared to the secondary school students used as respondents in the study by Pham, Keenan and Han. This could be a possible reason for the difference in the degree of correlation between relationship stress and academic achievement. It is believed that at third year, students are almost exiting college and some of them may have even found marriage partners amongst themselves.

Umar, Shaib, Aituisi, Yakubu and Bada (2010) showed that there was a weak negative relationship between romantic relationships and academic achievement among college students in Nigeria. The study revealed that romantic relationships accounted for about 9.16% of variance in students' academic achievement. Romantic relationships may be a psychological barrier to effective learning process. The current study results in Table 4.7 showed a weak negative relationship (rho = -.038, p = .517) between relationship stress and academic achievement and which is in agreement with the study findings by Umar, Shaib, Aituisi, Yakubu and Bada. However, the current study found that relationship stress accounted for less than 1% of variance in students' academic achievement.

Jimenez and Tatem (Retrieved, 23/02/2013) examined the relationship between dating status, academic achievement, academic motivation, depression and self- esteem. The study findings revealed a significant negative relationship between being in a committed relationship and academic performance (r = -.37, N= 60, P < .05). The study displayed consistent and significant lower levels of academic achievement and motivation and higher levels of depressive symptoms. The study further revealed that frequent daters displayed more depressive symptoms, but their self esteem was unaffected. It was also revealed that frequent dating not only compromised direct academic success, but also interfered with the kinds of internal sets that make academic learning a satisfying experience.

The current study established a weak negative correlation (rho = -.038, p = .517) between relationship stress and students' academic achievement (see Table 4.7). This result

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implies that relationship stress was negatively associated with students' academic achievement. This finding concurs with the study finding by Jimenez and Tatem. Their study used the Psychological Intimacy Questionnaire (PIQ) to investigate romantic love, supportiveness and communication ease in a participant's committed relationship. A higher PIQ score implied unsupportive committed relationship while a lower PIQ score implied supportive committed relationship. The current study however, used a researcher made tool that did not include all the aspects of romantic relationships included in the PIQ. This may have resulted in the difference in the degree of relationship between relationship stress and students' academic achievement as indicated in the study results.

Budeba and Neema (2015) examined the effects of sexual relationship on academic performance among a selected sample of 172 secondary school students in Tanzania. Their study findings showed that most sexually active students performed poorly in their studies and faced several problems which compromised their academic lives. It was taken that poor academic performance was an indication of negative effects of students' sexual relationship on academic performance.

According to Table 4.7, the current study found a weak negative relationship (rho = -.038, p = .517). Therefore the current study finding concurs with the study findings by Budeba and Neema. Their study never highlighted the extent of impact of sexual relationships on students' academic performance. The current study however, used correlational research design which enabled the researcher to carry out correlational

analysis so as to determine the extent of impact of relationship stress on students' academic achievement. The current study has highlighted that academic achievement among third year students in technical institutions in Kisumu County does not have any significant relationship with stress arising from their dating or romantic relationships.

Compared to the reviewed studies (Budeba & Neema, 2015; Pham, Keenan & Han, 2015; Umar, Shaib, Aituisi, Yakubu & Bada, 2010; and Jimenez & Tatem, retrieved 2013), the current study is the only that has revealed that there is no significant relationship (rho = -.038, p = .517) between relationship stress and students' academic achievement. This could possibly be associated with some of the cultural practices around Kisumu County, where people tend to attach a lot of significance to matters relating to sex, a fact that is embedded in cultural practices like wife inheritance, polygamy among others. This is further reflected in the high rates of HIV/AIDS prevalence in the area.

The current study results imply that though the relationship stress experienced by the students in technical institutions in Kisumu County has a negative relationship with academic achievement, the extent of impact is close to zero. Romantic relationships provide students with experiences which improve their self esteem and in turn outweigh the negative effects on the students' motivation and performance (Myers, 2010). Therefore the current study finding has revealed that relationship stress has no significant impact on students' academic achievement.

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During the interview session, the HODs were asked to comment generally on relationships as a source of stress among third year students in their institutions as reported by students who visited their departments. This question was to highlight the level of relationship stress among the students in technical institutions in Kisumu County, Kenya. The common responses given include:

"Students come to us when they break – up in their relationships." "We get cases of students with violent partners." "We also have cases of students complaining of disagreements with their dating partners." "Others are cases of unplanned pregnancies."

This implies that students in technical institutions in Kisumu County, experience relationship stress.

The HODs were further asked how these relationship stresses affect students' academic performance in their view. The responses shared by the two HODs included:

"Relationship break – ups leave students emotionally unstable." "Some students spend too much time partying with their dating partners at the expense of their academic work."

These responses points towards negative effects of relationship stress on students' academic achievement. This is consistent with the results of quantitative data captured in Table 4.7 which showed a weak negative relationship (rho = -.038 p = .517) between relationship stress and academic achievement among third year students in technical institutions in Kisumu County, Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of the Study Findings

This section presents a summary of the study findings based on the objectives of the study. The purpose of this study was to determine the extent of impact of selected stress factors on students' academic achievement in technical training institutions in Kisumu County. The objectives of the study were to: determine the extent of impact of financial stress on students' academic achievement; determine the extent of impact of academic stress on students' academic achievement; and determine the extent of impact of relationship stress on students' academic achievement.

