

**INFLUENCE OF COMPETITIVE CO-CURRICULAR ACTIVITIES ON SELF-  
CONCEPT, DEVIANT BEHAVIOUR AND ACADEMIC PERFORMANCE  
AMONG SECONDARY SCHOOL STUDENTS IN CENTRAL REGION, KENYA**

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## DECLARATION

This thesis is my original work and has not been presented for a degree in any other University or any other award.

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## **DEDICATION**

This work is dedicated to my late husband, Alexander Mwangi and children Christine Muthoni, Victor Warira and Silvester Kamau.

Your love and encouragement throughout this study is truly appreciated.

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## ABBREVIATIONS AND ACRONYMS

<b>ACT</b>	-	American College Testing
<b>ANOVA</b>	-	Analysis of Variance
<b>AP</b>	-	Academic Performance
<b>CRSSDA</b>	-	Central Region Secondary Schools Drama Association
<b>CRSSMA</b>	-	Central Region Secondary Schools Music Association
<b>CRSSSA</b>	-	Central Region Secondary Schools Sports Association
<b>ECAs</b>	-	Extra-curricular Activities
<b>GPA</b>	-	Grade Point Average
<b>IDM</b>	-	Illicit Drug Misuse
<b>KCPE</b>	-	Kenya Certificate of Primary Education
<b>KCSE</b>	-	Kenya Certificate of Secondary Education
<b>KICD</b>	-	Kenya Institute of Curriculum Development
<b>MANOVA</b>	-	Multiple Analyses of Variance
<b>MOEST</b>	-	Ministry of Education Science and Technology
<b>PSSA</b>	-	Pennsylvania System of School Assessment
<b>SES</b>	-	Social Economic Status
<b>TEU</b>	-	Test of Economics Understanding
<b>UN</b>	-	United Nations

## OPERATIONAL DEFINITION OF TERMS

**Absenteeism:** Refers to when a student is not present in school. In this study it is used to denote the number of days that a given student has missed school.

**Academic Performance:** The grade or total score that a student obtains in the end of a school term examinations.

**Central Region of Kenya:** The region covering the counties of Kiambu, Kirinyaga, Murang'a, Nyeri and Nyandarua.

**Class:** A group of students who attend specific lessons in a school.

**Co-curricular Activities:** Activities that complement, enhance and enrich the regular curriculum during normal school days but are not part of the regular curriculum, and therefore, play an important role in the school curriculum. In this study, they will refer to participation in the three competitive co-curricular activities of sports, music and drama.

**Deviance:** Any students' behaviour that violates the norms and expectations of a group, such as drug abuse, truancy, absenteeism, bullying and school drop-out.

**Drug Abuse:** Use of drugs such as alcohol, bhang, khat, cigarettes, heroin and cocaine.

**Gender:** A term used to differentiate students' participant in relation to their sex i.e. male or female students.

**Non-participant:** A student who does not represent the school in external competitions in co-curricular activities.

**Guardian:** A person who has legal responsibility of taking care of a child who does not have the capacity for self-care.

**Participant:** A student who represents the school in external competitions in co-curricular activities.

**Self-Concept:** A multi-dimensional construct referring to one's perception of self with regard to how he/she sees himself or herself, values himself or herself and what he or she wishes to be.

**Sex:** Dichotomous physiological differences between male and female.

**Socio-economic Status:** A person's general societal rank due to accomplishments in social and economic influence. In this study, it is used to refer to the highest education level attained by parents or guardians and their occupations.

**Sports:** Games or competitive activity, usually played outdoors and involving physical exertion, such as football, netball, athletics, and rugby.

## ABSTRACT

Co-curricular activities enhance attainment of the curriculum goals and objectives. A number of researchers have established positive effects of participation in co-curricular activities on student academic achievement and social aspects. Other studies have shown that participation in co-curricular activities is detrimental to academic performance. In cognizance of this discrepancy, the current study based on Zero-sum model and Developmental theory, sought to examine the effects of engagement in competitive co-curricular activities (Sports, Music and Drama) on the self-concept, deviant behaviour and academic performance of secondary school students in Central Region, Kenya. The study objectives were to determine whether the effects were dependent on type of school, year of study, socio-economic background and gender of the students. Alongside the objectives, an Ex-post Facto design formulated hypotheses to test the variables under study. The independent variable was participation or non-participation in co-curricular activities; and the dependent variables were self-concept, deviant behaviour and academic performance. The study population comprised of all Forms 1, 2, 3 and 4 students in public secondary schools, who qualified for regional championships in the Central region, Kenya. The total sample size comprised 1,408 participants. Purposive sampling was used to identify participants in this matched-pair designed study. The initial 704 'participation' participants, comprising 128 from sports, 240 from drama and 336 from music were identified with the help of respective teachers. Subsequently, each of these identified a matching friend to constitute the group of 704 non-competing participants. . Questionnaires and document analysis provided data for the study. The data collected was quantitative in nature and was analysed using descriptive and inferential statistics. Descriptive statistics included percentages, means, frequency counts, and standard deviations; whereas, inferential statistics included Independent t-test, Two-way ANOVA, Multiple Analysis of Variance (MANOVA) and Post hoc test of Tukey's HSD. All statistical tests were carried out at  $p < 0.05$  level of significance. The study found that participation in co-curricular activities had a positive impact on students' self-concept (957)  $< 0.001$ ,  $p < 0.001$ , deviant behaviour (958)  $< 0.001$ ,  $p < 0.001$  and academic performance,  $t(919) = 0.023$ ,  $p < 0.001$ . Participants in co-curricular activities had higher self-concept, better academic performance and rarely engaged in deviant behaviour as compared to non-participants. The study therefore, recommends schools' encouragement of student participation not only in sport, drama and music, but also in alternatives such as debating, science, , and religious clubs in the schools. Such participation help them develop self-confidence, gain skills for solving own problems, learn to work as a team, learn leadership skills and help avoid engagement in risky behaviour. The study also suggests that school administrators organize seminars and fora for all school stakeholders to disseminate the powerful effect of involvement in co-curricular activities on students' educational, self-concept and behaviour outcomes. This study further recommends the replication of the current study in primary schools and universities in Kenya. Such replication would broaden and deepen the body of knowledge concerning the advantages or disadvantages of students' involvement in co-curricular activities, especially with regard to students' self-concept, deviance behaviour and academic performance.

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background to the Study**

Specific educational goals and objectives can be achieved through the school curriculum. According to Njeng'ere (2014), curriculum refers to all that is organized to facilitate students gain and expand on the required information, skills; and develop positive attitudes. The Kenya education system has organized school curriculum into formal, non-formal and informal dimensions. Co-curricular activities, which fall under the non-formal aspect of the curriculum, are planned to enhance the attainment of the curriculum goals and objectives (Storey, 2010; Njeng'ere, 2014). Non-formal learning activities are planned in a more flexible way than in the formal dimension. In Kenyan secondary schools, non-formal activities include drama, sports, music, dance, clubs and societies (Njeng'ere, 2014). These activities complement but are not part of the regular curriculum (Keyani, 2013). The activities improve and augment the usual programme throughout the normal school days and, hence, play a significant role in the school curriculum.

Ongonga, Okwara, and Okello (2010) in their study on sports and secondary education, outline benefits associated with active participation in co-curricular activities. These benefits are threefold - health, social and psychological benefits. The health benefits include good posture and body physique, which implies a balanced development of the whole body, fitness of all muscles and strength. Social benefits include norms and knowledge, the transmission of values, which translate to social harmony in the school and the society as a whole. Finally, the psychological benefits include positive attitudes towards participation in co-curricular activities, increased vigour and alertness among the students, and internalization of mental strategies.

Several researchers have established irrefutable effects of participation in co-curricular activities on student scholarly achievement and social aspects (Nelson & Gordon-Larsen, 2006; Barbieri, 2007; Fredricks & Eccles, 2010; Kamau, Rintaugu, Muniu & Amusa, 2015). According to Fredricks and Eccles (2010), found affirmative association linking involvement in organized activities with developmental outcomes in educational attainment, educational expectations, career aspirations and refrain from drug abuse among students. Broh (2002) opined that co-curricular activities were not limited to sports, because students who were involved in music performed better in both, Mathematics and English than those not involved. Similarly, Wilcox (2010) found that students who were vigorously involved in three to four co-curricular activities such as music, drama and sports had increased academic performance throughout the year compared to non-participants.

On the other hand, various researchers have shown that participation in co-curricular activities did not have a positive impact on students' academic performance (Gorman, 2010; Zacherman, 2010; Anderson, 2011). Gorman (2010) compared performance of athletes and non-athletes in American College Test (ACT) scores and Grade Point Average (GPA) scores. The Gorman study found that athletic participation did not affect academic achievement among high school seniors, who graduated in 2009 from the three target high schools when compared to non-athletes. However, in terms of gender, male and female student athletes differed significantly in ACT and GPA scores. Anderson (2011) affirmed that engaging in extra-curricular activities could overwork students physically and mentally; and consume time meant for studies. As a consequence,

students' participation in extra-curricular activities could lead to negative effects on their academic performance.

From the above studies, it is clear that not all activities outside the classroom settings are beneficial to student success; some improve academic performance while others are distractions from academic work (Baker 2008). Collectively, these studies show that research in the area of academic and co-curricular activities in schools is not conclusive. Hence, the current study, which assessed the influence of participation in sports, music and drama on academic achievement in Kenyan secondary schools in Central region of Kenya.

According to Massoni (2011), children between nine and seventeen years learn to make their own decisions and be in charge of their actions. This is a vital opportune time for students to engage in enriching learning experiences under competent supervision and guidance. Supervision and guidance of competent teachers consequently, they are in a better position to resist hazardous behaviours such as substance and alcohol use, gang association, and unlawful activities. Participation in co-curricular activities such as sports, music, drama and school clubs has also shown to improve school attendance, self-concept, school connectedness and academic performance among students (Stephens & Schaben, 2002; Weber, 2008; Kamauet *al.*, 2015; Johnson& Eason, 2016). Researchers have linked participation in co-curricular activities to improved self-concept of students (Piexoto, 2004; Hart, 2013; Kimengi, Kiptala & Okero, 2014). Piexoto (2004) and Hart (2013) established that adolescent students, who participate in co-curricular activities report higher self-concept scores and positive influence on academic performance than

peers who do not participate. Similarly, Schmidt, Zdzinski, and Ballard, (2006) found that music had great influence on student's self-concept. Learners' self-concept should be a major concern, in order to improve academic performance and social behaviour among secondary school students.

Participation in co-curricular activities discourages deviant behaviour among students. Participation in sports activities reduces general indiscipline, drug abuse, school absenteeism, violence, risky sexual behaviours, and other forms of deviance (Hartmann & Massoglia, 2007; Weber, 2008; Wilcox, 2012; Kamau *et al.*, 2015). According to Wilcox (2012), discipline gained through participation in sports, music, or any out-of-class activity that falls outside the regular every day core curriculum, can spill over in to classroom learning because coaches of these activities do not tolerate indiscipline during participation.

Studies have established that participation in co-curricular activities is influenced by demographic characteristics, such as gender and age. Darling, Caldwell and Smith (2005) revealed that younger students were more interested in participating in co-curricular activities than older students within the same school. This suggests that students in Form One and Two could be more actively involved in co-curricular activities than those in Forms Three and Four. On the other hand, Singh and Mishra (2014) found no significant difference in the academic performance of students participating in dance, music, horse riding, yoga or sport activities across the different age groups of 13 to 14 years and 15 to 16 years. Chachra, Chen, Kilgore and Sheppard (2009) revealed that girls place higher

importance on co-curricular activities than boys. In addition, girls' involvement often cut across more than one activity, whereas boys' concentrate on one vigorous activity.

Darling *et al.*, (2005) established that students from families of low socioeconomic status, (SES), as measured by parental level of education and income, were more probable to drop out of participation in co-curricular activities compared to students from high SES families. Kenyan studies about the impact of students' socio-economic background on academic performance revealed that family socio-economic status influences students' academic performance and that those from high SES families perform better in academics (Rintaugu & Akpata, 2002; Okioga, 2013 and Muriungi, 2017).

Trinh (2013) found that involvement in extra-curricular activities lowers indulgence in risky behaviour among the female students from low socioeconomic status compared to female students from high socioeconomic status. However, among the male students, socio-economic status did not have a significant effect on their engagement in risky behaviour. With regard to the school type, Tubic, Djordjic, Milic and Protic-Gava (2015) established that students' engagement and involvement in sports at the local level, national level and international level did not have statistically significant relation with their academic performance. The study further found that there were no statistically significant differences in academic achievement between students who engaged in sport and those who did not engage in sports. In another study, Ahmavaara and Houston (2007) found that male students reported higher level of self-concept than the female counterparts, regardless of their school type, that is, selective or non-selective.

Despite overwhelming evidence suggesting close links between co-curricular activities and improved educational accomplishment, involvement in co-curricular activities has its opponents (VanDuyne, 2004; Weber, 2008). VanDuyne (2004) believes that the time taken during engagement in sports activities hinders students' scholarly pursuits. According to Weber (2008), critics of co-curricular activities such as drama, music, sports and academic clubs claim that schools' centre of attention should be on academics; arguing that co-curricular pursuits simply diverts adolescent attention from their academic responsibility while in school.

The Kenyan education system separates activities into curricular and co-curricular. Ongonga, Okwara, and Okello (2010) and Newman (2005) opined that the engagement in non-formal school activities is not recognized in a number of schools in Kenya. There is paucity of evidence-based information from teachers, students and parents regarding the influence engagement in non-formal school activities on students' self-concept, deviant behaviour and educational performance. According to the Ministry of Education Science and Technology (M.O.E.S.T) 2001 report as quoted by Gikungu and Karanja (2014), implementation of both, formal and non-formal activities has led to strikes and riots in secondary schools in Central Province leading to poor Kenya Certificate of Secondary Education (K.C.S.E) performance in the region. Consequently, the current study sought to determine the influence of participation in co-curricular activities on the self-concept, deviant behaviour and academic performance among secondary school students in the Central region of Kenya. The study also sought to suggest interventions for enhancing students' participation in non-formal activities.

## 1.2 Statement of the Problem

Students should not be in school merely to learn and pass examinations; but for holistic growth that includes habits that will enable them survive in the society (Kariyan, Maphosa & Mapuranga, 2012). Chege (2012) noted that most schools emphasize the academic side of the curriculum with little concern for co-curricular activities. Many stakeholders in the education sector believe that co-curricular activities unnecessarily consume academic time and energy (Kariyan, Maphosa & Mapuranga, 2012). Secondary schools differ in the degree to which students get involved in co-curricular activities; yet, little is known about their role in students' learning outcomes and psychological well-being (Ongonga, *et.al*, 2010; Chege, 2012; Kiarie, 2015).

Despite the allocation of over four hundred million shillings towards co-curricular activities by the Government of Kenya, there is minimal students' participation (MOEST, 2012). Anecdotal evidence suggests that instead of sports, music and drama being ongoing inculcated activities, they are reduced to mere public-relation exercises during competitions. In many schools, participation in music, drama and sports is purely for competitive purposes by the selected few students. They are not as across the school participation for instilling discipline and improving academic performance. Cases of deviant behaviour, especially absenteeism and drug abuse have been on the rise (Kariba, 2015; King'endo, 2015; Rugendo, 2016), leading to negative impact on students' academic performance (Simatwa, Odhong, Juma & Choka, 2014). In the light of these controversies and heightened emphasis on learner participation in co-curricular activities, there is need to understand the influence of participation on student outcomes This will enable all stakeholders make informed decisions about the role of co-curricular activities

in secondary schools in Kenya There is scarcity of empirical evidence to justify the inclusion of co-curricular activities in secondary schools in Kenya. Therefore, this study sought to establish the influence of participation in competitive co-curricular activities on self-concept, deviant behaviour and academic performance of Kenyan secondary school students in Central Region.

### **1.3 Purpose of the Study**

The purpose of this study was to determine the influence of participation in competitive co-curricular activities on the self-concept, deviant behaviour and academic performance of secondary school students in Central Region, Kenya.

### **1.4 Research Objectives**

The main objective of this study was to investigate the influence of participation in co-curricular activities on the self-concept, deviant behaviour and academic performance of secondary school students in Central Region, Kenya. The specific objectives were as follows:

1. To determine the influence of participation and non-participation in co-curricular competitive activities on the self-concept, deviant behaviour and academic performance of secondary school students in Central Region, Kenya.
2. To determine gender difference in the influence of participation in competitive co-curricular activities on the self-concept, deviant behaviour and academic performance among secondary school students in Central region, Kenya.
3. To evaluate the influence of participation in competitive co-curricular activities on the self-concept, deviant behaviour and academic performance of students across various types of school in Central Region, Kenya.

4. To establish the influence of competitive co-curricular activities on the self-concept, deviant behaviour and academic performance across students of different academic class levels in Central region, Kenya.
5. To examine the influence of competitive co-curricular activities on the self-concept, deviant behaviour and academic performance of students from different social economic status in Central region, Kenya.

## **1.5 Research Hypotheses**

### **1.5.1 Main Hypothesis**

There is no significant difference in self-concept, deviant behaviour and academic performance between participants and non-participants in competitive co-curricular activities across their demographic characteristics.

The following sub-hypotheses were formulated for testing.

H0<sub>1</sub>: There is no significant difference in the self-concept, deviant behaviour and academic performance between participants and non-participants in competitive co-curricular activities among secondary school students in Central region, Kenya.

H0<sub>2</sub>: There is no significant gender difference in the self-concept, deviant behaviour and academic performance between participants and non-participants in competitive co-curricular activities in Central region, Kenya.

H0<sub>3</sub>: There is no significant difference in the self-concept, deviant behaviour and academic performance between participants and non-participants in competitive co-curricular activities from different types of schools in Central region, Kenya.

H0<sub>4</sub>: There is no significant difference in the self-concept, deviant behaviour and academic performance between participants and non-participants in competitive co-curricular activities from different academic class levels in Central region, Kenya.

H0<sub>5</sub>: There is no significant difference in the self-concept, deviant behaviour and academic performance between participants and non-participants in competitive co-curricular activities based on their parental social economic status in Central region, Kenya.

### **1.6 Significance of the Study**

Findings of the study have given a direction on decisions pertaining to learner participation in competitive co-curricular activities to the Ministry of Education, Science and Technology (MOEST), school administration and teachers. This could help in adjusting school programmes to effectively balance co-curricular activities and academic work. Based on the results from this study, teachers should urge students to explore suitable competitive co-curricular activities that they could engage in more regularly. This could go a long way towards exploiting every student's full potential. The students will benefit from the study because the findings have revealed that involvement in competitive co-curricular activities such as sports, drama and music relate positively with variables of self-concept, absenteeism, and drug abuse, which in turn, influence their academic performance positively.

### **1.7 Delimitations of the Study**

The study was carried out in secondary schools in Central region, Kenya. Data was collected from those students who had competed at regional level competitions. Data collection was limited to the two instruments of questionnaires and document analysis. It

focused only on participation in sports, music and drama. These were the three main co-curricular activities in which most schools in the region competed up to the National level.

### **1.8 Limitations of the Study**

The determination of the academic performance was based on the grades obtained by students in their end of primary school education (K.C.P.E) and the end of term third term examination in the secondary school. Though many factors, such as school disciplinary policies and practices, entry behaviour, school connectedness, personality, school culture, family background factors and school guidance and counselling programmes could influence self-concept, deviant behaviour and academic performance, the study considered only participation in competitive co-curricular activities.

### **1.9 Assumptions of the Study**

The study was based on the following assumptions:

- i. Those students who represented their schools in competitive co-curricular activities were selected objectively.
- ii. The school records captured all the discipline issues.
- iii. Involvement in co-curricular activities was associated with better academic performance, improved self-concept and discipline.
- iv. The other intervening variables were held constant.

### **1.10 Theoretical Framework**

This study adopted Developmental Theory developed by Kohlberg's (1969) and Zero-Sum Model by Coleman (1961) to explain influence of co-curricular activities participation on students' self-concept, deviant behaviour and academic performance.

### **1.10.1 Developmental Theory**

The basic principle of developmental theory is that co-curricular activities enhance socialization and personality development. The theory emphasizes that taking part in co-curricular activities ultimately has a constructive relationship to educational inspirations because of the non-educational and psychological benefits linked to involvement in these activities (Fejgin, 1994; Anderman, 2002; Broh, 2002).

Broh (2002) argued that involvement in co-curricular activities positively enhances students' educational aspiration indirectly in three different ways. Firstly, involvement in co-curricular activities enhances development of positive life skills and virtues such as hard work and positive self-concept, which are related to increased educational performance. Secondly, involvement in co-curricular activities boosts students' socialization and allows them to gain entry into peer groups that are academically oriented. Thirdly, involvement in co-curricular activities allows students to interact freely with other students, teachers and parents, thereby acquiring social networks that keep them engaged in their schools. Consequently, such socialization acts as a form of social control, encouraging them to adhere strictly to school rules and regulations; and ultimately, performing well academically.

According to Fejgin (1994), the effects of involvement in music and drama are not different from those of athletics in reference to deviant behaviour issues, educational attainment and self-concept. In this regard, Gilman (2000) found that participants who were engaged in structured co-curricular activities, experienced more satisfaction in school than students with minimal or no participation in such activities. Similarly, Kamau et al (2015) found that adolescents, who engaged vigorously in competitive

sports, felt more connected to school compared to those who failed to participate. More so, Lewis (2005) showed that participation in co-curricular activities influences self-concept and self-efficacy leading to development of constructive association with other educational goals and social relations. Elliott (2009) established that adolescents, who were involved in co-curricular activities, had a higher confidence levels than non-participants. This could be due to the self-confidence and positive thinking gained through participation in these activities.

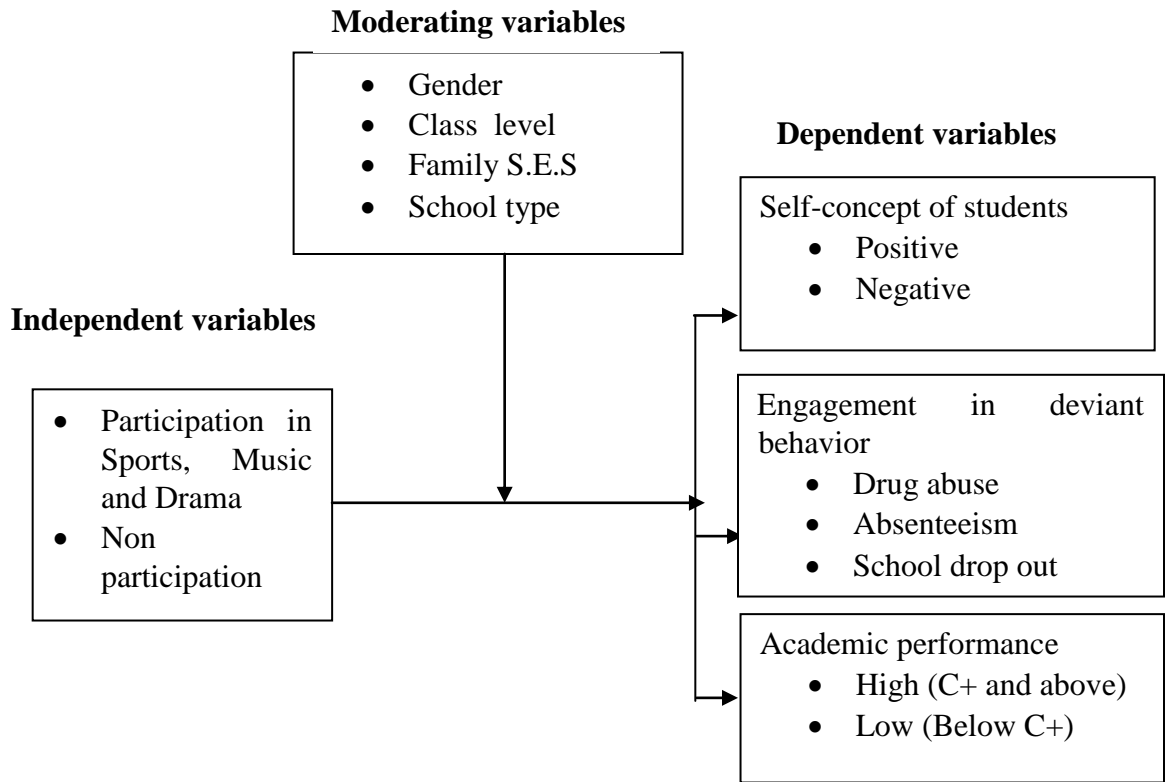
### **1.10.2 Zero-Sum Theory**

The Zero Sum Theory is concerned about students diverting their attention from academic work to co-curricular activities (Coleman, 1961 cited in Seow & Pan 2014). According to Holland and Andre (1987), the Coleman theory emphasizes extra-curricular activities' subversion of the students' academic goals. He formulated the Spend-Drain theory, which posited that too much concentrating on sports used up students' time and energy to the extent that they could not excel academically. Similarly, Marsh and Kleitman (2002) noted that the Zero-Sum model, credited to Coleman (1961), focuses on the period exhausted by students on academics, social and co-curricular activities. The contest for time challenges students to concentrate on the three areas productively; and therefore, threatens their academic goals. Coleman (1961) viewed the world of student's culture being restricted to academic performance only; and less committed to athletic participation and socialization. According to the Zero-Sum Principle of Time Distribution, students are in a dilemma about distribution of the inadequate time between academic pursuits, school-based and out-of-school co-curricular activities. Coleman (1961) argued that the time spent in these co-curricular activities led to poor academic

performance. Other researchers have also argued that involvement in co-curricular activities leads to adolescents forgetting their education goals (Zacherman, 2010; Roland, 2010; Anderson; 2011; Marsh & Kleitman, 2002). However, today's researchers have posited that adolescents' engagement in co-curricular activities affords a lot of benefits, including psychological well-being and academic success (Farb & Matjasko, 2012; Fredricks & Simpkins, 2012). Despite the overwhelming support, other studies emphasise that not every type of activity promotes adolescents' psychological adjustment; the change depends on the type of activity under consideration (Lisha, Crano & Delucchi, 2014; Fredricks & Eccles 2008). One of the main reasons for this theory being applicable in the current study, was the mistaken observation in developing countries, particularly in Africa, that participants in extra-curricular activities are "academically bankrupt" and intellectually "never-do-well" (Gitonga,1998). The researcher sought to refute this belief by determining the influence of participation in co-curricular activities on students' self-concept, deviant behaviour and academic performance, particularly in the Central region of Kenya.

### **1.11 Conceptual Framework**

The main objective of this study was to investigate the influence of participation in competitive co-curricular activities on the self-concept, deviant behaviour and academic performance of secondary school students in Central Region, Kenya. Figure 1.1 illustrates conceptual framework of the study.



**Source:** Researcher's own

**Figure 1 1: Conceptual Framework: Outcomes of Participation in Co-Curricular Activities**

As shown in Figure 1.1, the independent variable of the study was participation and non-participation in co-curricular activities. There are some students who involve themselves in co-curricular activities and others who do not. The activities focused on are sports, music and drama. Participation or non-participation in co-curricular activities may influence any, or all, of the dependent variables of student's self-concept, deviant behaviour and academic performance of the student. The moderating variables of the study include gender, academic level, school type and the social economic status (S.E.S.) of the family. In line with the developmental theory, it was expected that students who participated in co-curricular activities are less likely to abuse drugs and be absent from

school, have a positive self-concept and perform well in examinations compared to their non-participating counterparts. However, the Zero-Sum theory emphasizes on the diversionary role of extra-curricular activities in drawing student's attention away from academic goals (Coleman, 1961). It was, therefore, against this theory that the current study sought to determine the influence of participation in co-curricular activities on students' self-concept, deviant behaviour and academic performance in public secondary schools in Central region of Kenya.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Co-Curricular Activities and Students' Self-Concept**

Various studies have been conducted to examine the link between participation in co-curricular activities and self-concept (Lewis, 2005; Peixoto, 2004; Harper-Tarantolo, 2009; Rouse Gordon, 2011). Peixoto (2004) examined the effects of participation in extra-curricular activities on self-concept, scholarly alteration, learners' demeanour towards school and scholastic accomplishment in Portuguese schools among adolescent pupils in seventh, ninth and eleventh grade. Information was gathered utilizing a self-concept scale and a scale to quantify state of mind towards school. The results showed that low achievers benefited positively from involvement in co-curricular activities with change in self-concept and school accomplishment.

Lam (2011) evaluated the relationship between junior students' involvement (n=126) in co-curricular activities, their confidence and social aptitudes. The study additionally sought to demonstrate that participation in co-curricular activities, such as, debate, chess, music, games, dramatization and cheerleading have a similar effect on the advancement of students' confidence and social abilities. The findings demonstrated that there was a positive, solid and huge relationship between students' cooperation in extra-curricular activities and their confidence. However, the study did not find significant differences between academic and non-academic based extra-curricular activities. Further, the study found that statistically, there was no significant difference between students' involvement in extra-curricular activities and their social aptitudes. Thus, social aptitudes were not affected by students' involvement in extra-curricular activities. However, the two studies

did not fuse gender as a conceivable intervening variable in the link between involvement in co-curricular activities and self-concept. Therefore, this study sought to bridge the gap by determining whether gender could be an intervening factor on the influence of co-curricular activities participation on self-concept.

Kiptala and Kimengi (2014) explored relationships between perception and self-concept and participation in sports amongst secondary school students (n=320 with 196 volleyball and 124 football players) in the Rift Valley region, Kenya. Data was collected using questionnaires and analysed using t-tests, Pearson Product Moment Correlation and two way ANOVA. The findings showed that majority of the players (98%) had higher self-concept. Additionally, there was a significant relationship between sports participation perception and students self-concept. This implied that students who took part in sports had a higher self-concept than those who did not. Since this study was conducted in Kenyan Rift Valley region and focused on sports only, the results cannot be generalized to a wider scope. Hence, there was the need for a comparative study in another region of Kenya. As such, the current study concentrated on the influence of participation in co-curricular activities (sports, music and drama) on students' self -concept in public secondary schools in Central region, Kenya.

Using a qualitative approach, Russell-Bowie, (2013) determined the improvement of self-concept among 8 to 12 year children from different social and cultural backgrounds in low financial territory. The study focused on children participation in Creative Arts programme. Utilizing a questionnaire from Marsh (SDQ1) meant for pupils in primary school, the study looked at the improvement of scholastic and non-scholarly self-concept among pupils engaged in a coordinated expressions programme with those not included

in the program. The outcome demonstrated that, the general self-concept of those pupils involved in the creative arts programme showed considerably more improvement than pupils in non-creative arts programmes

Similarly, Ghazanfar (2015) established that participation in co-curricular activities boosts self-concept by helping students develop confidence and a positive perception of the school and other students. The Ghazanfar study focused on primary school pupils unlike the current study that targeted secondary school students in a Kenyan learning environment.

Darrow, Novak and Swedberg (2009) studied the consequences of participation in a Music Mentorship Program on self-esteem and attitudes of at risk students. The study comprised 24 pre-adult secondary school girls in different programmes for secondary students. Participants were assigned to a music mentorship group, music participation only group (no mentorship component), or control group (no participation in music). Dependent measures results demonstrated that confidence scores in the music and music mentorship groups increased in similar ways that were better than the control group in which the relationship was not significant. This information suggests that music involvement in any frame may help in enhancing students' self-concept.

Rafiullah, Fakhra and Jehanzaib (2017) explored the impact of extra-curricular activities on University students (n=200) in Pakistan. Data was collected using the questionnaires which consisted of 15 questions varying from strongly agree to strongly disagree in a five point Likert scale. The collected data was analysed using both descriptive and inferential statistics. The study established that university students who had participated in the extra-

curricular activities, had a positive self-concept and an improved academic performance compared to the students who did not participate in extra-curricular activities.

In Bangladesh, Ahmad, Rahman, Ali, Rahman and Al-Azad (2015) examined the relationship between students' (n=475) involvement in extra-curricular activities in college and academic performance. A cross-sectional study was conducted at Armed Forces Medical College. The study found that students involved in extra-curricular activities generally benefited by having, higher self-concept, better examination results, higher standardized test scores, and educational attainment. More so, by engaging in extra-curricular activities, students often inculcated skills such as leadership and teamwork from college club activities; thus, decreasing the likelihood of engaging in deviant behaviour. From this study, it is clear that participation in co-curricular had an irrefutable strong effect on students' change of character and relationship with other people and also in building their identities.

In contrast, the Karimi, Njoroge & Kamau (2018) study to determine the influence of co-curricular activities on the development of holistic public secondary school learners in Kiambu County, found a negative correlation between participation in co-curricular activities and personality development of self-efficacy, cognitive, and inter-personal values among the students. This showed that both, male and female student participation in co-curricular activities did not have a significant influence on their self-concept. The current study sought to establish whether this was an across-the-board case among the Kenyan students who participated in co-curricular activities.

## **2.2 Co-Curricular Activities and Deviant Behaviour**

Different studies have been conducted in various countries to unearth the relationship linking participation in extra-curricular activities and drug utilization, alcohol and tobacco use among the participants and non-participants (Le, 2013; Darling et al, 2005; Kwan, Bobko, Faulkner, et.al, 2014). For example, a review of longitudinal study carried out by Kwan et al., (2014) to examine the connection between alcohol consumption and engagement in sports and drug use among young people, found negative connection between youth involvement in sports' and drug abuse. Specifically, 82% of the reviewed studies showed that teenagers who took part in sports were more averse to taking part in the drug use, particularly non-cannabis drugs. Essentially, half of the reviews established that there was an unconstructive association linking sports involvement and marijuana consumption. The review also revealed a high association between participation in sports with adolescents' alcohol use. This study produced mixed results associating sports participation with more likelihood of using alcohol and less likelihood of engaging in drug abuse. The current study aimed at investigating whether the conflicting results would be obtained in public secondary schools in Kenya with a specific focus on the schools in Central region.

Darling, Caldwell and Smith (2005) analysed the relationship between involvement in school-based extra-curricular activities (baseball, band, school play, student government and various clubs) and pre-adult modification (drinking alcohol, marijuana use, grades, academic attitudes and academic aspirations) in California. They found that use of alcohol and marijuana in the schools was not directly linked with students' participation in extra-curricular activities. The Extra-curricular Activities (ECA) modification

affiliation did not change in view of demographic qualities of gender, ethnicity, grades and parent education; and did not appear to be influenced by associate attributes. Those students who participated in other extra-curricular activities, preferred modification over those who did not take part in any ECAs and learners who took part in sports. However, the study established that students who took part in ECAs returned higher evaluations, more inspirational dispositions toward schools, and superior scholastic desires when demographic qualities and earlier modification were inhibited. The current study differs from the reviewed one in that it focused only on influence of sports, music and drama in students' deviant behaviours.

Darling, Caldwell and Smith (2005) cited the Cooley, Henriksen, Nelson and Thompson (1995) study that examined the impact of non-formal activity involvement on student substance abuse and consumption of alcohol in secondary schools. The study involved students in grades five to twelve who took part in sports, various clubs, and music/drama. Information was gathered from 5,639 students from four Midwestern schools.. The findings showed that more than 70% of the students were involved in at least one non-formal activity, 24% percent of students in grades 5-12 engaged in athletics, 13.5% in music/drama and 6.3% in clubs, while 28% revealed inclusion in two or three activities in the school calendar. Non-involvement was noted mostly in the twelfth grade, with more than 33% of the adolescents revealing that they did not take part in any non-formal activities. The participants were surveyed according to their consumption of different drugs and substances, such as tobacco, cocaine, hallucinogens, marijuana, stimulants and depressants, inhalants, over-the-counter drugs, and alcohol. Outcomes of the study suggested that involvement in non-formal activities was a factor in reducing student

desire for and utilization of drugs and substances. Students' who took part in non-formal activities were less inclined to utilize drugs than their counterparts who did not participate in extra-curricular activities.

Participation in co-curricular activities keeps students lively; triggering a sense of team work and responsibility towards others. In turn, it drives them to adhere to constructive behavioural norms and perform their best (Women's Sports Foundation Report, 2015). The current study sought to determine the effect of engaging in co-curricular activities on deviant behaviour with a specific focus on drug and substance abuse among secondary school students.

Coto (2016) carried out a longitudinal study on the relationship between adolescents' participation in extra-curricular activities (fine art and academic clubs) and substance abuse. The study found that there was a significant association between participation in extra-curricular activities and adolescents substance use. In particular, findings showed that adolescents' participation in fine arts and scholarly clubs decreases their probability of engaging in substance use

In another case, Rambaree, Mousavi and Ahmadi (2017) used questionnaires to explore the relationship between drug use and sports participation among young people aged between 14 and 25 years in Mauritius. The questionnaires enquired about the participant's background, measures of perceived physical fitness, measures of drug use, and measures of sport activity, knowledge, attitudes and beliefs. The study determined that participation in sports among the young people protected them from engaging in drug abuse. While this study targeted young people aged between 14 and 25 years, the

current study targeted students and especially those who are in public secondary schools in Central region in Kenya.

Zubak, Terzic, Zenic, et al., (2018) explored sports-related issues connected to Illicit Drug Misuse (IDM) and the introduction of IDM among students preceding adulthood. Study participants comprised 436 teenagers among them 202 females and 234 males aged 16 years old. Tests were carried out at base line and followed up for a period of two years. The predicting factors (independent variables) included variables linked with diverse aspects of sports involvement and victory in sports. The dependent variables standards were; Measuring line IDM, follow-up IDM and introduction of IDM between measuring line and further investigation. In order to establish relationship between independent and dependent variables, logistic regressions were applied. The study revealed that there was higher likelihood of Illicit Drug Misuse in adolescents at baseline who quit individual sports, who had better aggressive sports success and those who had engaged in sports for a longer period. The IDM at follow-up was more prevalent in adolescents who participated in sports for a longer period and introduction to drug use was determined by being in sports for a longer period. Issues concerning sports were negatively associated to illicit drug use. This may be due to the fact that, most in all probability, the changeover from junior to senior level in sports put definite emphasis on those teenagers who were extremely dedicated to sports until that time, but who then had questionable competencies and future prospective in sports.

Adachi-Mejia, Chambers, Zhiganget al., (2014) examined the relationship between substance use and participation in team sports with a coach, other sports without a coach, school clubs, music, and other clubs in a nationally representative sample of United

States (US) teens. A sample of 6,522 U.S. students aged between 10 and 14 was used. Logistic regression models were adjusted for appropriate sampling weights using Jackknife variance estimation and tested associations with drinking and trying smoking, child and parent characteristics, friend/sibling/parent substance use, controlling for socio demographics, and media use. The study discovered that team sport participation with a coach was the only extra-curricular activity associated with lower risk of smoking. Additionally, the study established that involvement in other clubs was the only extra-curricular activity associated with lower risk of drinking. As such, the study concludes that the type of extra-curricular involvement was associated with risk of youth drinking and smoking.

Veliz, Schulenberg and Megan (2015) assessed substance abuse differences based on level of contact among competitive students in a variety of sports. This longitudinal study involving 970 12th graders spread across the country, and who starting from 2006, were monitored over 1 to 4 years for substance use, time for friends, school problems and socio-demographic features. The results showed that during the past two weeks, non-participants were less likely to engage in alcoholic drinks as compared to participants. Additionally, students who got involved in sports with a lot of body contact (i.e. football, ice hockey, lacrosse, and wrestling) had higher likelihood of indulging in alcohol consumption and engaging in marijuana use during the past 30 days, compared to their age mates who were non- participants in these types of sports during their 12th grade year. The present study determined the influence of involvement in sports, drama and music on students' deviant behaviour in central region, Kenya.

Malval, (2010) investigated the relationships between substance use, psychological health problems, and involvement in school-based extra-curricular activities among high school students. The study investigated rates of substance use, rates of elevated anxiety and depressive symptomology among 138 students attending a predominantly Hispanic, low-social economic status high school. The findings showed that a significant proportion of adolescents in the sample fell in the “at-risk” category for a clinical diagnosis of depression and/or anxiety disorder. Further, those students who reported using marijuana and smoking cigarettes were more likely to endorse feelings/thoughts related to school avoidance. Results further showed that the more adolescents reported being engaged in pro-social/academically oriented school based extra-curricular activities and/or special interest clubs, the less likely they were to report smoking cigarettes. Finally, participation in athletics protected students with social anxiety from using cigarettes.

Dawkins (2006), cited in Kelepolo (2011), examined the relationship between participation in school-based sports and substance abuse. The study established that for both white and black students, participation in athletics was positively associated with reduction in marijuana and cigarette use while sports served as prevention against alcohol abuse by black girls.

The above studies show that when students take part in co-curricular activities, it can affect their deviant behaviours either positively or negatively. Whereas some studies found that involvement in extra-curricular activities like sports, athletics reduces usage of drugs and substance abuse, others showed that participants in those activities were more likely to use drugs. The researcher, therefore, sought to bridge this gap by examining the

influence of participation in drama, music and sports on students' deviant behaviour in Central region, Kenya.

### **2.3 Co-curricular Participation and Absenteeism**

Previous studies (Holloway, 2002; Fredericks, 2002 & Weber, 2008) established that school going children who engage in athletics and other non-formal activities, rarely dropout from school thus improving retention rate. Wilcox (2012) and Kamau (2015) noted that social interactions gained through involvement in non-formal activities increases school connectedness and minimize chances of dropping out of school.

Singh and Mishra (2015) examined the relationship between participation in dance, indoor and outdoor activities, yoga and sport activities and academic performance of 120 students aged 13-16 years in both, government sponsored and privately owned secondary institutions. The specific focus of the study was to establish how involvement in extra-curricular activities can affect advances in scholastic, interpersonal relations and high school completion. They found that learners' who were involved in non-formal activities usually scored better mean averages and were more connected to the school. Similarly, Broh (2002) found that students' engagement in co-curricular activities is specifically connected with an enhanced academic outcome, positive attitude towards school, reduced absenteeism and increased school attendance. Students with better attendance record perform better academically. Further, Broh (2002) contends that because co-curricular activities promote attendance and lower drop-out rates, the need for strengthening co-curricular activities should not be underrated in secondary schools.

Girch (2015) sought to establish whether the participation of 134 secondary school students in sports, social clubs, art clubs, community clubs and academic clubs was correlated to their presence in school and increased educational performance. The results revealed that learners who were engaged in non-formal activities exhibited better educational performance and lower absenteeism than those who did not. Those who took part in activities supported by schools had better grades and their turn-out rate was better than those taking part in out-of-school activities. Similarly, the study found that students who participated in competitive co-curricular activities were less likely to miss school and also performed well in their academics compared to non-participants.

Dick (2010) investigated the relationship between participation in extra-curricular activities (sports, fine arts, cheerleading and dance) and students' achievement, student attendance and student behaviour. The study respondents consisted of 275 students who graduated between 2007 and 2009 in secondary schools in Western Nebraska. The findings showed that co-curricular activities could have either unfavourable or constructive impact on students' intellectual achievement and school attendance. The study established that participants engaging in activities that were sponsored by the school returned a greater school attendance rate than nonparticipants. This is because participants in extra-curricular activities received more disciplinary referrals than non-participants. Comparatively, participants had a higher turn-out rate of 94% whereas non-participants had an average of 90% turnout rate, implying that students who were participating in extra-curricular activities had good records of non-absenteeism compared to non-participants in extra-curricular activities.

Cardarelli (2003) examined the impact of playing musical instruments on harmonized test execution and school turnout rate of third-grade students. She looked at test scores and participation aggregates of students partaking musical classes with those not taking part in these classes. The two groups had statistically significant differences on participation aggregates; such that those students who engaged in instrumental music had better school attendance than those who did not engage in playing any instrument. In another study, Wilson (2009) showed that participation in co- curricular activities increases school attendance because it promotes social interaction among students, which leads to feelings of being part of the school or school connectedness and positive attitude towards school.

Singh and Mishra (2014) investigated the influence of participation in extra-curricular activities on the academic performance, social skills and high school completion among 120 grades 8 and 9 students aged between 13 and 16 years. The Data was collected using questionnaires and analysed using percentages and t-test statistics. The information captured in the questionnaires included various factors influencing students' engagement in extra-curricular activities. The findings showed that there was a significant relationship between student participation in all the six activities of Yoga, Music, Dance, Sport activities, Horse riding, and Indoor and outdoor activities academic performance among the students in both, public and private schools.

Students who engage in extra-curricular activities generally benefit from the many opportunities afforded to them Singh and Mishra (2014). Benefits of engaging in extra-curricular activities included higher self-concept, higher standardized test scores and higher educational attainment, better grades, increased regularity in school attendance.

Those who participate in out-of-school activities often have an increased connectedness to the school, higher grade point averages, and a decrease in absenteeism. This study by Singh and Mishra (2014) used percentages and t-test as the statistical tools for data analysis. The current study used means, standard deviations, independent t-test, two way ANOVA, MANOVA and Post hoc test of Tukey's HSD.

Reed (2014) examined the relationship between participation in extra-curricular activities, American College Test (ACT), Grade Point Average (GPA) and attendance in selected public high schools. The study employed a quantitative research design. The study sample participants comprised of teachers and administrators. Data was analysed through Pearson Product Moment Correlations, Chi-square statistics and regression analysis. The study established that there was a positive relationship between students' participation in extra-curricular activities and their academic achievement, school attendance and behaviour. It further emerged that participation in extra- deviant behaviour among the student was perceived to have the greatest impact as a result of extra-curricular participation.

Fortune, (2013) determined the effects of co-curricular participation on students' attendance, composite ACT score and student dropout rate. The findings revealed that students who participated in co-curricular courses have significantly better attendance, s better academic performance and lower dropout rate. Although Fortune (2013) looked at the influence of co-curricular activities on students' attendance in schools, the findings cannot be applied to Kenya; because the Fortune study was based in the United States which has vastly differing educational, social, cultural, and financial dynamics. As such,

the current study sought to determine whether student participants in co-curricular activities differed in their school attendance from that of the non-participants. The studies reviewed above further show that participation in co-curricular activities reduces cases of absenteeism among the students in schools. The current study sought to establish whether this was also the case in secondary schools in Kenya, especially in the Central region.

#### **2.4 Co-curricular Activities and Academic Performance**

Studies have shown supportive effect of participation in co-curricular activities on academic performance of students' (Guest & Schneider, 2003; Adeyemo, 2010; Crews, 2005; Everett, 2011; Freeman, 2017; Nelson & Gordon-Larsen, 2006; Barbieri, 2007). Guest and Schneider (2003) examined how school and group settings identify with relationship among secondary school students' extra-curricular participation, scholastic accomplishment, and instructive aspiration. These scholars argued that, every community or school places different values on different activities, emphasizing one more than another. Their investigation uncovered that involvement in sports is most unequivocally connected with academic performance in schools among underprivileged communities. Engagement in other co-curricular activities, apart from sports, is more consistently connected through equally advanced academic accomplishment and senior educational prospects across types of communities than is involvement in sports.

Adeyemo (2010) explored the connection linking students' participation in school-based extra-curricular activities and their accomplishment in physics in Nigeria. The study sample comprised 200 physics students chosen arbitrarily from four seniors' secondary schools in Mainland Local Government Area of Lagos State. The findings revealed that student participation in extra-curricular activities of sports, drama, music, scouting and

dance influences achievement in physics, such that those learners who engaged in co-curricular activities registered better performance in Physics compared to non-participants. The researcher noted that student involvement in social activities positively influences their performance in Physics. The students formed study groups to learn from each other; hence, improving their performance in physics.