5.1.1 Extent of Impact of Financial Stress on Students' Academic Achievement

The study findings revealed that 148 (49.5%) of the respondents had higher levels of financial stress while 154 (50.5%) of the respondents had lower levels of financial stress. This implies that slightly more than half of the third year students in technical training institutions in Kisumu County experienced lower levels of financial stress, the others experienced higher levels of financial stress.

Correlational analysis using financial stress scores as the independent variable and students' academic achievement scores as the dependent variable showed that there was a significant moderate and negative relationship (rho = -.640; p = .000) between financial

stress and students' academic achievement (see Table 4.2). This implies that students' academic achievement decreased by .640 standard deviation units for every one standard deviation increase in the level of financial stress. When the correlation coefficient (-.640) is squared, it gives a coefficient of determination of 0.409. This implies that financial stress accounted for up to 41% of variance in students' academic achievement in technical institutions in Kisumu County, Kenya.

5.1.2 Extent of Impact of Academic Stress on Students' Academic Achievement

The study findings revealed that 145 (48.5%) experienced higher levels of academic stress, while 154 (51.5%) of the respondents experienced lower levels of academic stress. This implies that there was only a small difference between the number of students with higher levels of academic stress and those with lower levels of academic stress among third year students in technical institutions in Kisumu County, Kenya.

The correlational analysis of students' academic stress scores and students' academic achievement scores showed a significant strong negative relationship (rho = -.721; p = .000) between academic stress and students' academic achievement (see Table 4.5). This implies that students' academic achievement decreased by .721 standard deviation units for every one standard deviation increase in academic stress level. When this correlation coefficient is squared, it gives a coefficient of determination of 0.519. This implies that academic stress accounted for up to 52% of variance in students' academic achievement among third year students in technical institutions in Kisumu County, Kenya.

5.1.3 Extent of Impact of Relationship Stress on Students' Academic Achievement

The study findings revealed that 152 (50.8%) of the respondents experienced higher levels of relationship stress while, 147 (49.2%) of the respondents experienced lower levels of relationship stress. This implies that majority (50.8%) of third year students in technical institutions in Kisumu County experienced higher levels of relationship stress.

The correlational analysis done using relationship stress scores as the independent variable and academic achievement scores as the dependent variable showed that there was a weak negative correlation (rho = -.038; p = .517) between relationship stress and students' academic achievement (see Table 4.7). The relationship was not significant. This implies that the extent of impact of relationship stress on academic achievement among third year students in technical institutions in Kisumu County is not noticeable, almost zero.

5.2 Conclusions

From the study findings, the following conclusions were drawn based on the objectives that were set.

5.2.1 Extent of Impact of Financial Stress on Students' Academic Achievement

From the study findings in objective one, it was concluded that financial stress had a significant moderate negative impact on students' academic achievement among third year students in technical institutions in Kisumu County, Kenya.

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5.2.2 Extent of Impact of Academic Stress on Students' Academic Achievement

From the study findings in objective two, it was concluded that academic stress had a significant strong negative impact on students' academic achievement among third year students in technical institutions in Kisumu County, Kenya.

5.2.3 Extent of Relationship Stress on Students' Academic Achievement

From the study findings in objective three, it was concluded that relationship stress had no significant, though weak negative impact on students' academic achievement among third year students in technical institutions in Kisumu County, Kenya.

5.3 Recommendations

The following recommendations were made based on the study's findings:-

i. Technical institutions in Kisumu County need to clearly take steps (for example, financial education, work study programs) to help students reduce the level of financial stress with a view to improving their academic achievement. This recommendation was based on the finding by the current study that students' academic achievement decreased with increased levels of financial stress among third year students in technical institutions in Kisumu County, Kenya.

ii. The curriculum developers together with the trainers should take a critical look at the curriculum to see if there are areas that would require revision with a view to reducing the academic stress experienced by the students so as to improve

students' academic achievement. This recommendation was based on the finding by the current study that students' academic achievement decreased with increased levels of academic stress among third year students in technical institutions in Kisumu County, Kenya.

iii. Technical institutions in Kisumu County need to train students on effective ways of handling relationships to improve students' emotional stability, and by extension academic achievement. This recommendation was based on the finding by the current study that slightly more than half 152 (50.8%) of third year students in technical institutions in Kisumu County experienced high levels of relationship stress.

5.4 Suggestions for Further Research

Based on the study's findings, the following recommendations were made for further research.

i. Mediating role of stress coping strategies on the relationship between financial stress and academic achievement of third year students in technical institutions in Kisumu County, Kenya.

ii. Mediating role of stress coping strategies on the relationship between academic stress and academic achievement among third year students in technical institutions in Kisumu County, Kenya.

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iii. Mediating role of stress coping strategies on the relationship between relationship stress and academic achievement of third year students in technical institutions in Kisumu County, Kenya.

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