Kariyan, Maphosa and Mapuranga (2012) sought to establish teacher opinion on the effect of student engagement in non-formal school activities on their school performance in South Africa. Both quantitative and qualitative information was gathered using blended technique approach. The study comprised 40 teachers from private and government funded institutions in the Eastern Cape Province in one educational district of South Africa. The study established that because involvement was helpful in many ways, teachers held optimistic perspectives about student involvement in non-formal activities. Teachers felt that taking part in co-curricular activities motivates learners', occupy/reduce time for delinquent behaviour among students, helps learners build self-confidence, improves socialization and develops positive attitudes toward school work. It was the opinion of the teachers that qualities conferred through involvement in co-curricular were vital in students' scholarly result.

However, the study also discovered that involvement in co-curricular activities did not ensure high student achievement in academic performance. A number of the learners, who previous involvement co-curricular activities, had also repeated a grade. This study by Kariyan, Maphosa and Mapuranga (2012) focused on the teachers' perception of students' participation in co-curricular activities. The current study focused on students' participation on competitive co-curricular activities.

Turner (2010) sought to establish whether high school student participation in extra-curricular activities in Texas saw greater scholarly achievement. The study comprised 93 students, two principals and two teachers from two schools located in Wichita Falls, Texas. The study revealed that activities such as music and drama helped students develop logical and investigative skills which greatly improved their academic performance. Similarly, Eady and Wilson (2004) established that music can impact learning in core subjects and in achievement core objectives in learning.

Thornton (2007) investigated the impact of music programmes on the Pennsylvania System of School Assessment (PSSA) scores. The study revealed that students, who voluntarily took part in music programmes, such as group singing, choir, and pop group, performed better in the PSSA tests over learners who decided not to take part in such activities in Pennsylvania. However, Thornton (2007) also opined that, students did not achieve higher scores on their PSSA tests because of their participation in music; the main factor in positively influencing their performance was the parental involvement in education.

Suleman and Singh (2014) evaluated the impact of excessive inclusion of extra-curricular activities on the learning accomplishment of 50 grade 10 secondary school students in Pakistan. This research was experimental in nature and utilized a pretest-post-test proportional groups plan. Experimental group learners were included in extra-curricular activities amounting to 40 minutes in school and 2 hours out-of- school. Those in the control group were included for 40 minutes in school only. Information was gathered through pre-test and post-test method. The study found major unconstructive impact of excessive inclusion in co-curricular activities on the educational accomplishment of

students at secondary school level. This negates the findings of past studies (Tubic, Djordjic, Milic & Protic-Gava, 2015) with respect to inclusion of co-curricular activities and student's scholastic accomplishment.

Everett (2011) carried out a survey to find out the effects of students' involvement in extra-curricular activities on scholastic presentation. The participants consisted of ten students drawn from five schools. The study established that there was a positive correlation between students' participation in co-curricular activities and students' academic performance. Specifically, it emerged that students who engaged in extra-curricular activities performed well in the academics compared to students who did not participate in extra-curricular activities. The study found that on average, students who participated in extra-curricular activities had good records of school attendance as compared to non-participants. The general monitoring of the participants in the classrooms and the school by their coaches positively influences participants' school attendance as well as their academic performance.

A study concerning relationship between extra-curricular activities and academic achievement was conducted by Freeman (2017). The specific objective of the study was to establish the relationship between the academic performance and participation in extra-curricular activities throughout the four year high school period. Academic performance was determined on the basis of composite score on the American College Test (ACT) and Cumulative Grade Point Average (GPA) throughout a student's attendance in high school s. The study discovered that there was a positive correlation between students' participation in extra-curricular activities and their academic performance. This clearly

indicated that students who frequently engaged in school-based competitive activities performed better in academics than non-participants.

Craft (2012) investigated the relationship between student achievement and participation in extra-curricular activities. These activities were categorized into three of sports, music and school clubs such as Student government, Fellowship of Christian athletes, Beta club, National Honor Society, Drama club, foreign language club and Key club. The results showed that students who participated in extra-curricular activities had slightly higher grade point averages, SAT scores, success on the Georgia High School Graduation Writing Test, and registered few cases of absenteeism from school. This study by Craft (2012) focused on sports, music and a number of the school clubs. The current study looked at the influence of students' participation in sports, music and drama in academic performance.

Singh (2017) carried out a study on the effect of co-curricular activities on academic achievement of students. The study targeted students from 11<sup>th</sup> class in schools located in Allahabad in India. The participants included 30 boys and 70 girls. An observation checklist was used to collect data about student participation in co-curricular activities, and the marks the same students obtained in the tenth class board examination. The results showed that participation in co-curricular activities had a positive impact on students' academic performance and personality development. The study also established that students' participation in co-curricular activities brought about changes in students' behaviour. This study by Singh (2017) employed only one tool; that is, observation checklist to collect data from the students.

Using this tool only, the researcher may not have had a guarantee that the marks indicated by the students were as per their teachers records. As such, he could have used another tool to verify students' academic performance. The current study used questionnaires as the main tool for data collection. In addition, the researcher personally did a document analysis to verify students' performance in their previous end of term examinations.

Suleiman and Singh (2014) conducted a survey in Pakistan on the effects of over-scheduled involvement in co-curricular activities on the educational attainment of students at secondary school level. This study adopted an experimental design targeting secondary school students. The study sample consisted 50 students who were randomly selected from public high schools. The students in the experimental group were involved in co-curricular activities for 40 minutes in school and 2 hours after school time. The students in the control group were involved for 40 minutes in school only. The statistics used to analysed data included mean, standard deviation and t-test. The study found that there was a significant negative effect of over-scheduled involvement in co-curricular activities on the educational attainment of students at secondary school level. This means that results by Suleiman and Singh (2014) negate the findings of past research studies which showed a positive correlation between involvement in co-curricular activities and students' academic achievement.

Other studies (Zacherman, 2010; Roland, 2010; Anderson; 2011) have shown that participation in co-curricular activities have a negative impact on students' academic performance. For example, Zacherman (2010) in his study on the relationship between participation in extra-curricular activities and academic performance revealed that

students whose level of participation exceeds 30 hours per week experience a detrimental effect in their grades.

Roland (2010) argued that participating in ECAs sometimes consumes more time and energy than students can handle. This inability, in turn, affects their academic performance. Anderson (2011) affirmed that engaging in extra-curricular activities can overwork the students mentally and physically and take away the time which can be used for study.

The Acquahand Partey (2014) study concerns the influence of co-curricular activities on student performance in economics in Ghana. The study adopted causal comparative design. A sample of nine hundred and twenty (920) economics students pursuing the three-year and four-year senior high curriculum from the Ashanti region was selected to participate in the study. The two instruments used by the study were the Test of Economics Understanding (TEU) and a standardized objective test to measure student performance in Economics. The researcher used a standardized objective test to measure students' performance in Economics. The test consisted of fifteen items from micro-economics and 15 items from macro-economics. Another questionnaire was used to gather information relating to co-curricular activities among the students. The findings showed that students' participation in co-curricular activities positively influences their academic achievement.

Bagaya (2012) conducted a cross sectional survey study to establish the influence of participation in indoor and outdoor sports on students' academic performance in Uganda. The purposive sampling method was used to select 90 students for participation in the

study. The quantitative data, collected using the questionnaire, was quantitative in nature and was analysed using Spearman's Rank correlation. The overall results illustrate that there was a significant positive relationship between students' involvement in sports and their academic performance. However, the results also showed that participation in indoor sports negatively influence students' performance because of the absence of a comprehensive programme that could balance both, sport and academic work. The study found that students registered a decline in their academic performance because they spent most of their time on sports.

Nyabero (2017) conducted a study on the effect of involvement in athletic activities on students' educational achievement in Kenya. The study used a mixed approach which provided data that was both, quantitative and qualitative in nature. The Questionnaires were used to collect quantitative demographic data concerning the student demographics, participation in athletics and academic performance. . Interview schedules, on the other hand, were used to collect qualitative data on the influence of participation in athletic activities on students' academic performance. Stratified sampling method was used to select the number of schools that took part in the study; while simple random sampling method was used to select 378 students as participants for the study. Results revealed that when athletes get involved in these activities, there positive effects on students' school performance ( $R=0.632$ ;  $p<0.05$ ). It further emerged from the findings that students involvement in athletics is learner driven with majority of them hoping to copy former learners in public secondary schools in the County who have gone on to excel nationally and internationally. This is because learners' participation in athletics stimulates immense motor development, student attentiveness and cognitive growth. It

can therefore be concluded that the schools should encourage students to participate in athletics and other extra-curricular activities in schools. This study by Nyabero used questionnaires and the interview schedule for data collection, while the current study used questionnaires and document analysis.

## **2.5 Co-Curricular Activities across Gender and Age**

Researchers have examined demographic differences of age and gender in student co-curricular participation. Chachra, Chen, Kilgore and Sheppard (2009) examined gender differences in co-curricular activities among engineering students. The study established that female students ranked significance of co-curricular activities higher than their male partners. The study further noted that female students' involvement is more often spread across more than one activity; whereas males tend to concentrate on one exceptional activity

Mello and Worrell (2008) investigated gender differences in co-curricular activities involvement and apparent existence odds among adolescents. The study found that there were differences across gender in extra-curricular activities involvement and perceived life chances among adolescents. Majority of the male adolescents participated more in athletics and organized groups, while more female adolescents took part in performing arts and religious activities.

In yet another study, Kiptala and Kimengi (2014) explored perceptions, self-concept and participation in sports amongst secondary school students (n=320 with 196 volleyball and 124 football players) in Rift Valley, Kenya. Data was collected using questionnaires and analysed using t-tests, Pearson Product Moment Correlation and Two Way ANOVA. The

study found that gender has no noteworthy impact on learners' involvement in co-curricular activities ( $t(194) = -.45, p = .654$ ). This finding suggests that gender difference has no significant association with students' co-curricular involvement and discernment.

Gitonga (1998) examined the effects of involvement in competitive sport on academic performance of secondary school students in Nairobi province, Kenya. The study established that participants consistently performed better than non-participants in educational achievement. The findings also revealed that parental social economic status (SES), KCPE marks and the type of school influenced students' academic achievement. A major finding of the study was that gender is not an important aspect in influencing the educational performance of learners.

In another study, Gitonga (2005) investigated the socialization into sports of secondary school athletes in Kenya. The study found that parental social economic status influenced secondary school students' socialization into sport. However, these studies only examined sports while the current study compared students' participation in sports, music and drama.

Bengo (2018) examined the institutional support and female students' participation ( $n=359$ ) in sports co-curricular activities at Makerere University. The study focused on assessing the current trends among female students' participation in sports, students' knowledge in relation to support given by the university to female participants, and the challenges affecting female participation in sports. This study adopted a mixed method technique, whereby, data collected was both quantitative and qualitative in nature. The study found that there was an increase in female students' participation in sports co-

curricular activities at university. This was on a marginal scale, possibly due to low students' knowledge of university support and the challenges that impeded their active participation. This, therefore, implies that female students' participation in sports activities was dependent on university's support, students' knowledge, as well as overcoming the challenges that bar female students from participating in sports co-curricular activities.

An investigation on the relationship between co-curricular activities and examination performance of students at different levels of class attendance was carried out by Rathore, Chaudhry and Azad (2018). Data used for the study was collected from 30 secondary schools in Lahore. The multistage purposive sampling method was used to select 636 participants for the study. The statistics used to analyse Data was analyze multiple regression analysis, Sobel test of mediation and independent sample t-test. Multiple regression analysis showed that co-curricular activities had positive impact on students' examination performance. Sobel test of mediation revealed that attendance partially mediated the association of engagement in co-curricular or non-classroom activities with examination performance. In addition, independent t-test revealed that students who were involved in co-curricular or non-class room activities had good academic performance compared to those students who did not participate in any co-curricular activities. Thus suggesting that participation in co-curricular activities enhances class attendance among students, which in turn, plays an important role in achieving good academic performance. With regard to of gender, the study established that when both, male and female students participated in non-classroom activities, female students performed better in academics compared to male students.

Kort-Butler and Hageman (2011) assessed the influence of participation in school based extra-curricular sports and school club activities on adolescents' self-esteem. The specific focus of the study was to examine self-esteem trajectories from adolescence (age 14) to young adulthood (age 26). The findings revealed that age had a linear relationship with self-esteem over time. Additionally, it emerged from the study that changes in both, the initial level of self-esteem and the growth of self-esteem over time were significantly influenced by the type of extra-curricular activity portfolio. The study also noted that the results were consistent across race and gender.

In their study on extra-curricular activities and student's performance in secondary school of government and private schools, Singh and Mishra (2014) established that there was no significant difference in the academic performance of students participating in sport activities, horse riding, yoga, dance and music across different age groups of 13 to 14 years and 15 to 16 years.

The studies presented above showed that different researchers obtained conflicting results in terms of participation in co-curricular activities across gender and age. It was, therefore, against this background that the current study sought to find out whether gender and age had an influence on students participation in co-curricular activities.

## **2.6 Co-Curricular Activities across Class and the School Type**

Previous studies have shown that students from different age groups, backgrounds and ethnicities have confirmed that participation in ECAs resulted in better academic achievements, social and other life skills (Turner, 2010; Garcia, 2012 & NCES, 2012). For instance, Garcia (2012) conducted a longitudinal study on the impact of external

employment on 12th grade student engagement in extra-curricular activities as a function of school size. The results revealed that students from small schools spent more time participating in extra-curricular activities than students from larger schools for equivalent work hours. It further emerged that, senior students working for twenty one hours or more per week, participated in more ECA than their peers working between 11 and 20 hours a week.

Tubic, Djordjic, Milic and Protic-Gava (2015) investigated the relationship between academic achievement and sports engagement. The results showed that student engagement and participation in sports at the local level, national level and international level did not have a statistically significant relation with their academic performance.

Kamau, et al., (2015) determined the effects of participation in competitive sports on school connectedness of secondary school students. Data was provided by 384 participants through questionnaires, and was analysed using t-test and ANOVA. The study found significant differences among students from National, County and District schools in reference to school connectedness. Students from National schools who participated in athletics and non-participants were more connected to school, as compared to those in County and Sub-county schools. Large schools (national schools), with greater resources, gave equal opportunities to all students for participating in a variety of sports activities (Gitonga & Akpata, 1998). These schools have capacity to organize inter-class competition, expand their sports departments and maintain many different sports teams and, therefore, enhance sports programs. However, the advantages of possessing resources extend beyond athletics. Schools having more resources can provide greater opportunities to their students than those schools with fewer resources, not only in terms

of access to sports, but also regarding the quality of instruction, because big schools could hire qualified coaches.

## **2.7 Co-Curricular Activities across Parental SES**

Mwanga, Gaudin and Ngunzo (2017) investigated family influence on Kenyan Athletes' Performance. The specific focus of the study was to investigate the impact of family on Kenyan runners' performance. The study comprised 246 runners from Iten in Elgeyo Marakwet County, Eldoret in Uasin Gishu County and Nandi Hills in Nandi County. The study was conducted between April and May 2015. Data was collected using questionnaires; and analysed using descriptive statistics, such as frequencies and percentages. The analysis showed that the family plays an important role in the development of athletic talent as well as influencing their performance. The study suggests that family involvement is crucial to the successful development of sports. Along with the other sports personnel, family should be an integral part of the team to nurture sports nurture local talent, rethink design, and implement talent identification.

Rintaugu et al., (2012) investigated psychosocial attributes of Kenyan university athletes. Their findings indicated that the student athletes came from families of higher socioeconomic status because their parents either had university education with good or white-collar jobs. The study further indicated that university athletes are influenced by team mates and coaches. In a nutshell, parents are powerful role models who transmit values and attitudes about physical activity by paying activity fees, and providing physical and emotional support to their offspring (Grevis, 1996 cited in Mwanga, et.al., 2017).

Gorman (2010) investigated the effect of athletic participation on academic achievement of high School Seniors. The study adopted a casual comparative design, in which academic achievement of senior high school athletes was compared with that of non-athletes. A questionnaire, on a six point Likert scale, was to collect data for the study. The study established that parental involvement directly affects academic achievement. Gorman (2010) concludes that when parents hope their athletic children could secure college scholarship through sports, they were prepared to spend large amounts for private coaching to improve their child's chances of winning a scholarship. The time spent in training often translates into less time for studying, resulting in poor academic achievement.

Weininger, Lareau, and Conley (2015) argue that participation in well-organised extra-curricular activities increases proportionally according to class background of young people and that of their families'. Lareau (2011) emphasises social-class differences in the probability of participation in organised leisure activities. She maintains that, while children in poor and working-class families tend to spend a great deal of their leisure time in informal activities (like wandering around the shops, hanging out with friends, playing computer games, or watching television, young people from middle-class and upper middle-class families spend greater amount of their leisure time in well-structured activities administrated and supervised by educated adults.

Putnam (2015) corroborated Lareau's (2011) findings that the rate of participation of students from European-American background with college-educated and high-income parents was higher than for students from Black-Americans or Latino immigrants,

because both the latter groups are from disadvantaged backgrounds living in low-income communities.

## **2.8 Influence of Participation in Sport, Drama and Music on Self-Concept, Deviance Behaviour and Academic Performance**

Several Studies have provided evidence of the influence of participation in various co-curricular activities on learner's self-respect, deviant behaviour and academic performance (Fredricks and Eccles, 2008; Rees & Sabia, 2010; Ongonga, et al., 2010; Davenport, 2010; Knifsend and Graham, 2012; Lisha, Crano, and Delucchi, 2014; Mansour, Martin, Anderson, Gibson, Liem and Sudmalis 2018). Mansour, Martin, Anderson, Gibson, Liem and Sudmalis (2018) investigated the influence of participation in performing arts and creative activities on young people's self-concept. The study established a relationship between young adults' participation in various forms of creative and performing arts such as dance, drama, film, music, visual arts and their self-concept. This implies that participants in drama had higher self-concept than non-participants.

A survey by Fredricks and Eccles (2008) sought to determine participation in extra-curricular activities in the middle school years. The results showed that participation in sports has been associated with higher levels of alcohol use and other risky behavior as compared to participation in performing arts. However, participation in performing arts such as band, theater, and choir and academic and service clubs is more consistently related to higher grades and academic values than participation in sports. Ongonga, et al.,(2010) argued that music enhances knowledge in the areas of physical education, geography, history, mathematics, science, vocational training, and foreign language. The

study found that students who participated in music were highly connected in schools and had an improved reading comprehension as compared to non- participants.

In a different setting, Rees & Sabia (2010) investigated the influence of sports on students' academic performance. The study showed a significant relationship between academic achievement and sports participation in high school and junior high school. The study further established that individual motivation, future-orientees, and self-discipline acted as mediating factors towards students' participation in sport and their academic performance. According to Taliaferro, Rienzo and Donovan (2010), participation in sports among the youths relates to increased locus of control, self-esteem, problem-solving skills, social competence, self-efficacy, academic achievement, and school attendance, and it reduces teen births, school dropouts, and juvenile arrests. Similarly, Knifsend and Graham (2012) found that student participation in sports enhances their academic performance and, at the same time, promotes fundamental life skills.

## **2.9 Summary of Literature Review**

The reviewed literature addressed the relationship between involvement in co-curricular activities and drug and substance abuse. Whereas some studies have revealed significant negative connection linking adolescents' taking part in co-curricular activities and drug abuse, others reveal that use of alcohol and marijuana in schools showed that use of alcohol and marijuana in the schools was not directly associated with students' participation in co-curricular activities. This highlights the fact that there are conflicting revelations in relation to influence of participation in co-curricular activities and students' drug and substance abuse. The current study, therefore, sought to bridge this gap by

determining the influence of involvement in co-curricular activities on drug and substance use among secondary school students in Central region, Kenya.

The reviewed literature also addressed the interaction between taking part in co-curricular activities and school absenteeism. From these studies, there appears to be a general consensus among researchers that learners who vigorously engage in co-curricular activities are likely to stay in school. Nonetheless, the studies concentrated on one or specific type of activities and, therefore, the results cannot be generalized to all activities. Similarly, the studies did not consider other variables such as gender, age, type of school, class and parental SES. This study sought to establish whether these findings are replicable in Central region with emphasis on the gender and age of participants and non-participants.

Studies were identified that show a positive interaction amongst students' involvement in co-curricular activities and academic performance. However, almost all these studies were done outside Kenya; and as such, it would be difficult or impossible to apply the findings to the Kenyan situation. The researcher, therefore, sought to determine the impact or influence of participation in co-curricular on academic achievement in Central Kenya region.

Literature focusing on the connection flanked by participation in co-curricular activities to adolescents' self-concept is quite sparse with mixed findings and based on just sports or music. There is need for further investigation into whether different types of activities are more influential on educational outcomes and whether there are gender differences. This study, therefore, sought to determine whether (i) there is any association connecting

involvement in co-curricular activities with academic performance, (ii) there is a direct relationship between participation in co-curricular activities and deviant behaviour, and (iii) whether this is a direct relationship with participation in co-curricular and self-concept. Most of the identified literature is based on studies in developed countries, especially, the United States of America, one of the most developed countries in the world. This makes it almost impossible to apply or generalize the findings to a developing country like Kenya.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Research Design**

The current study employed the ex post facto research design. This design is recommended in psychology, sociology and education research because many research problems in social sciences do not lend themselves to experimental enquiry (Simon and Goes, 2013). In the ex post facto design, the researcher does not manipulate the independent variable since study participants cannot be randomly assigned to different levels of the independent variable (Kothari, 2004). The choice of ex post facto research design is pegged on the cognition that the researcher did not manipulate either of the variables. The design enabled the researcher to study facts that have already occurred. This is because the effect of the independent variables (participation and non-participation in co-curricular activities) on the dependent variables (self-concept, deviant behaviour and academic performance) had already occurred.

### **3.2 Variables of the Study**

The dependent variables were self-concept, deviant behaviour and academic performance of participants and non-participants in competitive co-curricular activities. The independent variable was participation/non-participation in co-curricular activities. The co-curricular activities included sports, music and drama. The intervening variables of the study included gender, year of study, Kenya Certificate of Primary Education (K.C.P.E) marks and the Social Economic Status (S.E.S.) of the family.

### **3.3 Location of the Study**

The study was carried out in the Central Region, Kenya. There are five counties in the region, namely Kiambu, Murang'a, Nyeri, Kirinyaga and Nyandarua (MOEST, 2016). Secondary schools in this region have been participating in competitive sports, drama and music, and have witnessed widespread cases of indiscipline which has led to deteriorating performance in KCSE (Kenya Certificate of Secondary Education) examinations (Simatwa, Odhong, Juma & Choka, 2014). A report by M.O.E.S.T. (2001) as quoted by Gikungu and Karanja (2014), observed that deprived implementation of both formal and non-formal activities has led to strikes and riots in secondary schools in Central region leading to poor K.C.S.E performance in the region. That is why the study was based in this region.

### **3.4 Target Population**

This study targeted all secondary school students who participated in Regional championships in the Central Region and were to identify their peers who never took part in co-curricular activities. The target population was made of participants in sports, drama and music competitions organized by Central Region Secondary Schools Sports Association and Central Region Secondary Schools Music/Drama Association (CRSSSA and CRSSMA/DA). These were participants in group events under the categories of Sports, drama and music: Sports- netball (girls), volleyball (boys and girls), soccer (boys and girls), rugby (boys), hockey (boys and girls), basketball (boys and girls) and handball (boys and girls); Drama- Play (boys and girls), choral verse (boys and girls), traditional dance (boys and girls), modern dance (boys), standard comedy (boys) and French play (girls); Music- Set piece (either boys, girls or mixed) and Folk song (either boys or girls), and verses under various categories (boys and girls).

**Table 3 1: Population Distribution**

Co-curricular activities			Number of teams	Participants per team/group	Participants	Non-participants
Sport	Soccer	Boys	2	20	40	40
		Girls	2	20	40	40
	Volleyball	Boys	2	12	24	24
		Girls	2	12	24	24
	Netball	Girls	2	20	40	40
	Basketball	Boys	2	15	30	30
		Girls	2	15	30	30
	Handball	Boys	2	15	30	30
		Girls	2	15	30	30
	Rugby	Boys	2	22	44	44
	Hockey	Boys	2	20	40	40
		Girls	2	20	40	40
Drama	Play	Boys	2	25	50	50
		Girls	2	25	50	50
	Choral Verse	Boys	2	10	20	20
		Girls	2	10	20	20
	Modern Dance	Boys	2	20	40	40
	Standard comedy	Boys	2	10	20	20
	French Play	Girls	2	25	50	50
	Creative dance	Boys	2	35	70	70
Girls		2	35	70	70	
Music	Folk song	Boys	2	42	84	84
		Girls	2	42	84	84
	Set piece	Boys	2	42	84	84
		Girls	2	42	84	84
	Verse	Boys	2	10	20	20
		Girls	2	10	20	20
<b>Total</b>			<b>54</b>	<b>589</b>	<b>1178</b>	<b>1178</b>

**3.4.1 Inclusion Criteria**

The study included all secondary school students who participated in competitive co-curricular activities up to regional level in external competitions and students who had not participated in competitive co-curricular activities. Inclusion to the study was voluntary

### **3.4.2 Exclusion Criteria**

Any student within the target population who declined to engage in the study or was not prepared to sign the consent form was excluded from the study.

### **3.5 Sample Size and Sampling Techniques**

Participants were drawn from students who participated in co-curricular activity competitions at the regional level. Purposive sampling was used to select the two sports activities of soccer and volleyball; two drama activities of play and creative dance; and two music activities of set piece and folk song for both, boys and girls. These are popular activities within secondary schools and use the minimal facilities that are available in most schools. The researcher randomly selected two teams for each of the boy and girl category in the five counties which resulted in 40% of the population. Mugenda and Mugenda (2003) propose a sample size of between 10 and 30% as a good representation of the target population, making the 40% as adequate size for providing data in such a design. Therefore, a total of 24 teams was selected from the five counties. Using a matched pair design the selected participants identified their peers who never took part in competitive co-curricular activities. According to Wang and Liu (2013) matched pair design is employed when the experiment has only two treatment conditions.

The participants were grouped into two, based on participation or non-participation in co-curricular activities. The final group of participants was arrived at by the the researcher selecting eight teams in sports (four soccer teams and four volleyball teams), eight teams in drama (four play and four creative dance teams) and eight teams in Music (four folk song teams and four set piece teams). In the sport category, the researcher selected 80

soccer players and 48 volleyball players. In drama, 100 participants in the play category and 140 participants in creative dance were selected to participate in the study. In the music category, the researcher selected a total of 336 participants among them 168 in folk song and 168 in set piece. In this way, the number co-curricular participants was 704 with 704 ‘matched-pair’ non-participants; combining to a final total of 1,408 responding participants. Details of the sampling procedure are show on Table 3.1.

**Table 3 2: Sample Size and Distribution**

Co-curricular activities			Number of teams	Participants per team/group	Participants	Non-participants
Sport	Soccer	Boys	2	20	40	40
		Girls	2	20	40	40
	Volleyball	Boys	2	12	24	24
		Girls	2	12	24	24
Drama	Play	Boys	2	25	50	50
		Girls	2	25	50	50
	Creative dance	Boys	2	35	70	70
		Girls	2	35	70	70
Music	Folk song	Boys	2	42	84	84
		Girls	2	42	84	84
	Set piece	Boys	2	42	84	84
		Girls	2	42	84	84
<b>Total</b>			<b>24</b>	<b>352</b>	<b>704</b>	<b>704</b>

### 3.6 Research Instruments

Data was collected using questionnaires and through examination of school records (Appendix B). Section A of the questionnaire captured background information such as gender, age, academic level and school type.. . The same section also captured co-curricular activities in which the students engaged while in primary school and parents’ education level and occupation. Section B captured information about deviant behaviour

of the participant and the nonparticipant in co-curricular activities. The 4-point Likert scale questions refer to very often (VO), often (O), rarely (R) and never (N), which was scored as 4, 3, 2 and 1 respectively. Section C gathered information concerning student's self-concept. Student's self-concept was measured using the Personal and Academic Self-Concept Inventory (PASCI) adapted from Fleming and Whalen (1990) (Appendix B). It has a 2-point Likert scale of practically never and very often which was scored as 0 and 1 respectively. In addition, the researcher examined the students' academic performance, discipline and school attendance records using the end of term examination records in the schools, daily occurrence book and class registers. The performance of students in the end of term examinations was converted (standardized) to meet the methodological requirements (see appendix B and C respectively). The performance of students in the end of term examinations was converted (standardized) from raw scores to z-scores and then to T-scores ( $T = z(sd) + \text{Mean}$ ;  $T = 10z + 50$ ) for comparability (Mood & Morrow, 2014). For ease of statistical analysis, the students' end of term marks were grouped into four clusters, A, B, C and D, Group A score was 300-400 (low performance), group B 500-600, C 700-800 and D 900-1200 (higher performance).

### **3.7 Recruitment and Training of Research Assistants**

Three post graduate students in the department of Physical Education, Exercise and Sports Science at Kenyatta University were recruited as research assistants. Prior to data collection, the research assistants were trained by the researcher for two days on the recommended ways of administering and interpreting the questionnaires to the participants if the need arose. (Appendix E). This was to ensure accuracy in the data collection procedures. Clarification of various items was done. The assistants were also

involved in the pre-testing of the questionnaires. They were then assigned duties and responsibilities after demonstrating competency in data collection procedures.

### **3.8 Pre-test**

Before the study was conducted, the questionnaires were pre-tested in a boy's school and a girl's school. The pre-testing was necessary to establish the accuracy and reliability of the questionnaires, their feasibility, identify logistical issues and to determine duration for administering questionnaires. .Mugenda and Mugenda (2003) considered between 1% and 10% of the total sample size, to be a suitable representative size for the pre-test.. Accordingly, 10% (140) of the main study sample was selected for the pre-test. Of these, 140 students, 70 were participants (35 girls and 35 boys) and 70 non-participants (35 girls and 35 boys) . The pre-testing helped to improve reliability and content validity of the questionnaires by ironing out ambiguities discovered in the questionnaire. A reliability index above 0.5 was to be considered adequate (O'Donoghue, 2012). A correlation coefficient alpha of 0.87 was obtained for the items measuring deviance behaviour, whereas, self-concept inventory scale obtained a correlation coefficient of 0.74.

#### **3.8.1 Validity and Reliability of Research Instruments**

Validity refers to the soundness or correctness of a test or instrument in measuring what it is designed to measure (Thompson et. al., 2011).There are four forms of validity: face validity, content validity, criterion-related validity and construct validity. The researcher tested face and content validity. Face validity refers to the likelihood that a question will be misunderstood or misinterpreted. The pre-test of the questionnaire helped to iron out uncertainties. Pre-testing a survey is a good way to increase the likelihood of attaining

face validity. Content validity on the other hand, refers to whether an instrument provides adequate coverage of a topic. Content validity of the questionnaire was improved through expert judgment, as recommended by Gall, Gall and Borg (2007), whereby the researcher sought assistance from supervisors, and other lecturers who were competent in research methods and sociology of sports in order to help improve validity of the instrument. Before collecting data for the actual analysis, the researcher incorporated all the suggestions that were given by her supervisors and other experts in the questionnaire.

Reliability refers to the degree to which a research instrument yields consistent results after repeated trials (Chakrabartty, 2013). In order to determine reliability of the instrument, an assessment of consistency of the responses in the pre-test questionnaire was done to judge its reliability. The Test-retest technique was employed to determine the reliability index of the questionnaire. Test-retest is a measure of reliability obtained by managing the same test twice over a period of time ranging from few weeks to months, on a group of individuals. The scores obtained during the first test and the second tests are then correlated between the two separate measurements in order to evaluate the test for stability over time. Split half technique is another technique used to measure reliability of the research instruments. The researcher first splits a test into two halves, whereby the findings of one half of a test are compared with the findings from the other half. If the two halves of the test provide similar results this would suggest that the test has internal reliability.

The questionnaire was administered to the pilot sample of 140 participants twice, with a two weeks interval, after which a comparison of the two sets of data was done to

establish whether the responses were consistent. A reliability coefficient for the two scores was then computed using Cronbach's Coefficient Alpha. A correlation coefficient alpha of 0.87 was obtained for the items measuring deviance behaviour, whereas, self-concept inventory scale obtained a correlation coefficient of 0.74. A reliability index of 0.7 or higher was accepted as it reflected reliability of the instrument. This was within the criteria recommended by with Mugenda and Mugenda (2003) who considered a correlation coefficient of 0.7 and above as reliable and adequate for data analysis and reporting.

### **3.9 Data Collection Techniques**

The researcher, through telephone calls and personal visits to the sampled schools, formally requested the heads of the sampled schools for permission to use their schools for the study. The school heads introduced the researcher to the teachers, who were requested to cooperate with the researcher and provide any needed information. The school heads also requested teachers to assist the researcher with the students' academic performance records and class attendance registers. Thereafter, on a mutually agreed date and time, the researcher visited the schools to administer the questionnaires. The researcher coordinated with the research assistants in the delivery and collection of questionnaires from participants. Completed questionnaires were collected the same day. Immediately after collecting the questionnaires the researcher was allowed to examine the school records concerning discipline and academic performance in the deputy principal's office. The researcher was also assisted by sports, music and drama teachers in the sampling of respondents.

### **3.10 Data Analysis and Presentation**

The primary data obtained in this study was coded and analysed through Statistical Package for Social Sciences (SPSS) version 20. Data collected from the field was quantitative in nature and was analysed using both descriptive and inferential statistics. Descriptive statistics included frequency counts, percentages, means and standard deviations; whereas, inferential statistics included independent t-test, two way ANOVA, MANOVA and Post hoc test of Tukey's HSD.

Independent t-test statistics was used to determine mean differences between two unrelated groups such as participants in co-curricular activities and non-participants. This test uses two categorical variables with only the two groups of male and female and one continuous dependent variable, for example, self-concept, deviant behaviours and academic performance. The researcher used an independent t-test to determine whether participants in co-curricular activities differed from non-participants in terms of self-concept, deviant behaviour and academic performance. In addition, the researcher tested gender difference in relation to students' self-concept, deviant behaviours and academic performance.

Two-way ANOVA is a statistical test that is used to determine the effects of two independent variables on a dependent variable. In the current study, two-way ANOVA was used to establish the influence of participation in co-curricular activities on students' self-concept, deviant behaviour and academic performance. The researcher assumed that students were independent and were randomly selected to participate in the study. The researcher also assumed that the study sample was drawn from a normally distributed population. To conduct Analysis of Variance, the researcher determined the influence of

two or more categorical variables (participant and non-participants) and one dependent variable (self-concept, deviant behaviour and academic performance).

Further, the study employed Multiple Analysis of Variance (MANOVA). MANOVA test is used when there are two or more dependent variables. The assumptions made were that the students were randomly and independently sampled from the population to take part in the study and there were several dependent variables in a single experiment. This test (MANOVA) was further used in testing whether mean differences among the students who participated and those who did not participate competitively in co-curricular activities on a combination of the dependent variables (self-concept, deviant behaviour and academic performance) were likely to have occurred by chance. The researcher was able to identify which among the three co-curricular activities of sport, drama and music, had the greater influence on students' self-concept, deviant behaviour and academic performance. The MANOVA also enabled the researcher to determine whether the factors affected or interacted with each other.

The researcher used Box's test of equality of covariance matrices and the Levene Test of equality of error variances to test the assumptions of MANOVA statistic.

Post hoc test of Tukey's HSD was conducted to help the researcher identify which group differed significantly from each other. All statistical tests were carried out at 0.05 level of significance.

### **3.11 Logistical and Ethical Considerations**

The researcher obtained authority to conduct the study from Graduate School, Kenyatta University (Appendix E). Ethical review for the study was sought and approval granted by Kenyatta University Ethics and Review Committee (Appendix K). Research consent

was sought from the National Commission for Science, Technology and Innovations (NACOSTI), (Appendix F). The researcher notified the Regional Coordinator of Education about the research and sought permit to conduct the research which was granted (Appendix I). Research authorization was also sought and granted from the five county directors in the region (Appendix J). The sampled schools were visited to obtain permission from the principals to conduct the study. The participants were informed about the importance of the research, and also informed of their free will to participate. Participation was voluntary and, therefore, the participants were given an assent form to sign (Appendix A).

## **CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION**

### **4.1 Introduction**

This chapter presents results of the data analysis and interpretation of these findings. The main objective of this study was to determine influence of participation in competitive co-curricular activities on self-concept, deviant behaviour and academic performance of secondary school students in Central Region, Kenya. The chapter is organized into six sections. The first section consists of background information of the respondents while the remaining five sections present findings of the study based on the research objectives, namely:

1. To determine the influence of participation and non-participation in competitive co-curricular activities on self-concept, deviant behaviour and academic performance of secondary school students in Central Region, Kenya.
2. To compare the influence of co-curricular activities on self-concept, deviant behaviour and academic performance between male and female students in Central Region, Kenya.
3. To compare the influence of co-curricular activities on self-concept, deviant behaviour and academic performance of students across various type of schools in Central Region, Kenya.
4. To establish the influence of co-curricular activities on self-concept, deviant behaviour and academic performance across students of different classes in Central Region, Kenya.
5. To compare the influence of co-curricular activities on self-concept, deviant behaviour and academic performance of students from different social economic status in Central

Region, Kenya. Data was collected through the use of questionnaires and examination of school records. Descriptive and inferential statistics were used for data analysis. Descriptive statistics included frequency counts, percentages, means, and standard deviations whereas inferential statistics included; Independent t-test, Two-Way ANOVA, Multiple Analysis of Variance (MANOVA) and Post hoc test of Tukey's HSD. The study sample comprised of 1,408 students among them 704 participants and 704 non participants in co-curricular activities. Out of the 1,408 students, 963 (563 participants and 400 non-participants) participated in the study giving a 68.4% questionnaire return rate. This proportion was considered high adequate for reporting and discussion of the study findings.

#### **4.2 Background Information of the Study Respondents**

In this section, background information of the students' participants and non-participants in co-curricular activities is presented. The information captured in this section includes; students' gender, class and type of school. Parental/Guardian social economic status – education and occupation- of students' participants and non-participant are also captured. In terms of gender, out of 563 participants, 56.0% (315) were male and 44.0% (248) were female students. Among the non-participants, 51.0% (204) were male and 48.8% (195) were female students. This shows that the proportion of male students who participated in the study was slightly higher than that of female students. The distribution of students based on their classes is presented in Table 4.1.

**Table 4 1: Students' Distribution by Class**

Class	Participants		Non-participants		Total	
	f	%	f	%	f	%
Form 1	90	16.0	46	11.5	136	14.1
Form 2	133	23.6	112	28.0	245	25.4
Form 3	202	35.9	148	37.0	350	36.3
Form 4	138	24.5	94	23.5	232	24.1
<b>Total</b>	<b>563</b>	<b>100.0</b>	<b>400</b>	<b>100.0</b>	<b>963</b>	<b>100.0</b>

Table 4.1 shows students distribution by class where most participants, 35.9% (202) in co-curricular activities were in Form three, 24.5% (138) were in Form four, 23.6% (133) were in Form two and 16.0% (90) were in Form one. Among the non-participants, 37.0% (148) were in Form three, 28.0% (112) were in Form two, 23.5% (94) in Form four and 11.5% (46) were in Form one. This shows that majority of the students who participated in the study were in Form three, followed by those in Form two, then Form four and finally Form one. The respondents' type of school is presented in Table 4.2.

**Table 4 2: Respondents' Type of School**

School type	Participants		Non-participants	
	f	%	f	%
Sub-county	33	5.86	37	9.25
County	17	3.01	24	6.0
Extra-county	333	59.14	188	47.0
National	174	30.90	143	35.75
No response	6	1.06	8	2.0
<b>Total</b>	<b>563</b>	<b>100.0</b>	<b>400</b>	<b>100.0</b>

Results in Table 4.2 show that of the 563 participants in co-curricular activities, 5.9% (33) were from sub-county schools, 3.0% (17) were from county schools, 59.1% (333) were from extra county and 30.9% (174) from national schools. On the other hand, out of the 400 non participants, 9.2% (37) were from sub-county schools, 6.0% (24) were from county, 47.0% (188) from Extra County and 35.8% (143) from national schools. This clearly indicates that most of the participants and non-participants were derived from extra-county and national schools. The participants' performance in the Kenya Certificate of Primary Education (KCPE) examination is presented in Table 4.3.

**Table 4 3: Participants and Non-Participants KCPE Marks**

		<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Dev</b>
Participants	Marks attained in KCPE examination	398	200	440	360.13	47.75
Non-participants	Marks attained in KCPE examination	561	202	439	358.19	43.41

Data in Table 4.3 shows that participants had attained a mean score and a standard deviation of  $360.13 \pm 47.75$  in KCPE while non-participants had a mean score and standard deviation of  $358.19 \pm 43.41$ . This indicates that participants had higher KCPE entry scores than non- participants.

The researcher further sought to establish the number of students' participants and nonparticipants in co-curricular activities while in primary school. In response, 91.7% (516) students reported that they participated in co-curricular activities in primary school while 8.3% (47) reported that they did not participate in any co-curricular activity while

in primary school. Among the non-participants, 44.5% (178) had participated co-curricular activities while 55.2% (221) had not participated in any co-curricular activity. One (0.2%) non-participant did not give any response. Beyond their participation in co-curricular activities, it was important to find out activities they were involved in and the results are presented in Table 4.4.

**Table 4 4: Participation in Performing Arts and Sport Activities while in Primary School**

Sport activity	Participants		Non-participants		Total	
	f	%	f	%	f	%
Soccer	248	42.6	47	24.5	295	38.1
Volleyball	120	20.6	27	14.1	147	19.0
Netball	70	12.0	36	18.8	106	13.7
Athletics	144	24.7	82	42.7	226	29.1
<b>Total</b>	<b>582</b>	<b>100.0</b>	<b>192</b>	<b>100.0</b>	<b>774</b>	<b>100.0</b>
Performing arts	Participants		Non-participants		Total	
	f	%	f	%	f	%
Music	189	65.9	68	68.7	257	66.6
Drama	98	34.1	31	31.3	129	33.4
<b>Total</b>	<b>287</b>	<b>100.0</b>	<b>99</b>	<b>100.0</b>	<b>386</b>	<b>100.0</b>

Table 4.4 shows that of the 582 participants in co-curricular activities, 42.6% (248) played soccer in primary school, 24.7% (144) participated in athletics, 20.6% (120) played volleyball and 12.0% (70) took part in netball. Among the non-participants, 42.7% (82) participated in athletics, 24.5% (47) played soccer, 14.1% (27) volleyball and 18.8% (36) netball. Therefore, it is apparent that majority of the students participated in soccer followed by those who participated in athletics, volleyball and netball. Pertaining to performing arts, results in Table 4.4 showed that out of the 287 participants, 65.9% (189) had participated in music while 34.1% (98) participated in drama while in primary

school. Among the non-participants, 68.7% (68) took part in drama while 31.3% (31) took part in music while in primary school.

Further analysis revealed that out of the 963 students who participated in the study, 563 participated in co-curricular activities while in secondary schools whereas 400 were nonparticipants. Among the participants, 59.0% (332) participated in sports, 41.5% (400) in music and 20.6% (116) in drama. This shows that majority of the participants were in sports. Table 4.5 shows students' performance in the last year examination.

**Table 4 5: Participants and Non-Participants Academic Performance in the Latest Previous End of Year Examination**

Rating of performance	Participants		Non-participants	
	f	%	f	%
Poor	13	2.3	22	5.5
Fair	62	11.0	75	18.8
Average	249	44.2	149	37.2
Good	184	32.7	116	29.0
Very good	51	9.1	17	4.2
No response	4	0.7	21	5.2
<b>Total</b>	<b>563</b>	<b>100.0</b>	<b>400</b>	<b>100.0</b>

Table 4.5 shows that 2.3% (13) students' participants rated their performance as poor in the previous year's examination, 44.2% (249) rated their performance as average while 51(9.1%) felt that their performance was very good. 5.5% (22) students who were non-participants rated their performance as poor, 37.2% (149) rated their performance as average while 4.2% (17) rated their performance as very good. This implies that most of the students perceived their performances in the previous year examination as average. However, comparing the participants and non-participants performance in the end of term examination, participants in co-curricular activities felt they performed better in end of term examination than non-participants.

#### **4.2.1 Deviant Behaviour among the Students**

To establish the extent to which students engaged in deviant behaviours while at school, the researcher presented participants and non-participants with 10 items measuring their behaviours on a 4-point Likert scale. The scale ranged from 1-4 with 1 denoting never, 2 representing rarely, 3 often and 4 very often. The midpoint of the scale was a score of 2.5. Therefore, score below 2.5 denoted that students rarely or never engaged in deviant behaviours while scores above 2.5 denoted that students frequently engaged in deviant behaviours. Table 4.6 shows percentages, means and standard deviations obtained by the students on items measuring their engagement in deviant behaviours while at school.

**Table 4 6: Deviant behaviours among the participants and non-participants**

<b>Deviant behaviours</b>	<b>Students</b>	<b>Never (%)</b>	<b>Rarely (%)</b>	<b>Often (%)</b>	<b>Very Often (%)</b>	<b>Mean</b>	<b>Std. Dev.</b>
Being absent from school without permission	Participants	91.9	7.2	0.5	0.4	1.09	0.34
	Non-participants	46.7	32.1	7.8	13.4	1.88	1.03
Being punished by teachers for making noise in class	Participants	35.1	55.2	7.1	2.7	1.77	0.69
	Non-participants	22.7	31.8	24.5	21.0	2.44	1.06
Fighting with other students in school	Participants	87.6	10.6	1.4	0.4	1.15	0.42
	Non-participants	49.5	31.8	15.7	3.0	1.72	0.84
Being sent home for discipline problems	Participants	92.3	5.9	1.1	0.7	1.10	0.40
	Non-participants	56.1	30.7	8.6	4.6	1.62	0.83
Smoking cigarettes	Participants	97.7	1.1	0.7	0.5	1.04	0.29
	Non-participants	62.0	27.8	7.9	2.3	1.51	0.74
Drinking alcohol	Participants	91.0	5.9	2.0	1.1	1.13	0.47
	Non-participants	55.8	22.8	10.9	10.4	1.76	1.01
Use of drugs e.g. Bhang, Miraa (Khat), Heroine, Cocaine	Participants	94.6	2.7	1.8	0.9	1.09	0.42
	Non-participants	58.6	22.3	9.1	9.9	1.70	0.99
Failure to complete assignments/ homework	Participants	41.5	47.7	7.3	3.6	1.73	0.75
	Non-participants	21.6	27.4	14.6	36.4	2.66	1.18
Sneaking out of school	Participants	97.1	2.2	.4	0.4	1.04	0.26
	Non-participants	63.5	26.7	5.0	4.8	1.51	0.80
Bullying junior students in the school	Participants	90.4	7.3	1.6	0.7	1.13	0.43
	Non-participants	65.4	23.2	9.3	2.0	1.48	0.75

As shown in Table 4.6, the mean scores obtained by the students participants and non-participants on items measuring their deviant behaviours while at school ranged from 1.04 to 1.77 and 1.48 to 2.66 respectively. The highly ranked deviant behaviours by the participants included, “being punished by teachers for making noise in class

(1.77±0.69)”, “bullying junior students in the school (1.13±0.43)” and drinking alcohol (1.13±0.47)”. The lowest ranked deviant behaviours by the participants included “sneaking out of school (1.04±0.26)” and “smoking cigarettes (1.04±0.29)”. Among the non-participants, the highest ranked deviant behaviours were “Failure to complete assignments/ homework (2.66±1.18)” and “being punished by teachers for making noise in class (2.44±1.06)”. On the other hand, the lowest ranked deviant behaviour among non-participants were “bullying junior students in the school (1.48±0.75)” and “smoking cigarettes (1.51±0.80)”. Based on these findings, it emerged that a number of non-participants frequently engaged in deviant behaviour in comparison to participants. The most common deviant behaviour among the non-participants were failure to complete assignments/ homework, making noise in class, taking alcohol and absenteeism from school without permission. On average deviant behaviour were more common among non-participants compared to participants. The means for non-participants was higher compared to participants across all deviant behaviours. The study findings implied that participation in co-curricular activities had a positive influence on deviant behaviour.

#### **4.2.3 Students Self -Concept Inventory**

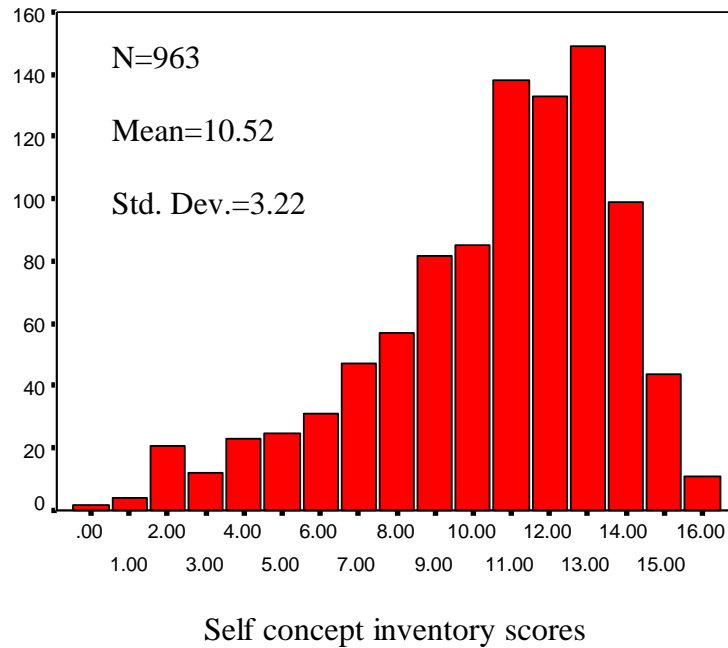
To measure students’ self-concept, a self-concept inventory scale with 16 items was presented to the study respondents. A two point Likert scale was used with 0 representing practically never (0) and 1 very often. The midpoint of the scale was a score of 0.5. Therefore, a mean score of below 0.5 signified that majority of the respondents have practically never found themselves in certain situations measured using a self-concept scale while a mean score of 0.5 and above showed that majority of the respondents had frequently found themselves in those situations. 4.7.

**Table 4 7: Participants and Non-Participants Self-Concept Inventory Scale**

Self-concept inventory	Students	Practically never	Very often	Mean	Std. Dev.
		%	%		
You have ever thought of yourself as an outstanding student	Participants	18.0	82.0	0.82	0.38
	Non-participants	46.7	53.3	0.53	0.50
Are you ever worried about other people regarding you as a success or a failure in school	Participants	41.2	58.8	0.59	0.49
	Non-participants	50.3	49.7	0.5	0.50
Academically, do you think you have more ability than a number of your classmates	Participants	17.9	82.1	0.82	0.38
	Non-participants	44.1	55.9	0.56	0.50
Ever have feelings of being less capable in academics than your classmates	Participants	26.0	74.0	0.74	0.44
	Non-participants	38.7	61.3	0.61	0.49
Do you consider yourself a worthwhile student in school	Participants	13.4	86.6	0.87	0.34
	Non-participants	36.5	63.5	0.63	0.48
You have ever considered yourself having better capability to read and understand than most students	Participants	20.5	79.5	0.8	0.40
	Non-participants	51.4	48.6	0.49	0.50
You find yourself having problems expressing your ideas when doing oral or written assignments	Participants	38.0	62.0	0.62	0.49
	Non-participants	55.4	44.6	0.45	0.50
Most of the time, do you sincerely like yourself	Participants	11.2	88.8	0.89	0.40
	Non-participants	44.0	56.0	0.56	0.50
You have ever doubted yourself as a worthy person	Participants	26.2	73.8	0.74	0.44
	Non-participants	48.3	51.7	0.52	0.50
You think of yourself as a generally competent person who can do most things well	Participants	10.5	89.5	0.89	0.31
	Non-participants	45.0	55.0	0.55	0.50
You are worried about what other people think of you	Participants	63.8	36.2	0.36	0.48
	Non-participants	45.6	54.4	0.54	0.50
You get worried when others criticize you on your behaviour or performance	Participants	51.5	48.5	0.48	0.50
	Non-participants	51.9	48.1	0.48	0.50
You always feel proud of or pleased with your looks and appearance	Participants	21.0	79.0	0.79	0.41
	Non-participants	45.9	54.1	0.54	0.50
You often feel nervous or uncomfortable when called upon to speak in front of others	Participants	36.5	63.5	0.63	0.48
	Non-participants	54.8	45.2	0.45	0.50
How often do you feel that you have a strong sense of self worth	Participants	12.8	87.2	0.87	0.34
	Non-participants	37.3	62.7	0.63	0.48
Are you concerned when your academic performance is not progressing well	Participants	6.7	93.3	0.93	0.25
	Non-participants	37.0	63.0	0.63	0.48

As shown in Table 4.7, the mean scores of the participants and non-participants on the aspects measuring their self-concept ranged from 0.36 to 0.93 and 0.45 to 0.63 respectively. The higher ranked statements by the participants were “*Are you often concerned when your academic performance is not progressing well? ( $0.93\pm0.25$ )*,” “*Most of the time, do you sincerely like yourself ( $\bar{x}=0.89\pm0.30$ )*” and “*How often do you think of yourself as a generally competent person who can do most things well in school? ( $0.89\pm0.31$ )*”. The lowly ranked statement by the participants was “*Are you worried about what other people think of you? ( $0.36\pm0.48$ )*”. Among the non-participants, the highest scored statements were “*do you consider yourself a worthwhile student in school ( $0.63\pm0.48$ )*” and “*are you concerned when your academic performance is not progressing well ( $0.63\pm0.48$ )*” while the lowest scored statement was “*do you find yourself having problems expressing your ideas when doing oral or written assignments ( $0.45\pm0.50$ )*”. From these findings, it emerged that majority of the participants in co-curricular activities obtained scores above 0.5 in most aspects of the self-concept scale, while majority of non-participants had scored 0.5 and below in most aspects . This implies that participants in co-curricular activities had higher self-concept compared to non- participants.

An overall score for students’ self-concept was computed, with the highest possible score being 16 (high self-concept) and the lowest possible score being 0 (low self-concept). The midpoint of the scale was a score of 8. Figure 4.1 illustrates composite scores of the students.



**Figure 4 1 Overall Scores for Self-Concept Inventory**

The scores obtained by students on the scale measuring their self-concept as illustrated in Figure 4.1 ranged from 0 to 16, with a mean score of  $10.52 \pm 3.22$ . Majority of the respondents obtained mean scores of above 8 on the scale. This shows that most of the students had higher self-concept. Table 4.8 demonstrates number of days participants and non-participants were absent from school during the term.

**Table 4 8: Number of Days absent from School during the Term**

Days absent from school	Participant		Non-participant		Total	
	f	%	f	%	f	%
Less than 10 days	354	62.9	202	50.5	556	57.7
10-20 days	25	4.4	37	9.3	62	6.4
20-30 days	1	0.2	11	2.8	12	1.2
Above 30 days	1	0.2	3	0.8	4	0.4
No response	182	32.3	147	36.8	329	34.2
<b>Total</b>	<b>563</b>	<b>100.0</b>	<b>400</b>	<b>100.0</b>	<b>963</b>	<b>100.0</b>

As shown in Table 4.8, of the 563 participants, 62.9% (354) were absent for less than 10 days, 4.4% (25) were absent for 10 to 20 days, one was absent for 20 to 30 days while another one was absent for more than 30 days. Among the non-participants in co-curricular activities, 50.5% (202) were absent from school during the term for less than 10 days, 9.3% (37) were absent for 10 and 20 days, 2.8% (11) were absent for 20-30 days while three indicated that they were absent for more than 30 days. This shows that majority of the participants and non-participants reported that they had been absent from school for less than 10 days during the term. It further emerged that non-participants were more absent than participants from school.

Table 4.9 shows results in relation to student attendance in school and their engagement in deviant behaviours. Both participant and non-participants were expected to give their response using a “No” or “Yes”, where “No” was given a score of 1 and “Yes” a score of 2. High mean score shows that majority of the respondents approved the statement while low mean scores indicated that most of the students were in disagreement with the statement.

**Table 4 9: Students’ School Attendance and Engagement in Deviance Behaviours**

Document analysis	Non-participant		Participant	
	Mean	Std. Dev.	Mean	Std. Dev.
Absent with permission	0.55	.498	0.64	.486
Absent without permission	0.35	.477	0.07	.259
Frequency of punishment for deviance	2.43	.667	1.63	.639
Student suspension for deviance	0.29	.454	0.07	.247
Student involved in drug related incident	0.38	.487	0.05	.214

Results presented in Table 4.9 show the mean for participants and non-participants on aspects measuring their school attendance and engagement in deviant behaviours. From the Table, the means for non-participants were higher than those of participants in the following statements: Frequency of punishment for deviance ( $2.43\pm 0.67$ ); student involved in drug related incident ( $0.38\pm 0.49$ ); absent without permission ( $0.35\pm 0.48$ ); and, student suspension for deviance ( $0.29\pm 0.54$ ). This shows that most non-participants in co-curricular activities were absent from school more times without permission than participants. Secondly, they were more frequently punished because of engaging in deviant behaviours than participants. Thirdly, they were more involved in drug abuse than participants and also, were frequently suspended from school than participants.

Table 4.10 presents various types of drugs and substances abused by students' participants and non-participants in co-curricular activities.

**Table 4 10: Types of Drugs and Substances Abused among the Participants and Non participants**

Type of drugs/substance abuse	Participants		Non-participants	
	f	%	f	%
Bhang	10	34.5	34	19.7
Alcohol	10	34.5	63	36.4
Miraa	4	13.8	23	13.3
Khat	1	3.4	21	12.1
Tobacco	1	3.4	7	4.0
Heroin	1	3.4	1	0.6
Kubeli	1	3.4	8	4.6
Charvis	1	3.4	0	0.0
Cocaine	0	0.0	11	6.4
Beer	0	0.0	2	1.2
Cigarette	0	0.0	2	1.2
Wine	0	0.0	1	0.6

Table 4.10 indicates that two similar proportions of the participants in co-curricular activities reported that they used bhang (34.5%) and drink alcohol (34.5%) while 13.8% of them indicated that they chewed miraa. Other drugs mentioned by participants were tobacco, heroin, kubeli, khat and charvis. Among the non-participants, 36.4% consumed alcohol, 19.7% abused bhang, 13.3% chewed miraa, 12.1% chewed khat and 6.4% were taking cocaine. Other drugs abused by nonparticipants included tobacco (4.0%), Kubeli (4.6%), cigarettes (1.2%), beer (1.2%), wine (0.6%) and heroin (0.6%). This implies that non-participants were abusing drugs more than participants.

Table 4.11 shows comparison of average marks obtained by participants and non-participants in KCPE examination and previous end of term examination

**Table 4 11: Participants and Non-Participants Academic Performance in KCPE and End of Term Examination in Secondary School**

<b>Academic</b>	<b>Minimum performance</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Dev.</b>
Participant Student's KCPE examination marks	200	440	361.00	46.92
Student end of term examination marks	83	998	499.69	153.03
Student's KCPE examination marks	202	440	358.89	42.84
Student end of term examination marks	21	982	548.62	169.90

As shown in Table 4.11, the minimum marks scored obtained by the participants in KCPE examination was 202 while the maximum score was 440 with an average mean score and standard deviation of 358.89±42.86. In the end of the term examination at secondary school level, the minimum score obtained was 21 and maximum score was 982 with a mean score of 548.62 and a standard deviation of 169.90. Among the non-participants, the minimum score obtained in KCPE examination was 200 while the

maximum score was 440 with an average mean score and standard deviation of 361.00  $\pm$ 46.92. In the end of term examination at the secondary school level, the minimum score obtained by non-participants was 83 and maximum score was 998 with a mean score and standard deviation of 499.69  $\pm$ 153.026. From these findings, it is clear that nonparticipants in co-curricular activities performed better in KCPE examination compared to participants, whereas, participants performed better in end of term examinations compared to non-participants.

#### **4.3 Influence of Participation and Non-Participation in Competitive Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance**

The first objective of the study was to determine the influence of participation and nonparticipation in competitive co-curricular activities on self-concept, deviant behaviour and academic performance of secondary school students in Central Region, Kenya. To address this objective, an independent sample t-test was conducted. The results are presented in Table 4.12.

**Table 4 12: Means, Standard Deviations and T-test Results for Self-Concept, Deviant Behaviour and Academic Performance**

Dependent variable	Students Participation	Descriptive statistics			T-test results		
		N	Mean	Std. Deviation	t	Df	Sig. (2-tailed)
<b>Self-Concept Index</b>	Non-participant	398	54.15	22.9	15.42	593.13	0.000*
	Participant	561	73.93	13.56			
<b>Deviance Index</b>	Non-participant	398	1.83	0.66	17.06	497	0.000*
	Participant	562	1.23	0.28			
<b>Change in Performance</b>	Non-participant	387	-13.6553	13.53	-5.38	772	0.000*
	Participant	534	-9.0064	12.05			

#### **4.3.1 Influence of Participation and Non-Participation in Competitive Co-Curricular Activities on Self-Concept**

The results in Table 4.12 show that the mean score and standard deviation of participants was 73.93 ±13.56 on self-concept while non-participants had a mean score and standard deviation of 54.15± 22.90 on self-concept. This shows that participants obtained higher mean scores compared to non-participants. This implies that participants had higher self-concept than participants. T-test results revealed that there was a significant difference between participants and non-participants self-concept level (t (593) =15.42, p<0.001). This shows that participants in co-curricular activities had higher self-concept than non-participants. As such, the null hypothesis which stated that there is no significant difference in self-concept between participants and non-participants in co-curricular activities was rejected at alpha=0.05 level of significance. Therefore, results show that

self-concept was significantly different between participants and non-participants in co-curricular activities.

#### **4.3.2 Influence of Participation and Non-Participation in Competitive Co-Curricular Activities on Deviant Behaviour**

The study results (Table 4.12) show that the mean and standard deviation for participants on the aspects measuring the frequency in which they engage in deviant behaviours was  $1.23 \pm 0.28$  whereas the mean and standard deviation for non-participants was  $1.83 \pm 0.66$  on the same. This portrays that while most of the participants were never or rarely engaged in deviant behaviour, a significant number of the non-participants engaged in deviant behaviours. The independent sample t-test results showed that there was a significant difference between participant and non-participants in terms of their engagement in deviant behaviours while in school ( $t(497) = 17.06, p < 0.001$ ). This suggests that participants in co-curricular activities were less likely to engage in deviant behaviour as compared to non-participants. The results, therefore, imply that participation in co-curricular activities had a positive impact on students' behaviour. Based on these findings, the study rejected the null hypothesis that there is no significant difference in deviant behaviour between participants and non-participants in co-curricular activities at  $\alpha = 0.05$  level of significance.

#### **4.3.3 Influence of Participation and Non-Participation in Competitive Co-Curricular Activities on Academic Performance**

The study results (Table 4.12) show the means and standard deviations for participants and non-participants in academic performance. The mean and standard deviation for

participants was  $-9.00 \pm 12.05$  while for non- participants was  $13.66 \pm 13.53$ . The negative mean score in academic performance demonstrated that academic performances of both, participants and non-participants declined between the KCPE examinations and the end of term examinations at secondary school. The T-test score indicates that there was a significant difference in academic performance between the participants and non-participants ( $t(772) = -5.38, p < 0.001$ ). The study found that, although there was a decline in academic performance of both groups, participants had better academic performance as compared to non-participants. This means that participation in co-curricular activities had a positive impact on students' academic performance. The null hypothesis that there is no significant difference in academic performance between participants and non-participants in co-curricular activities was rejected at  $\alpha = 0.05$  level of significance.

#### **4.4 Gender Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance**

To address this objective, a two way Analysis of Variance was computed to compare the influence of participation in co-curricular activities on self-concept, deviant behaviour and academic performance of male and female students in Central region, Kenya. The results are shown in Tables 4.13, 4.14, 4.15, 4.16 and 4.17.

##### **4.4.1 Gender Differences in the Influence of Participation in Co-Curricular Activities on Self-Concept**

The study assessed the influence of participation in co-curricular activities on self-concept between male and female students. The study used descriptive statistics such as mean and standard deviation to describe participation across genders while two way ANOVA was used to analyse the effect of participation in co-curricular activities on self-

concept based on the gender of the students. The results are presented in Tables 4.13 and 4.14.

**Table 4 13: Influence of Participation in Competitive Co- Curricular Activities on Students’ Self-Concept across Gender**

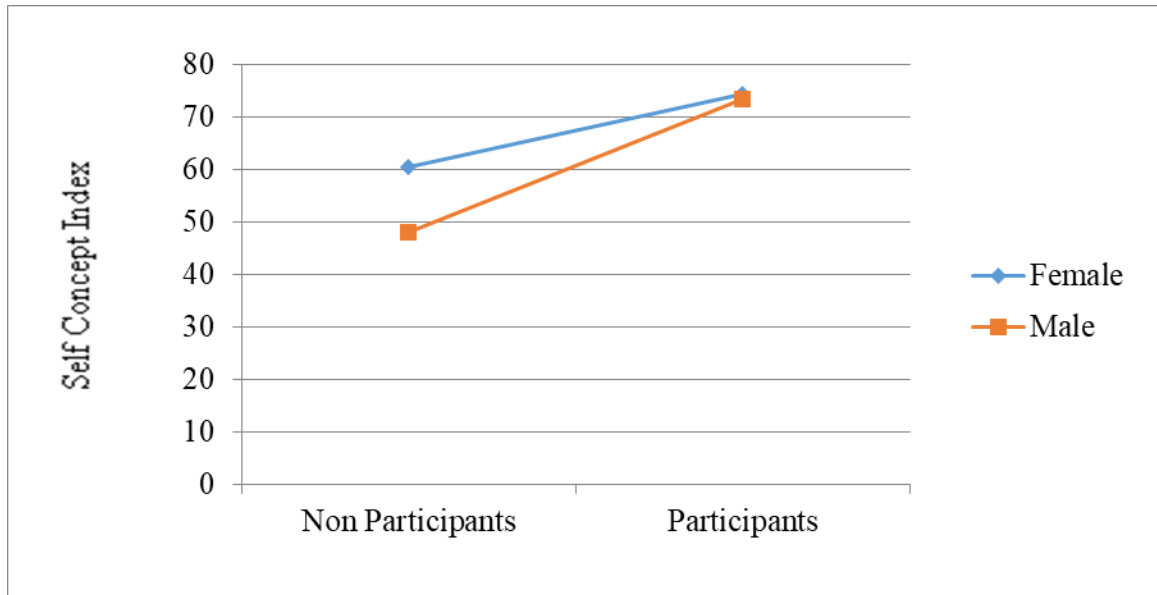
<b>Dependent Variable: Self-Concept Index</b>				
<b>Gender</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Female	Non-participant	194	60.45	21.65
	Participant	247	74.48	13.04
	<b>Sub Total</b>	<b>441</b>	<b>68.31</b>	<b>18.69</b>
Male	Non-participant	203	48.11	22.53
	Participant	315	73.49	13.96
	<b>Sub Total</b>	<b>518</b>	<b>63.53</b>	<b>21.70</b>
Total	Non-participant	397	54.14	22.93
	Participant	562	73.93	13.56
	<b>Grand Total</b>	<b>959</b>	<b>65.73</b>	<b>20.50</b>

The results in Table 4.13 show that the mean and standard deviation for female participants on self-concept was  $74.48 \pm 13.04$  while the mean and standard deviation for female non-participants was  $60.45 \pm 21.65$ . Among the males, the mean and standard deviation for participants was  $73.49 \pm 13.96$  while the mean and standard deviation for male non-participants was  $48.11 \pm 22.53$ . The total mean score and standard deviation for all participants was  $73.93 \pm 13.56$  while that for non-participants was  $54.14 \pm 22.93$  respectively. This implies that participants obtained higher scores on self-concept than nonparticipants. Secondly, female participants and non-participants obtained higher scores when compared to their male counterparts. This implies that female students had higher self-concept compared to male students. To find out whether the mean differences were significant, ANOVA was computed and findings presented in Table 4.14.

**Table 4 14: Influence of Participation in Co-Curricular Activities on Self-Concept across Gender**

<b>Tests of Between-Subjects Effects</b>					
<b>Dependent Variable: Self-Concept Index</b>					
<b>Source</b>	<b>Type III Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Corrected Model	106233.221 <sup>a</sup>	3	35411.074	114.160	.000
Intercept	3801091.996	1	3801091.996	12254.125	.000
Gender	10269.006	1	10269.006	33.106	.000
Co-curricular	89692.014	1	89692.014	289.153	.000
Gender * cocurricular	7430.396	1	7430.396	23.954	.000
Error	295920.077	954	310.189		
Total	4540940.305	958			
Corrected Total	402153.298	957			
a.R Squared=.264 (Adjusted R Squared =.262)					

As shown in Table 4.14, analysis of variance tested gender differences in the influence of students' participation in co-curricular activities on student's self-concept. The results of the analysis revealed that students' gender ( $F(1,954) = 33.106, p < 0.001$ ) and participation in co-curricular activities ( $F(1,954) = 289.153, p < 0.001$ ) had a significant main effects on students' self-concept, at  $p < 0.05$  level of significance. The findings further showed that there was significant interaction between gender and participation in co-curricular activities ( $F(1,954) = 23.954, p < 0.001$ ) in influencing students' self-concept. Therefore, the null hypothesis that there is no significant difference in self-concept between participants and non-participants in co-curricular activities based on gender of the students was rejected at  $\alpha = 0.05$  level of significance.



**Figure 4 2: Interaction among Gender, Participation in Co-curricular Activities and Self-Concept**

Figure 4.2 depicts participation in co-curricular activities, students' gender and self-concept. The findings showed that gender did not have a bearing on self-concept among students who participated in co-curricular activities. However, the situation among non-participants was different, unlike self-concept for non-participants which was different. Female non-participants had higher self-concept than male non-participants.

#### 4.4.2 Gender differences in the Influence of Participation on Deviant Behaviour

The study used the two ways ANOVA to assessed gender differences of the influence of participation in co-curricular activities on deviant behaviour of secondary school students.

**Table 4 15: Influence of Participation on Deviant Behaviour across Gender**

<b>Dependent Variable: Deviant Behaviour index</b>				
<b>Gender</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Female	Non-participant	194	1.63	.66
	Participant	247	1.17	.21
	Total	441	1.37	.52
Male	Non-participant	203	2.03	.60
	Participant	315	1.28	.31
	Total	518	1.57	.57
Total	Non-participant	397	1.83	.66
	Participant	562	1.23	.28
	<b>Total</b>	<b>959</b>	<b>1.48</b>	<b>.56</b>

Table 4.15 shows that the mean and standard deviation for female participants in deviant behaviour was  $1.17 \pm 0.21$ , while the mean and standard deviation for male participants was  $1.28 \pm 0.31$ . On the other hand, the mean and standard deviation for female non-participants was  $1.63 \pm 0.66$  while the mean and standard deviation for male non-participants was  $2.03 \pm 0.60$ . This shows that both male participants and non-participants obtained higher scores than female participants and non-participants on deviant behaviour. This indicates that female students were less likely to engage in deviant behaviour than male students. Secondly, male and female participants in co-curricular activities were less likely to engage in deviant behaviours in comparison to male and female non-participants. The two way ANOVA was also used to determine whether the

differences between male and female students was statistically significant. The results are presented in Table 4.16.

**Table 4 16: Two Way ANOVA Results on Influence of Participation in Co-Curricular Activities on Students' Engagement in Deviant Behaviour across Gender**

Tests of Between-Subjects Effects					
Dependent Variable: Deviance Index					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	100.871 <sup>a</sup>	3	33.624	161.951	.000
Intercept	2154.324	1	2154.324	10376.498	.000
Gender	15.066	1	15.066	72.565	.000
Co-curricular	83.370	1	83.370	401.559	.000
Gender * co-curricular	4.840	1	4.840	23.314	.000
Error	198.273	955	.208		
Total	2401.250	959			
Corrected Total	299.144	958			
a. R Squared = .337 (Adjusted R Squared = .335)					

Results in Table 4.16 show that students gender ( $F(1,955) = 72.565, p < 0.001$ ) and participation in co-curricular activities ( $F(1,955) = 401.559, p < 0.001$ ) had a significant main effects on students' engagement in deviant behaviour, at  $p < 0.05$ . Secondly, there was a significant interaction between gender and participation in co-curricular activities ( $F(1,955) = 23.314, p < 0.001$ ) in influencing students' engagement in deviant behaviour. Therefore, the null hypothesis which stated that there is no significant difference in deviant behaviour between participants and non-participants in co-curricular activities based on gender was rejected at  $\alpha = 0.05$  level of significance.

**Table 4 17: Means and Standard Deviations on Participation in Co-Curricular Activities on Students Academic Performance across Gender**

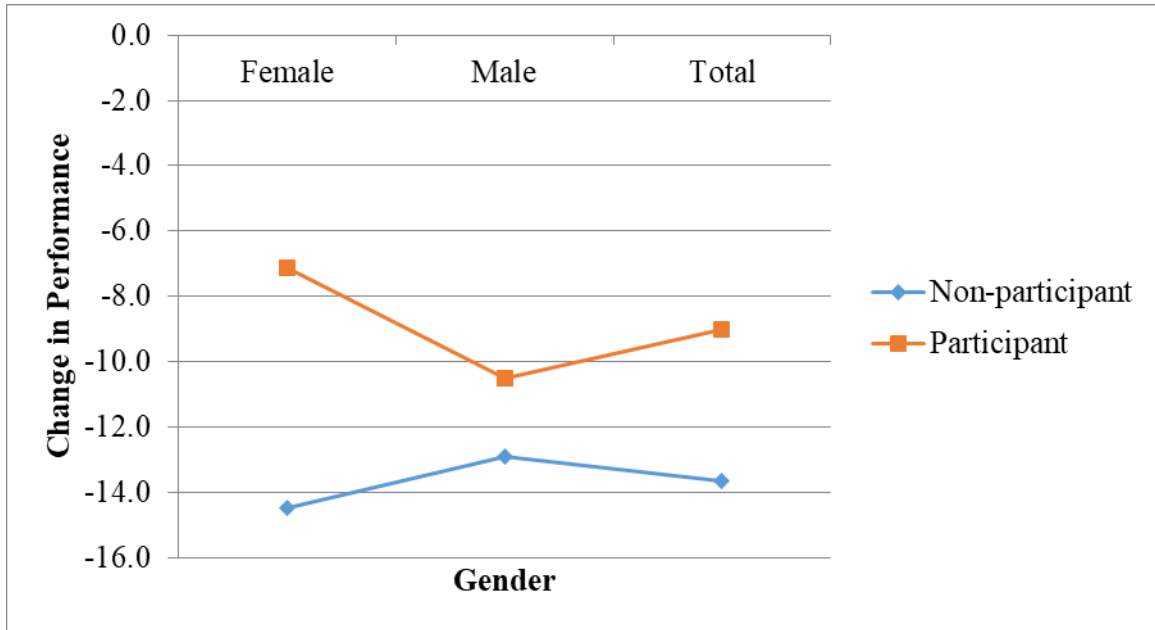
<b>Dependent Variable: Academic Performance</b>				
<b>Gender</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Female	Non-participant	186	-14.48	14.29
	Participant	239	-7.14	12.32
	<b>Total</b>	425	-10.35	13.70
Male	Non-participant	200	-12.90	12.81
	Participant	295	-10.52	11.63
	<b>Total</b>	495	-11.48	12.17
Total	Non-participant	386	-13.66	13.55
	Participant	534	-9.00	12.05
	<b>Total</b>	<b>920</b>	<b>-10.96</b>	<b>12.90</b>

Table 4.17 shows the overall mean and standard deviation for participants was  $-9.00 \pm 12.05$  whereas the overall mean and standard deviation for non-participants was  $-13.66 \pm 13.55$ . The means for both participants and non-participants across gender were negative, suggesting a decline in performance between the KCPE examinations and end of term examination at secondary school. The mean and standard deviation for female participants was  $-7.14 \pm 12.32$  while the mean and standard deviation for male participants was  $-10.52 \pm 11.63$ . Among the non-participants, the mean and standard deviation for females was  $-14.48 \pm 14.29$  while the mean and standard deviation for males was  $-12.90 \pm 12.81$ . This shows that female participants were better in academic performance than male participants. However, male non-participants had better performance in academics than female non-participants. To establish whether these differences in performance were significant across gender, Two Way ANOVA was conducted and the findings are presented in Table 4.18.

**Table 4 18: Two way ANOVA on Participation in Co-Curricular Activities on Students' Academic Performance across Gender**

Tests of Between-Subjects Effects					
Dependent Variable: Academic Performance					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6597.448 <sup>a</sup>	3	2199.149	13.760	.000
Intercept	112987.023	1	112987.023	706.967	.000
Gender	179.865	1	179.865	1.125	.289
Co-curricular	5260.997	1	5260.997	32.918	.000
Gender * cocurricular	1368.951	1	1368.951	8.566	.004
Error	146394.583	916	159.819		
Total	263477.088	920			
Corrected Total	152992.030	919			
a. R Squared = .043 (Adjusted R Squared = .040)					

As shown in Table 4.18, the findings showed that gender ( $F(1,916) = 1.125, p = 0.289$ ) did not have a significant main effect on students' academic performance while the participation in co-curricular activities ( $F(1,916) = 32.918, p < 0.001$ ) had a significant main effect on students' academic performance, at  $p < 0.05$ . Secondly, there was a significant interaction between gender and participation in co-curricular activities ( $F(1,916) = 8.566, p = 0.004$ ) in influencing students' change in academic performance. The null hypothesis which stated that there is no significant difference in academic performance between participants and non-participants in co-curricular activities based on gender was rejected at  $\alpha = 0.05$  level of significance.



**Figure 4 3: Interaction of Gender and Participation in Co-Curricular Activities on Academic Performance**

The results in Figure 4.3 show that negative change in academic performance was large among non-participant when compared to participants. Similarly, the results show that the change between female non-participants and participants was large compared to male participant and non-participants. The findings further confirmed that influence of participation in co-curricular activities on change in performance was significant across gender.

#### **4.5 Influence of Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance of Students across Various Types of School**

The third objective of the study was to compare the influence of co-curricular activities on self-concept, deviant behaviour and academic performance of students across various school types in Central Region, Kenya.

#### 4.5.1 Influence of Co-Curricular Activities on Self-Concept of Students across Various Types of School

The study first sought to establish the differences in means and standard deviations on participation in co-curricular activities, school type and students' self-concept. The results of this analysis are presented in Table 4.19.

**Table 4 19: Means and Standard Deviations on Participation in Co-Curricular Activities, School Type and Students' Self-Concept**

<b>Dependent Variable: Self - concept Index</b>				
<b>Type of school</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Sub-county	Non-participant	37	45.79	23.11
	Participant	33	73.35	12.64
	<b>Total</b>	<b>70</b>	<b>58.78</b>	<b>23.34</b>
County	Non-participant	23	58.62	17.49
	Participant	17	70.23	14.63
	<b>Total</b>	<b>40</b>	<b>63.55</b>	<b>17.15</b>
Extra-county	Non-participant	188	56.50	21.78
	Participant	332	74.49	13.89
	<b>Total</b>	<b>520</b>	<b>67.98</b>	<b>19.20</b>
National	Non-participant	143	52.28	24.07
	Participant	173	73.37	13.08
	<b>Total</b>	<b>316</b>	<b>63.83</b>	<b>21.57</b>
Total	Non-participant	391	54.07	22.73
	Participant	555	73.94	13.59
	<b>Total</b>	<b>946</b>	<b>65.73</b>	<b>20.43</b>

As shown in Table 4.19, the total mean and standard deviation for participants in co-curricular activities was  $73.94 \pm 13.59$  while the total mean and standard deviation for non-participants was  $54.07 \pm 22.73$ . Students who participated in co-curricular activities from the sub-county schools, county, extra-county and national schools had a higher mean on self-concept inventory scale as compared to nonparticipants from the same

schools. This implies that participants had higher self-concept than non-participants. In addition, the means for participants in extra-county schools was higher than the means for those in national, county and sub-county schools, meaning they had higher self-concept than their counterparts. Table 4.20 shows results of the Two Way Analysis of the influence of students' participation in co-curricular activities, school type and students' self-concept.

**Table 4 20: Two Way ANOVA on Participation in Co-Curricular Activities, School Type and Students' Self-Concept**

Tests of Between-Subjects Effects					
Dependent Variable: Self Concept Index					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	95615.489 <sup>a</sup>	7	13659.356	42.886	.000
Intercept	1408915.805	1	1408915.805	4423.557	.000
School type	2876.248	3	958.749	3.010	.029
Co-curricular	33891.364	1	33891.364	106.408	.000
School type * co-curricular	2211.315	3	737.105	2.314	.074
Error	298755.712	938	318.503		
Total	4481103.060	946			
Corrected Total	394371.201	945			
a. R Squared = .242 (Adjusted R Squared = .237)					

Two Way analysis of variance tested the effects of school type and participation in co-curricular activities on student self-concept. The findings of the analysis showed that school type ( $F(3,938) = 3.010, p = 0.029$ ) and participation in co-curricular activities ( $F(1,938) = 106.408, p < 0.001$ ) had a significant main effect on students' self-concept. Secondly, there was no significant interaction between school type and participation in

co-curricular activities ( $F(3,938) = 2.314, p = 0.074$ ) influencing students' self-concept. The null hypothesis that there is no significant difference in self-concept between participants and non-participants in co-curricular activities from different types of schools was retained at  $\alpha = 0.05$  level of significance. The researcher further decided to carry out a post hoc analysis on school type variable and the results based on Turkey HSD are shown in Tables 4.21 and 4.22.

**Table 4 21: Post Hoc Analysis Test on School Type across Students' Self-Concept**

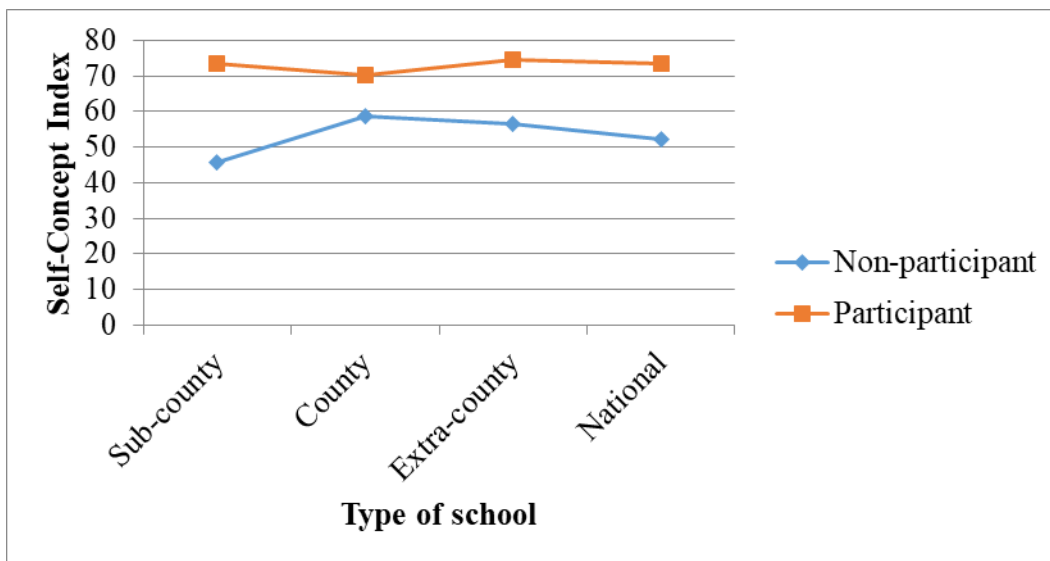
<b>Multiple Comparisons</b>				
<b>Self-Concept Index</b>				
<b>Tukey HSD</b>				
<b>(I) Type of school</b>	<b>(J) Type of school</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
Sub-county	County	-4.7728	3.53732	.532
	Extra-county	-9.2035*	2.27212	.000
	National	-5.0457	2.35753	.141
County	Sub-county	4.7728	3.53732	.532
	Extra-county	-4.4307	2.92832	.430
	National	-.2729	2.99508	1.000
Extra-county	Sub-county	9.2035*	2.27212	.000
	County	4.4307	2.92832	.430
	National	4.1577*	1.27296	.006
National	Sub-county	5.0457	2.35753	.141
	County	.2729	2.99508	1.000
	Extra-county	-4.1577*	1.27296	.006
Based on observed means.				
The error term is Mean Square(Error) = 318.503.				
*. The mean difference is significant at the .05 level.				

**Table 4 22: Tukey HSD Results on School Type**

Self-Concept Index			
Tukey HSD			
Type of school	N	Subset	
		1	2
Sub-county	70	58.7805	
County	40	63.5533	63.5533
National	316	63.8263	63.8263
Extra-county	520		67.9840
Sig.		.230	.342

Means for groups in homogeneous subsets are displayed.  
 Based on observed means.  
 The error term is Mean Square(Error) = 318.503.

From Tables 4.21 and 4.22, Sub-County ( $\bar{x} = 58.8$ ), County ( $\bar{x} = 63.6$ ) and National ( $\bar{x} = 63.8$ ) schools have been placed in the same category while Extra-County ( $\bar{x} = 68.0$ ) has been placed with County and National schools. This implies that the significant difference is only between Sub-County and Extra-County schools with Extra County having the highest self-concept index.



**Figure 4 4: Interaction of School Type and Participation in Co-Curricular Activities on Self-Concept Index**

The results in Figure 4.4 show that students across all that types of schools who had participated in co-curricular activities had high self-concept index compared to non-participants across the various types of schools. The findings implied that regardless on the school type participation in co-curricular activities increases self-concept among the students.

#### **4.5.2 Influence of Co-Curricular Activities on Deviant Behaviour of Students across Various Types of School**

Table 4.23 shows means and standard deviations on participation in co-curricular activities, school type and students' deviant behaviours.

**Table 4 23: Means and Standard Deviations on Participation in Co-Curricular Activities, School Type and Students' Deviant Behaviours**

<b>Dependent Variable: Deviance Index</b>				
<b>Type of school</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Sub-county	Non-participant	37	2.48	.71
	Participant	33	1.13	.18
	<b>Total</b>	<b>70</b>	<b>1.85</b>	<b>.86</b>
County	Non-participant	23	1.86	.75
	Participant	17	1.11	.10
	<b>Total</b>	<b>40</b>	<b>1.54</b>	<b>.68</b>
Extra-county	Non-participant	188	1.68	.59
	Participant	332	1.24	.29
	<b>Total</b>	<b>520</b>	<b>1.40</b>	<b>.47</b>
National	Non-participant	143	1.87	.61
	Participant	174	1.25	.28
	<b>Total</b>	<b>317</b>	<b>1.53</b>	<b>.55</b>
Total	Non-participant	391	1.83	.66
	Participant	556	1.23	.28
	<b>Total</b>	<b>947</b>	<b>1.48</b>	<b>.56</b>

Table 4.23 show that the means for non-participants in co-curricular activities from Sub-county schools, County, Extra County and National schools were higher than the means for participants in co-curricular activities. On overall, the mean and standard deviation for non-participants was  $1.83 \pm 0.66$  while the mean score and standard deviation for participants was  $1.23 \pm 0.28$ . This means that non-participants from all the types of schools were more likely to engage into deviant behaviour as compared to participants in co-curricular activities. It further emerged that non- participants from Sub-county schools were more likely to engage in deviant behaviours than those from County, Extra-County and National schools.

Table 4.24 presents results of the Two Way ANOVA concerning students' participation in co-curricular activities, school type and their engagement in deviant behaviours.

**Table 4 24: Two Way ANOVA on Participation in Co-Curricular Activities, School Type and Students' Deviant Behaviours**

<b>Dependent Variable: Deviance Index</b>					
<b>Source</b>	<b>Type III Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Corrected Model	103.957 <sup>a</sup>	7	14.851	72.865	.000
Intercept	882.057	1	882.057	4327.767	.000
School type	8.240	3	2.747	13.476	.000
Co-curricular activities	55.228	1	55.228	270.974	.000
School type * co-curricular	13.292	3	4.431	21.739	.000
Error	191.381	939	.204		
Total	2373.410	947			
Corrected Total	295.338	946			
a. R Squared = .352 (Adjusted R Squared = .347)					

Results in Table 4.24 show the effects of school type and participation in co-curricular activities on students' engagement in deviant behaviour. The study found that school

type ( $F(3,939) = 13.476, p < 0.001$ ) and participation in co-curricular activities ( $F(1,939) = 270.974, p < 0.001$ ) had significant main effect on students' engagement in deviant behaviour. Secondly, there was significant interaction between school type and participation in co-curricular activities ( $F(3,939) = 21.739, p < 0.001$ ) in influencing students' deviant behaviour. Therefore, the null hypothesis which stated that there is no significant difference in deviant behaviours between participants and non-participants in co-curricular activities from different types of schools was rejected at  $p < 0.05$ . Post hoc analysis was done across school types and the results based on Turkey HSD are shown in Tables 4.25 and 4.26.

**Table 4 25: Post Hoc Analysis on School Type across Deviance Behaviour Variables**

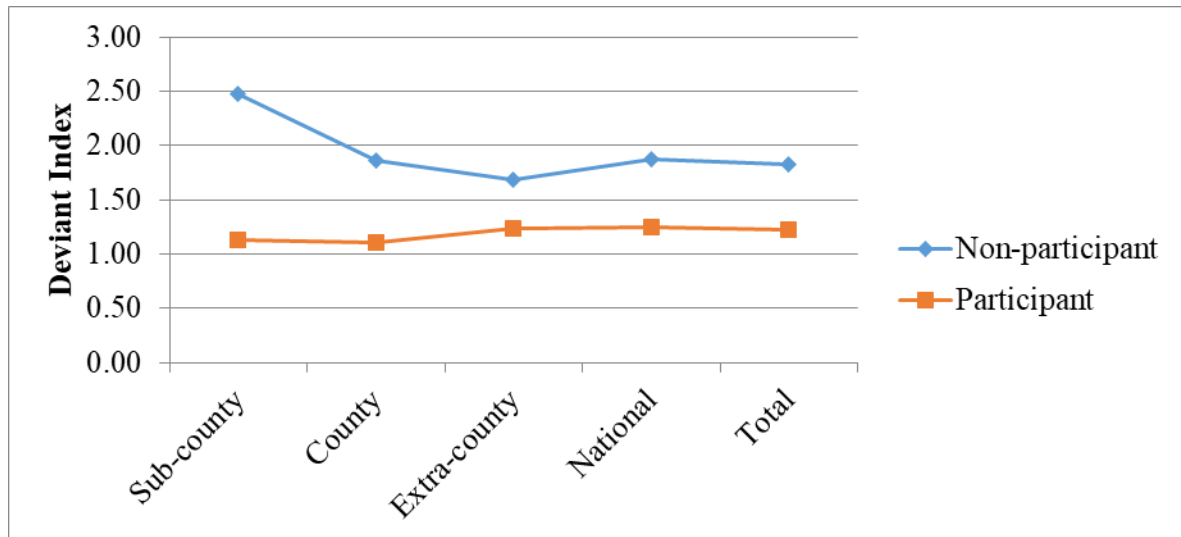
<b>Multiple comparisons</b>				
<b>Deviance Index Tukey HSD</b>				
<b>(I) Type of school</b>	<b>(J) Type of school</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
Sub-county	County	.3060*	.08948	.004
	Extra-county	.4502*	.05748	.000
	National	.3177*	.05962	.000
County	Sub-county	-.3060*	.08948	.004
	Extra-county	.1442	.07408	.209
	National	.0117	.07575	.999
Extra-county	Sub-county	-.4502*	.05748	.000
	County	-.1442	.07408	.209
	National	-.1326*	.03217	.000
National	Sub-county	-.3177*	.05962	.000
	County	-.0117	.07575	.999
	Extra-county	.1326*	.03217	.000
Based on observed means. The error term is Mean Square(Error) = .204. *. The mean difference is significant at the .05 level.				

**Table 4 26: Post Hoc Analysis on School Type across Deviance Behaviour Variables**

Deviance Index			
Tukey HSD			
Type of school	N	Subset	
		1	2
Extra-county	520	1.3976	
National	317	1.5302	
County	40	1.5418	
Sub-county	70		1.8478
Sig.		.140	1.000

Means for groups in homogeneous subsets are displayed.  
Based on observed means.  
The error term is Mean Square (Error) = .204.

From the Tables 4.25 and 4.26, Extra-county ( $\bar{x} = 1.39$  ), National ( $\bar{x} = 1.53$  ) and County ( $\bar{x} = 1.54$  ) schools have been placed in the same category while Sub-county ( $\bar{x} = 1.85$  ) was placed in a different category. This implies that Sub-county schools significantly differs with the rest which is supported by the  $p < 0.05$  for all cases in Table 4.26 above.



**Figure 4 5: Interaction between School Type and Participation in Co-Curricular Activities on Deviant Behaviour**

The results in Figure 4.5 show that deviant behaviour were more common in non-participants across all the type of schools in Kenya. The results further show that deviant behaviours in non-participant from sub-county schools was the highest compared to other type of schools. The findings implied that deviant behaviour were less in students that participated in co-curricular activities across all the type of schools.

#### **4.5.3 Influence of Co-Curricular Activities in Academic Performance of Students across Various Types of school**

The mean scores and standard deviations on students' participation in co-curricular activities, school type and students' academic performance are presented in Table 4.30.

Table 4.27: Means and Standard Deviations on Participation in Co-Curricular Activities, School Type and Students' Academic Performance

**Table 4 27: Means and Standard Deviations on Participation in Co-Curricular Activities, School Type and Students' Academic Performance**

<b>Dependent Variable: Change in Performance</b>				
<b>Type of school</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Sub-county	Non-participant	34	-3.56	16.09
	Participant	29	-6.53	16.92
	<b>Total</b>	<b>63</b>	<b>-4.93</b>	<b>16.41</b>
County	Non-participant	23	-14.14	13.71
	Participant	16	-8.04	15.49
	<b>Total</b>	<b>39</b>	<b>-11.64</b>	<b>14.59</b>
Extra-county	Non-participant	182	-13.52	13.90
	Participant	319	-9.10	11.99
	<b>Total</b>	<b>501</b>	<b>-10.70</b>	<b>12.88</b>
National	Non-participant	140	-16.54	10.62
	Participant	165	-9.58	10.65
	<b>Total</b>	<b>305</b>	<b>-12.78</b>	<b>11.18</b>
Total	Non-participant	379	-13.78	13.41
	Participant	529	-9.07	12.01
	<b>Total</b>	<b>908</b>	<b>-11.04</b>	<b>12.82</b>

Table 4.27 shows the means and standard deviations in academic performance for participant and non-participants in co-curricular activities from different types of schools. The means and standard deviations for both participants and nonparticipants from all the schools were negative, meaning there was a decline in academic performance between the KCPE examinations and end of term examination in secondary schools. Secondly, participants in co-curricular activities from County, Extra County and national schools had higher means in academic performance compared to non- participants from the same schools. However, in Sub-county schools, non-participants ( $M=-3.56 \pm 16.09$ ) had

higher mean than participants ( $M=-6.53 \pm 16.92$ ). This implies that non-participants in sub-county schools had better academic performance than the participants in co-curricular activities.

To find out whether these mean differences were significant, a Two Way ANOVA was conducted to determine whether the differences in academic performance across school types were statistically significant. Results of the ANOVA are presented in Table 4.28.

**Table 4 28: Two Way ANOVA on Participation in Co-Curricular Activities, School Type and Students' Academic Performance**

<b>Dependent Variable: Change in Performance</b>					
<b>Source</b>	<b>Type III Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Corrected Model	9769.717 <sup>a</sup>	7	1395.674	9.019	.000
Intercept	34226.239	1	34226.239	221.163	.000
School type	3369.288	3	1123.096	7.257	.000
Co-curricular	1100.025	1	1100.025	7.108	.008
School type * co-curricular	1328.963	3	442.988	2.862	.036
Error	139280.311	900	154.756		
Total	259683.872	908			
Corrected Total	149050.028	907			
a. R Squared = .066 (Adjusted R Squared = .058)					

The results presented in Table 4.28 show that school type ( $F(3,900) = 7.557, p < 0.001$ ) and participation in co-curricular activities ( $F(1,300) = 7.108, p = 0.008$ ) had a significant main effect on students' academic performance, at  $p < 0.05$  level of significance. Secondly, there was a significant interaction between school type and participation in co-curricular activities ( $F(3,900) = 2.862, p = 0.036$ ) in influencing students' academic performance. As such, the null hypothesis which stated that there is no significant

difference in academic performance between participants and non-participants in co-curricular activities from different types of schools could not be accepted at  $\alpha=0.05$  level of significance. The researcher conducted a post hoc analysis on school type and academic performance and the results based on Tukey HSD are presented in Tables 4.29 and 4.30.

**Table 4 29: Post Hoc Analysis on School Type across Academic Performance**

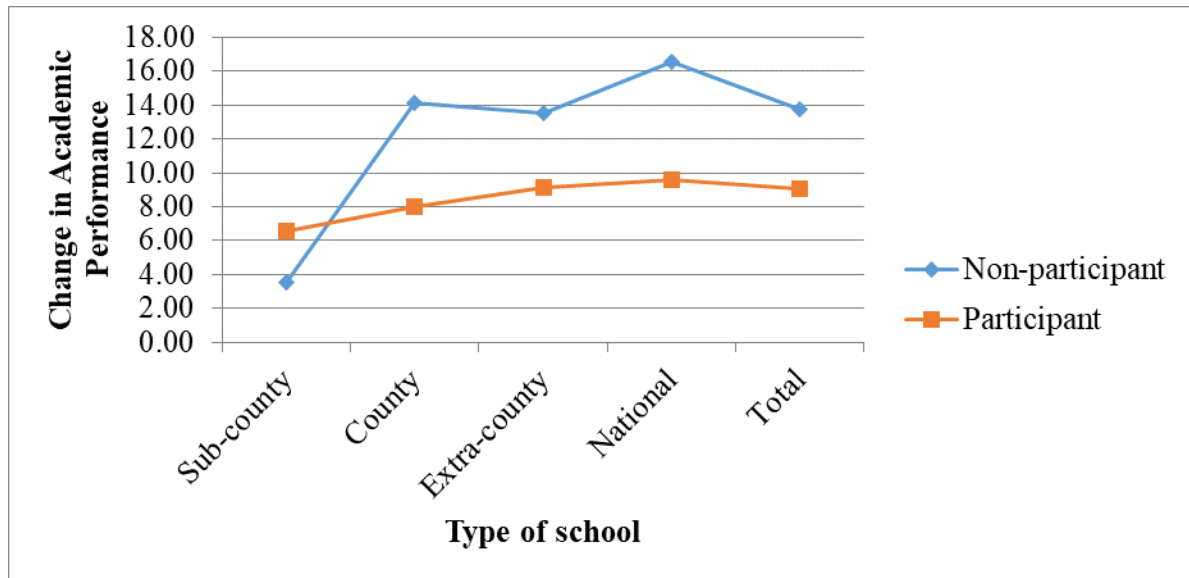
<b>Multiple Comparisons</b>				
<b>Academic Performance</b>				
<b>Tukey HSD</b>				
<b>(I) Type of school</b>	<b>(J) Type of school</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
Sub-county	County	6.7123*	2.53467	.041
	Extra-county	5.7774*	1.66293	.003
	National	7.8496*	1.72158	.000
County	Sub-county	-6.7123*	2.53467	.041
	Extra-county	-.9348	2.06809	.969
	National	1.1373	2.11554	.950
Extra-county	Sub-county	-5.7774*	1.66293	.003
	County	.9348	2.06809	.969
	National	2.0722	.90349	.100
National	Sub-county	-7.8496*	1.72158	.000
	County	-1.1373	2.11554	.950
	Extra-county	-2.0722	.90349	.100
Based on observed means.				
The error term is Mean Square(Error) = 154.756.				
*. The mean difference is significant at the .05 level.				

**Table 4 30: Tukey HSD results on School Type and Academic performance**

Academic Performance			
Tukey HSD			
Type of school	N	Subset	
		1	2
National	305	-12.7751	
County	39	-11.6378	
Extra-county	501	-10.7029	
Sub-county	63		-4.9255
Sig.		.696	1.000

Means for groups in homogeneous subsets are displayed.  
 Based on observed means.  
 The error term is Mean Square (Error) = 154.756.

Results presented in Tables 4.29 and 4.30 shows that National ( $\bar{x} = -12.78$ ), County ( $\bar{x} = -11.64$ ) and Extra-county ( $\bar{x} = -10.70$ ) schools have been placed in the same category while Sub-county ( $\bar{x} = -4.93$ ) was placed in a different category. This implies that Sub-county schools differ significantly with other schools in terms of academic performance.



**Figure 4 6: Interaction Between School Type and Participation in Co-Curricular Activities on Academic Performance**

The results in Figure 4.6 show that the difference in academic in performance was large among non-participant students across all type of schools except sub-county schools. These findings implied that students who participated in co-curricular activities showed consistency in their academic performance as compared to non-participants who showed negative change in their performance.

#### **4.6 Influence of Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance across Students of Different Classes**

The fourth objective of the study was to compare the influence of co-curricular activities on self-concept, deviant behaviour and academic performance across students of different academic levels in secondary schools in Central region, Kenya.

##### **4.6.1 Influence of Co-Curricular Activities on Self-Concept, across Student Academic levels**

Means scores and standard deviations of participation in co-curricular activities, academic level and students' self-concept were computed to determine influence of co-curricular activities on self-concept across different academic levels in secondary schools. The results of this analysis are presented in Table 4.31.

**Table 4 31: Means and Standard Deviations on Participation in Co-Curricular Activities, Academic Level and Student Self-Concept**

<b>Dependent Variable: Self-Concept Index</b>				
<b>Class</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Form 1	Non-participant	46	56.63	23.69
	Participant	90	73.54	13.49
	<b>Total</b>	<b>136</b>	<b>67.81</b>	<b>19.27</b>
Form 2	Non-participant	112	58.15	24.19
	Participant	132	72.72	13.16
	<b>Total</b>	<b>244</b>	<b>66.03</b>	<b>20.34</b>
Form 3	Non-participant	146	51.54	19.48
	Participant	201	74.61	13.89
	<b>Total</b>	<b>347</b>	<b>64.91</b>	<b>20.02</b>
Form 4	Non-participant	94	52.22	25.29
	Participant	138	74.34	13.57
	<b>Total</b>	<b>232</b>	<b>65.38</b>	<b>22.03</b>
Total	Non-participant	398	54.15	22.90
	Participant	561	73.93	13.56
	<b>Total</b>	<b>959</b>	<b>65.72</b>	<b>20.49</b>

Table 4.31 shows mean differences among the participants and non-participants across different academic levels (form one, two, three and four) and their self-concept. The mean and standard deviation for self-concept among participants in Form one was 73.54±13.49, while the mean and standard deviation for self-concept among the non-participants in the same class was 56.63±23.69. The mean and standard deviation for self-concept among Form three participants 74.61±13.89, while mean and standard deviations of their non-participant counterparts in the same form was 51.54±19.48. The combined means and standard deviations for self-concept among the participants at all four academic levels and non-participants at all four academic levels were 73.93±13.56 and 54.15±22.90 respectively. The combined higher mean of participants in all four academic

levels suggests that participants better self-concept than their non-participating counterparts.

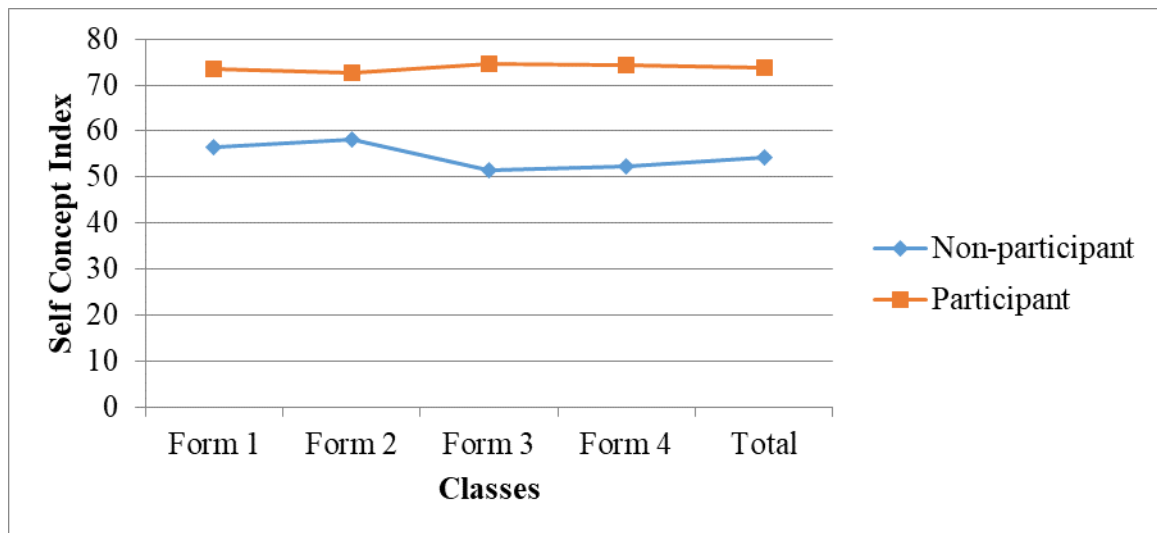
Table 4.32 shows Two Way ANOVA for participation in co-curricular activities, academic level and self-concept

**Table 4 32: Two Way ANOVA for Participation in Co-Curricular Activities, Academic Level and Self-Concept**

Tests of Between-Subjects Effects					
Dependent Variable: Self-Concept Index					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	94819.734 <sup>a</sup>	7	13545.676	41.903	.000
Intercept	3338218.443	1	3338218.443	10326.627	.000
Class level	1044.575	3	348.192	1.077	.358
Co-curricular activities	74349.129	1	74349.129	229.996	.000
Class * co-curricular	3116.177	3	1038.726	3.213	.022
Error	307423.313	951	323.263		
Total	4544104.368	959			
Corrected Total	402243.047	958			
a. R Squared = .236 (Adjusted R Squared = .230)					

As shown in Table 4.32, Analysis of variance tested the influence of academic level and participation in co-curricular activities on students' self-concept. The findings of the analysis showed that class level ( $F(3,951) = 1.077, p = 0.358$ ) did not have a significant main effect on students' self-concept whereas participation in co-curricular activities ( $F(1,951) = 229.996, p < 0.001$ ) had a significant main effect on students' self-concept, at  $p < 0.05$ . However, there was significant interaction between class level and participation in co-curricular activities ( $F(3,951) = 3.213, p = 0.022$ ) in influencing students' self-concept. As such, the null hypothesis, which stated that there is no significant difference

in self-concept between participants and non-participants in co-curricular activities at different academic levels could not be accepted at  $\alpha=0.05$  level of significance. The difference in class levels is not significant ( $F=1.08, p=0.358$ ) and therefore post hoc is not necessary.



**Figure 4 7: Interaction among Participation in Co-Curricular Activities, Academic Levels and Self-Concept**

The results in Figure 4.7 show that the self-concept index was high among participants across all the academic levels compared to non-participants. The findings implied that participation in co-curricular activities has a positive influence on students' self-concept regardless of the class of the student. These results concur with those of the ANOVA, that class level had insignificant effect on the self-concept of students participating in co-curricular activities.

#### 4.6.2 Influence of Co-Curricular Activities on Deviant Behaviour, across Academic Levels

Table 4.33 shows the mean scores and standard deviations on the influence of participation in co-curricular activities, students' class level and their engagement in deviant behaviour.

**Table 4 33: Means and Standard Deviations of Deviance Index among Participants and Non-Participants across Academic Levels**

<b>Dependent Variable: Deviance Index</b>				
<b>Class</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Form 1	Non-participant	46	1.58	.72
	Participant	90	1.13	.16
	<b>Sub Total</b>	<b>136</b>	<b>1.28</b>	<b>.48</b>
Form 2	Non-participant	112	1.61	.65
	Participant	132	1.25	.34
	<b>Sub Total</b>	<b>244</b>	<b>1.42</b>	<b>.54</b>
Form 3	Non-participant	146	2.09	.59
	Participant	202	1.26	.26
	<b>Sub Total</b>	<b>348</b>	<b>1.61</b>	<b>.60</b>
Form 4	Non-participant	94	1.81	.61
	Participant	138	1.25	.28
	<b>Sub Total</b>	<b>232</b>	<b>1.48</b>	<b>.52</b>
Total	Non-participant	398	1.83	.66
	Participant	562	1.23	.28
	<b>Grand Total</b>	<b>960</b>	<b>1.48</b>	<b>.56</b>

As shown in Table 4.33, the overall means and standard deviations for participants and non-participants in co-curricular activities were  $1.23 \pm 0.28$  and  $1.83 \pm 0.66$  respectively. Participants across all academic levels (Form one, Form two, Form three and Form four) scored lower as compared to non-participants on the scale measuring frequency of engagement in deviant behaviour. This means that non-participants in all academic levels

were more likely to engage in deviant behaviour as compared to participants. When comparing the level of engagement among the non-participant across the academic levels of form one, two, three and four, the findings showed that Form three's (2.09 ±0.59) engaged in deviant behaviour frequently, followed by Form four's (1.81±0.61), then Form two's (1.61 ±0.65) and finally Form one's (1.58 ±0.72).

A two way ANOVA was computed to determine whether the differences in the means were significant. The results are presented in Table 4.34.

**Table 4 34: Two Way ANOVA for Deviant Behaviour, Academic Level and Participation among Secondary Students**

Tests of Between-Subjects Effects					
Dependent Variable: Deviance Index					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	102.466 <sup>a</sup>	7	14.638	70.817	.000
Intercept	1816.456	1	1816.456	8787.799	.000
Class level	13.005	3	4.335	20.972	.000
Co-curricular	61.952	1	61.952	299.718	.000
Class * Co-curricular	8.627	3	2.876	13.912	.000
Error	196.780	952	.207		
Total	2404.490	960			
Corrected Total	299.246	959			
a. R Squared = .342 (Adjusted R Squared = .338)					

The findings in Table 4.34 show that class level (F (3,952) =20.972, p<0.001) and participation in co-curricular activities (F (1,952) =299.718, p<0.001) had a significant main effect on students' engagement in deviant behaviour, at p<0.05. Secondly, there was a significant interaction between class level and participation in co-curricular activities (F (3,952) =13.912, p<0.001) in influencing students' engagement in deviant behaviours.

Therefore, the null hypothesis which stated that there is no significant difference in deviant behaviour between participants and non-participants in co-curricular activities across academic levels was not accepted at  $\alpha=0.05$  level of significance. The Tukey HSD post hoc analysis was conducted to determine which academic level differed significantly from the other levels. The results are shown in Tables 4.35 and 4.36.

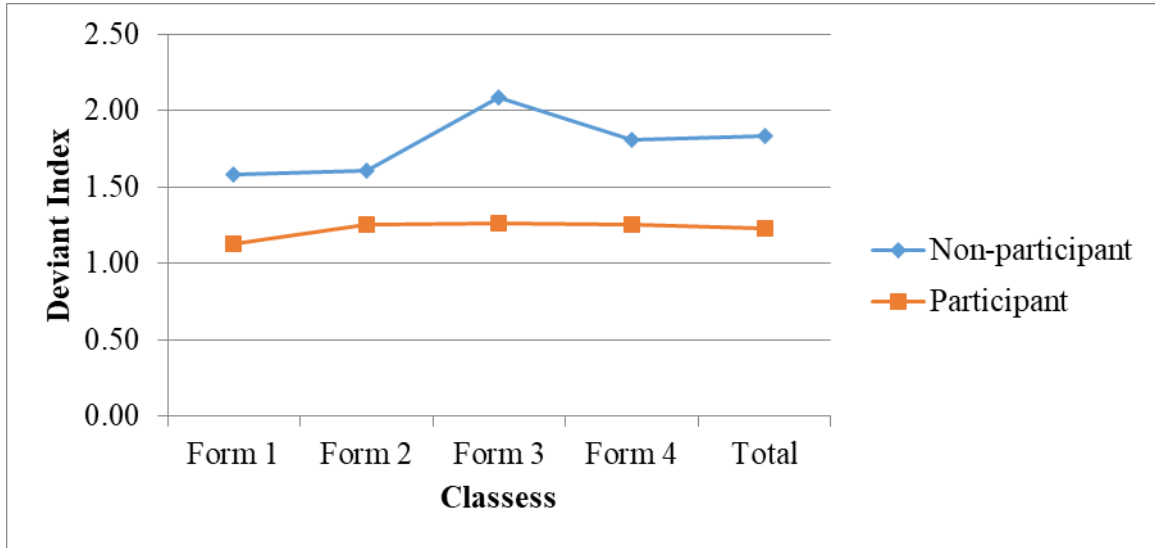
**Table 4 35: Post Hoc Analysis of Deviant Behaviour across Academic levels**

<b>Multiple Comparisons</b>				
<b>Deviance Index Tukey HSD</b>				
<b>(I) Class</b>	<b>(J) Class</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
Form 1	Form 2	-.1321*	.04865	.034
	Form 3	-.3230*	.04598	.000
	Form 4	-.1946*	.04910	.000
Form 2	Form 1	.1321*	.04865	.034
	Form 3	-.1909*	.03796	.000
	Form 4	-.0625	.04169	.439
Form 3	Form 1	.3230*	.04598	.000
	Form 2	.1909*	.03796	.000
	Form 4	.1285*	.03853	.005
Form 4	Form 1	.1946*	.04910	.000
	Form 2	.0625	.04169	.439
	Form 3	-.1285*	.03853	.005
Based on observed means.				
The error term is Mean Square (Error) = .207.				
*. The mean difference is significant at the .05 level.				

**Table 4 36: Tukey HSD of Deviance Behaviour across Academic Levels**

Deviance Index				
Tukey HSD				
Class	N	Subset		
		1	2	3
Form 1	136	1.2832		
Form 2	244		1.4153	
Form 4	232		1.4777	
Form 3	348			1.6062
Sig.		1.000	.485	1.000
Means for groups in homogeneous subsets are displayed. Based on observed means. The error term is Mean Square (Error) = .207.				

As shown in Tables 4.35 and 4.36, Form one ( $\bar{x} = 1.28$ ) was placed in its own category, Form two ( $\bar{x} = 1.42$ ) and Form four ( $\bar{x} = 1.48$ ) were placed in one category whereas Form three ( $\bar{x} = 1.61$ ) was placed in another different category. This reveals that the significant difference is only between Form one and Form three students in terms of their engagement in deviant behaviour. The table further shows that Form three students were more likely to engage in deviant behaviour as compared to Form one students



**Figure 4 8: Interaction among Academic Levels, Participation and Self-Concept**

The results presented in Figure 4.8 further show that deviant behaviour was commonly experienced among non-participants students compared to participants students across all the classes. The results further show that deviant behaviour of students from the same class was different between non-participant and participants. The findings implied that participation in co-curricular activities reduces instances of deviant behaviour among students across all the classes.

**4.6.3 Influence of Co-Curricular Activities on Academic Performance, across Student Academic Level**

The descriptive statistics showing means and standard deviations for participation in co-curricular activities on academic performance across student academic levels are shown in Table 4.37.

**Table 4 37: Means and Standard Deviations for Participation in Co-Curricular Activities, Academic level and Academic Performance**

<b>Dependent Variable: Change in Performance</b>				
<b>Class</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Form 1	Non-participant	44	-9.48	13.29
	Participant	89	-8.65	9.69
	<b>Total</b>	<b>133</b>	<b>-8.92</b>	<b>10.97</b>
Form 2	Non-participant	108	-20.22	13.11
	Participant	131	-12.01	11.20
	<b>Total</b>	<b>239</b>	<b>-15.72</b>	<b>12.75</b>
Form 3	Non-participant	143	-10.10	13.56
	Participant	183	-7.03	13.34
	<b>Total</b>	<b>326</b>	<b>-8.38</b>	<b>13.50</b>
Form 4	Non-participant	92	-13.46	11.17
	Participant	131	-9.00	11.96
	<b>Total</b>	<b>223</b>	<b>-10.84</b>	<b>11.82</b>
Total	Non-participant	387	-13.66	13.53
	Participant	534	-9.01	12.05
	<b>Total</b>	<b>921</b>	<b>-10.96</b>	<b>12.90</b>

Results presented in Table 4.37 show the overall academic performance means and standard deviations for participants and non-participants in co-curricular activities. Specifically, the mean and standard for participants in Form one was  $-8.65 \pm 9.70$  while that of the non-participants was  $-9.48 \pm 13.30$ . The mean and standard deviation for Form four participants was of  $-9.00 \pm 11.96$ , whereas the non-participants had a mean and standard deviation of  $-13.46 \pm 11.17$ . The overall mean and standard deviation for the participants was  $-9.01 \pm 12.05$  while that of the non-participants was  $-13.66 \pm 13.53$ . This shows that although the means obtained by students were negative, participants were performing better in academics than non-participants. It was further discovered from the

results that non-participants in Form two had the highest decline in academic performance compared to non-participants in Form one, three and four.

The two way ANOVA was computed to establish whether the differences in these means were significant among participants and non-participants across the different academic levels. The findings of the ANOVA are presented in Table 4.38

**Table 4 38: Two Way ANOVA on Participation in Co-Curricular Activities, Academic Level and Academic Performance**

<b>Tests of Between-Subjects Effects</b>					
<b>Dependent Variable: Change in Performance</b>					
<b>Source</b>	<b>Type III Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Corrected Model	13982.196 <sup>a</sup>	7	1997.457	13.119	.000
Intercept	98923.842	1	98923.842	649.715	.000
Class level	8472.727	3	2824.242	18.549	.000
Co-curricular	3358.981	1	3358.981	22.061	.000
Class level * co-curricular	1375.566	3	458.522	3.011	.029
Error	139010.917	913	152.257		
Total	263621.088	921			
Corrected Total	152993.114	920			
a. R Squared = .091 (Adjusted R Squared = .084)					

As shown in Table 4.38, Analysis of Variance tested the effects of class level and participation in co-curricular activities on students' change in academic performance. The findings of the analysis showed that class level ( $F(3, 913) = 18.549, p < 0.001$ ) and participation in co-curricular activities ( $F(1, 913) = 22.061, p < 0.001$ ) had significant main effect on students' change in academic performance. Secondly, there was a significant interaction between participation in co-curricular activities and class level ( $F(3, 913) = 3.011, p = 0.029$ ) in influencing academic performance. Based on the findings, the null hypothesis which stated that there is no significant difference in academic performance

between participants and non-participants in co-curricular activities across class/academic levels was rejected at  $\alpha=0.05$  level of significance. The researcher conducted post hoc analysis on academic performance across different academic levels and the results based on Tukey HSD are presented in Tables 4.39 and 4.40.

**Table 4 39: Post Hoc Analysis Test on Academic Performance across Academic Levels**

<b>Multiple comparisons</b>				
<b>Change in Performance</b>				
<b>Tukey HSD</b>				
<b>(I) Class</b>	<b>(J) Class</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
Form 1	Form 2	6.7952*	1.33486	.000
	Form 3	-.5437	1.26958	.974
	Form 4	1.9167	1.35187	.488
Form 2	Form 1	-6.7952*	1.33486	.000
	Form 3	-7.3390*	1.05076	.000
	Form 4	-4.8785*	1.14884	.000
Form 3	Form 1	.5437	1.26958	.974
	Form 2	7.3390*	1.05076	.000
	Form 4	2.4604	1.07229	.100
Form 4	Form 1	-1.9167	1.35187	.488
	Form 2	4.8785*	1.14884	.000
	Form 3	-2.4604	1.07229	.100
Based on observed means.				
The error term is Mean Square(Error) = 152.257.				
*. The mean difference is significant at the .05 level.				

**Table 4 40: Tukey HSD Results on Academic Performance across Academic Levels**

Academic Performance			
Tukey HSD			
Class	N	Subset	
		1	2
Form 2	239	-15.7200	
Form 4	223		-10.8415
Form 1	133		-8.9248
Form 3	326		-8.3811
Sig.		1.000	.177

Means for groups in homogeneous subsets are displayed.  
Based on observed means.  
The error term is Mean Square (Error) = 152.257.

Results presented in Tables 4.39 and 4.40 shows that Form two ( $\bar{x} = -15.72$ ) was placed in its own category while form four ( $\bar{x} = -10.84$ ), form one ( $\bar{x} = -8.92$ ) and form three ( $\bar{x} = -8.38$ ) have been placed in the same category. This implies that form two students differed significantly from students in other classes in terms of their academic performance.



**Figure 4 9: Interaction among Academic Level and Participation in Co-Curricular Activities and Academic Performance**

The results in Figure 4.9 show that in Form 1, the difference in the change in academic performance for non-participants and participants was very small. However, this difference widened for Form 2, 3 and 4 for non-participant and participants. The change in performance for Form 2 was bigger as compared to other classes. On average, negative change in academic performance was large in non-participants compared to participants.

#### **4.7 Influence of Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance across Social Economic Status**

The fifth objective of the study was to compare the influence of participation in co-curricular activities on self-concept, deviant behaviour and academic performance across the social economic status among secondary school students in Central region, Kenya. The two-way Analysis of Variance was conducted to meet this objective; the independent variable of the study was participation/non-participation in co-curricular activities while the dependent variables were self-concept, deviant behaviour and academic performance. The social economic status was based on the parents or guardian's education level and occupation.

Table 4.41 presents father's highest education level as reported by students' participants and non-participants.

**Table 4 41: Father’s Highest Level of Education**

<b>Education Qualification</b>	<b>Participants</b>		<b>Non-participants</b>		<b>Total</b>	
	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>
Primary education	33	5.9	40	10.0	73	7.6
Secondary education	83	14.7	51	12.8	134	13.9
College certificate/diploma	130	23.1	98	24.5	228	23.7
University	245	43.5	171	42.8	416	43.2
No response	72	12.8	40	10.0	112	11.6
<b>Total</b>	<b>563</b>	<b>100.0</b>	<b>400</b>	<b>100.0</b>	<b>963</b>	<b>100.0</b>

As reflected in Table 4.41, 23.1% (130) participants and 98 (24.5%) non-participants reported that their fathers had college education while 43.5 % (245) participants and 42.8 (171) non-participants indicated that their fathers had attained university education. Result in Table 4.41 also showed that 14.7% (83) participants and 12.8% (51) nonparticipants reported that their fathers had attained secondary education with only 5.9% (33) participants and 10.0% (40) non-participants indicating that their fathers had only attained primary education. From the study findings, it emerged that majority of the students reported that their fathers had attained university education. Mother’s highest education as reported by student participants and non-participants is as shown in Table 4.42

**Table 4 42: Mother’s Highest Level of Formal Education**

<b>Education qualification</b>	<b>Participants</b>		<b>Non-participants</b>		<b>Total</b>	
	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>
Primary education	56	9.9	67	16.8	123	12.8
Secondary education	115	20.4	89	22.2	204	21.2
College certificate/diploma	188	33.4	98	24.5	286	29.7
University	176	31.3	100	25.0	276	28.7
No response	28	5.0	46	11.5	74	7.7
<b>Total</b>	<b>563</b>	<b>100.0</b>	<b>400</b>	<b>100.0</b>	<b>963</b>	<b>100.0</b>

Results presented in Table 4.42 show that 9.9% (56) of the participants reported that their mother's had attained primary education, 20.4% (115) reported secondary education, 33.4% (188) college education and 31.3% (176) university education. Among the non-participants, 16.8% (67) reported that their mother's had attained primary education, 22.2% (89) secondary education, 24.5% (98) college and 25.0% (100) university education. This shows that the proportion of students who reported that their mother's had attained college and university qualifications was slightly higher for the participants compared to that of non-participants. Table 4.43 shows fathers, mothers and guardians occupation as reported by student participants and non-participants in co-curricular activities.

**Table 4 43: Fathers, Mothers and Guardians Occupation as Reported by the Students**

Father's Occupation	Participant		Non-participant		Total	
	f	%	f	%	f	%
Professional / managerial	163	34.8	147	43.6	310	38.5
Commercial / self employed	109	23.2	48	14.2	157	19.5
Skilled	180	38.4	105	31.1	285	35.4
Unskilled	17	3.6	37	10.9	54	6.7
	<b>469</b>	<b>100.0</b>	<b>337</b>	<b>100.0</b>	<b>806</b>	<b>100.0</b>
Total Mother's Occupation	Participant		Non-participant		Total	
	f	%	f	%	f	%
Professional / managerial	188	38.1	118	35.2	306	37.0
Commercial / self employed	87	17.6	109	32.5	196	23.7
Skilled	189	38.3	92	27.5	281	33.9
Unskilled	29	5.9	16	4.8	45	5.4
<b>Total</b>	<b>493</b>	<b>100.0</b>	<b>335</b>	<b>100.0</b>	<b>828</b>	<b>100.0</b>
Guardian's Occupation	Participant		Non-participant		Total	
	f	%	f	%	f	%
Professional / managerial	22	43.1	3	18.8	25	37.3
Commercial / self employed	21	41.2	8	50.0	29	43.3
Skilled	3	5.9	1	6.3	4	6.0
Unskilled	5	9.8	4	25.0	9	13.0
<b>Total</b>	<b>51</b>	<b>100.0</b>	<b>16</b>	<b>100.0</b>	<b>67</b>	<b>100.0</b>

Out of 469 participants in co-curricular activities, 34.8% (163) indicated that their fathers were engaged in professional employment, 23.2% (109) indicated commercial jobs, 38.4 (180) cited skilled jobs while 3.6% (17) indicated unskilled jobs. Among the non-participants, 43.6% (147) indicated their father were doing professional job, 14.2% (48)

indicated commercial jobs, 31.1% (105) cited skilled jobs while 10.9% (37) indicated unskilled jobs. This shows that majority of the participants and non-participants cited that their fathers were doing professional and skilled jobs.

Regarding their mothers' occupation, 38.1% (188) of the participants reported that their mothers were doing professional job, 17.6% (87) were engaged in commercial jobs, 38.3% (189) skilled jobs while 5.9% (29) indicated unskilled jobs. Among the non-participants, 35.2% (118) indicated their mother were doing professional jobs, 32.5% (109) indicated commercial jobs, 27.5% (92) cited skilled jobs while 4.8% (16) indicated unskilled jobs. This shows that while most participants indicated that their mothers were doing professional and skilled jobs, most of the non-participants reported they were doing professional and commercial jobs.

Data in Table 4.43 further showed that 43.1% (22) of the participants reported that their guardians were doing professional job, 41.2% (21) indicated commercial jobs, 5.9% (3) cited skilled jobs while 5 (9.8%) indicated unskilled jobs. Among the non-participants, 18.8% (3) indicated their guardians were doing professional job, 50.0% (8) indicated commercial jobs, 6.3% (1) cited skilled jobs, while 25.0% (4) indicated unskilled jobs. This show that while majority of the participants indicated that their guardians were doing professional and commercial jobs, half of the guardians were engaged in commercial jobs.

#### 4.7.1 Influence of Co-Curricular Activities on Self-Concept of Students based on Father's Level of Education

This section presents the results on the influence of participation in co-curricular on students' self-concept based on the father's level of education. Computed means and standard deviations are as presented in Table 4.44.

**Table 4 44: Means and Standard Deviations of Participation in Co-Curricular Activities, Father's Education Level and Students' Self-Concept**

<b>Dependent Variable: Self-Concept Index</b>				
<b>Father's level of education</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Primary education	Non-participant	40	52.06	21.73
	Participant	33	73.48	15.38
	<b>Sub Total</b>	<b>73</b>	<b>61.74</b>	<b>21.82</b>
Secondary education	Non-participant	51	49.57	26.87
	Participant	83	72.95	14.62
	<b>Sub Total</b>	<b>134</b>	<b>64.05</b>	<b>23.09</b>
College certificate/diploma	Non-participant	98	52.81	25.09
	Participant	129	74.50	13.27
	<b>Sub Total</b>	<b>227</b>	<b>65.14</b>	<b>22.04</b>
University	Non-participant	171	54.48	21.03
	Participant	244	73.77	13.02
	<b>Total</b>	<b>415</b>	<b>65.82</b>	<b>19.27</b>
<b>Total</b>	Non-participant	360	53.06	23.11
	Participant	489	73.81	13.50
	<b>Grand Total</b>	<b>849</b>	<b>65.01</b>	<b>20.89</b>

Table 4.44 shows means and standard deviations of self-concept among the participants and nonparticipants across fathers' education levels. The mean for self-concept of participants whose fathers had attained primary education, secondary, college and university were higher when compared to those of non-participants. The overall participant and non-participant means and standard deviations were 73.81±13.50 and

53.06± 23.11 respectively. Thus implying that participants in co-curricular activities had a higher self-concept than non-participants.

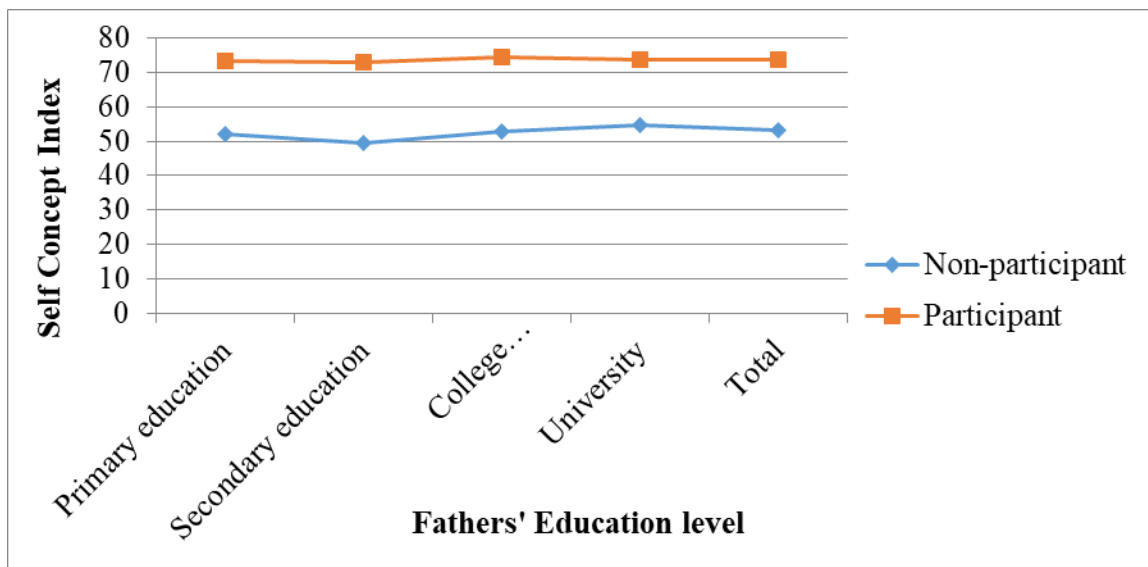
Table 4.45 Results of the two-way ANOVA show of the influence of participation in co-curricular activities on students' self-concept across parental education level.

**Table 4 45: Two Way ANOVA of Influence of Participation in Co-curricular Activities on Self-Concept of Students across Father Education levels.**

<b>Tests of Between-Subjects Effects</b>					
<b>Dependent Variable: Self-Concept Index</b>					
<b>Source</b>	<b>Type III Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Corrected Model	90372.343 <sup>a</sup>	7	12910.335	38.833	.000
Intercept	2208154.167	1	2208154.167	6641.901	.000
Education level	833.065	3	277.688	.835	.475
Co-curricular	64062.361	1	64062.361	192.693	.000
Education level* cocurricular	486.650	3	162.217	.488	.691
Error	279597.308	841	332.458		
Total	3957932.591	849			
Corrected Total	369969.651	848			
a. R Squared = .241 (Adjusted R Squared = .229)					

As shown in Table 4.45, Two Way ANOVA tested the influence of participation in co-curricular activities on the self-concept of secondary school students across father's education level (primary education, secondary, college and university) within the variable of socio-economic status. The analysis showed that father's education level (F (3,841) =0.835, p=0.475) did not have a significant main effect on students self-concept, whereas, participation in co-curricular activities (F (3,841) =192.693, p<0.001) had a significant main effect on students' self-concept. Secondly, there was no significant

interaction between participation in co-curricular activities and father's education level ( $F(3,841) = 0.488, p = 0.691$ ) in influencing students' self-concept. Therefore, the null hypothesis that there is no significant difference in self-concept between participants and non-participants in co-curricular activities based on their parental education level was accepted. The difference in parental education level is not significant ( $F = 0.835, p = 0.475$ ) and therefore post hoc is not necessary.



**Figure 4 10: Interaction Between Father's level of Education and Participation in Co-Curricular Activities on Self-Concept of Students**

The results in Figure 4.11 show that participants had high self-concept as compared to non-participants. The results also show that there was a difference in self-concept between participants and non-participants whose fathers had same level of education. The findings implied that deviation in self-concept could be attributed to participation in co-curricular activities in their respectively schools.

#### 4.7.2 Influence of Secondary School Student’s Participation in Co-Curricular Activities on Deviant Behaviour across Father’s Education level

This section presents the results on the influence of participation in co-curricular activities on students ‘deviant behaviour across father’s level of education.

**Table 4 46: Means and Standard Deviations of Participation in Co-Curricular Activities, Father’s Education level and Students’ Deviant Behaviour**

<b>Dependent Variable: Deviance Index</b>				
<b>Father’s level of education</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Primary education	Non-participant	40	2.18	0.80
	Participant	33	1.21	0.22
	<b>Sub Total</b>	<b>73</b>	<b>1.74</b>	<b>0.78</b>
Secondary education	Non-participant	51	2.03	0.75
	Participant	83	1.22	0.24
	<b>Sub Total</b>	<b>134</b>	<b>1.53</b>	<b>0.63</b>
College certificate/diploma	Non-participant	98	1.79	0.60
	Participant	129	1.21	0.21
	<b>Sub Total</b>	<b>227</b>	<b>1.46</b>	<b>0.56</b>
University	Non-participant	171	1.80	0.59
	Participant	245	1.26	0.31
	<b>Sub Total</b>	<b>416</b>	<b>1.48</b>	<b>0.52</b>
Total	Non-participant	360	1.87	0.66
	Participant	490	1.24	0.27
	<b>Grand Total</b>	<b>850</b>	<b>1.51</b>	<b>0.57</b>

Table 4.46 shows that based on father’s education level within the realm of SES, the means and standard deviations for deviant behaviour among the non-participants were higher than those of the participants. The overall, the mean and standard deviation of the non-participants was  $1.86 \pm 0.66$  while those of the participants was  $1.24 \pm 0.27$ . This means that non-participants, whose fathers had attained both, lower and higher education levels were more likely to engage in deviant behaviour as compared to participants with

fathers from similar education levels. It further emerged that non-participants, whose father's education did not go higher than primary and secondary school levels, were more likely to engage in deviant behaviour compared to those whose fathers had attained higher education to college and university levels. Table 4.47 shows results of the two-way ANOVA for secondary school student' participation in co-curricular activities, father's education level and deviant behaviour.

**Table 4 47: Results of ANOVA for the Influence of Participation in Co-Curricular Activities on Deviant Behaviour Across Fathers' Education Levels**

Tests of Between-Subjects Effects					
Dependent Variable: Deviance Index					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	90.469 <sup>a</sup>	7	12.924	59.201	.000
Intercept	1403.899	1	1403.899	6430.754	.000
Education level	2.861	3	.954	4.369	.005
Co-curricular	72.971	1	72.971	334.255	.000
Education level* co-curricular	3.987	3	1.329	6.087	.000
Error	183.817	842	.218		
Total	2199.835	850			
Corrected Total	274.287	849			

a. R Squared = .325 (Adjusted R Squared = .314)

As shown in Table 4.47, the two-way ANOVA established the influence of participation in co-curricular activities on deviant behaviour across the SES based on fathers' education levels. The findings showed that father's education level ( $F(3,842) = 4.369, p=0.005$ ) and participation in co-curricular activities ( $F(1,842) = 334.255, p<0.0001$ ) had significant main effect on students' engagement in deviant behaviour. Secondly, there was a significant interaction between participation in co-curricular

activities and father education ( $F(3,382) = 6.087, p < 0.0001$ ) in influencing students' level of engagement in deviant behaviour. As such, the null hypothesis which stated that there is no significant difference in deviant behaviour between participants and non-participants in co-curricular activities based on their father education level was not accepted.

The researcher conducted post hoc analysis on father's level of education and deviant behaviour variables with an aim of identifying which group differed significantly from each other and the results based on Tukey HSD are presented in Tables 4.48 and 4.49.

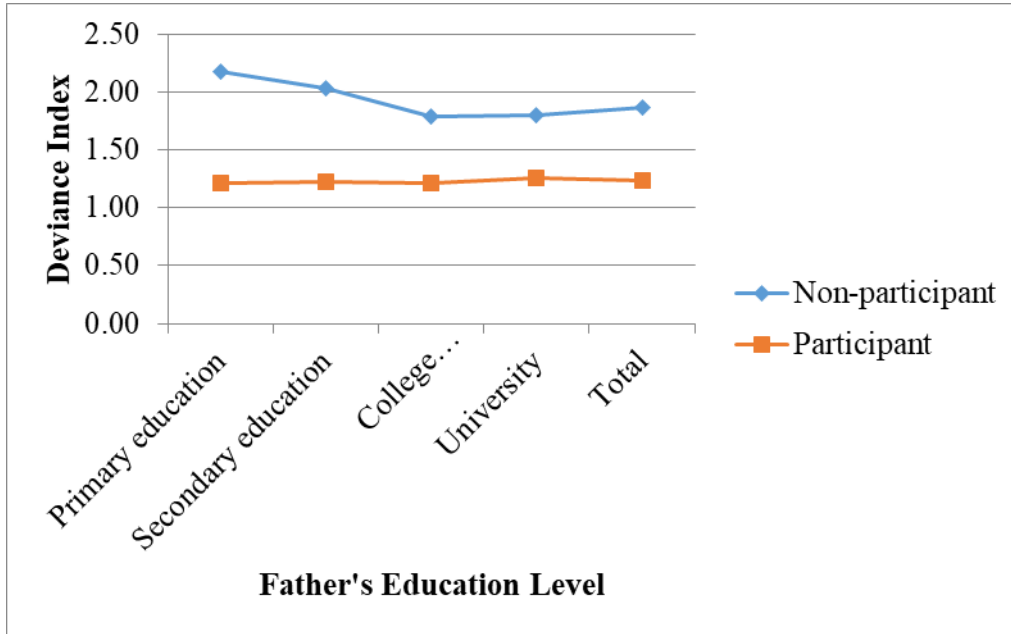
**Table 4 48: Post Hoc Analysis Results on Students' Deviant Behaviour across Father's Education Level**

<b>Multiple Comparisons</b>				
<b>Deviance Index Tukey HSD</b>				
<b>(I) Father's highest level of education</b>	<b>(J) Father's highest level of education</b>	<b>Mean Difference (I- J)</b>	<b>Std. Error</b>	<b>Sig.</b>
Primary education	Secondary education	.2135*	.06797	.009
	College certificate/diploma	.2756*	.06287	.000
	University	.2611*	.05929	.000
Secondary education	Primary education	-.2135*	.06797	.009
	College certificate/diploma	.0621	.05090	.614
	University	.0476	.04641	.735
College certificate/diploma	Primary education	-.2756*	.06287	.000
	Secondary education	-.0621	.05090	.614
	University	-.0146	.03856	.982
University	Primary education	-.2611*	.05929	.000
	Secondary education	-.0476	.04641	.735
	College certificate/diploma	.0146	.03856	.982
Based on observed means. The error term is Mean Square(Error) = .218.				
*. The mean difference is significant at the .05 level.				

**Table 4 49: Tukey HSD results Student Deviant Behaviour across Father's Education Level**

<b>Deviance Index</b>			
Tukey HSD			
Father's highest level of education	N	Subset	
		1	2
College certificate/diploma	227	1.4645	
University	416	1.4791	
Secondary education	134	1.5266	
Primary education	73		1.7401
Sig.		.675	1.000
Means for groups in homogeneous subsets are displayed. Based on observed means. The error term is Mean Square (Error) = .218.			

As shown in Tables 4.48 and 4.49above, College certificate/diploma ( $\bar{x} = 1.46$ ), University ( $\bar{x} = 1.48$ ) and secondary education ( $\bar{x} = -10.70$ ) have been placed in the same category while primary education ( $\bar{x} = 1.74$ ) was placed in a different category on its own. This implies that, with regard to deviant behaviour, students, whose fathers had attained education just up to primary level, differed significantly from students whose father's had attained secondary, college or university levels of education.



**Figure 4 11: Interaction Between Father’s Level of Education, Participation in Co-Curricular Activities and Student Deviant Behaviour**

The results presented in Figure 4.11 show that, across all levels of fathers’ education, students who participated in co-curricular activities showed less deviant behaviour as compared to non-participants. The findings imply that participation in co-curricular activities reduced deviant behaviour among students in Central Kenya, regardless of the father level of education. The results also show that both, non-participants and participants, whose father had same level of education, showed completely different deviant behaviour. Thus, further highlighting the importance of co-curricular activities in shaping student behaviour.

#### **4.7.3 Influence of Co-Curricular Activities on Academic Performance across Father’s Education Level**

This section presents results of the influence of participation in co-curricular on academic performance across father’s education level.

**Table 4 50: Results of Influence of Participation in Co-Curricular Activities on Academic Performance across Father’s Education Level**

<b>Dependent Variable: Academic Performance</b>				
<b>Father’s highest level of education</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Primary education	Non-participant	36	-5.83	14.15
	Participant	32	-10.02	14.24
	<b>Total</b>	<b>68</b>	<b>-7.80</b>	<b>14.24</b>
Secondary education	Non-participant	50	-15.04	13.64
	Participant	81	-9.20	11.34
	<b>Total</b>	<b>131</b>	<b>-11.43</b>	<b>12.54</b>
College certificate/diploma	Non-participant	94	-17.93	10.86
	Participant	124	-8.97	12.30
	<b>Total</b>	<b>218</b>	<b>-12.83</b>	<b>12.49</b>
University	Non-participant	167	-13.59	13.66
	Participant	229	-8.63	12.27
	<b>Total</b>	<b>396</b>	<b>-10.72</b>	<b>13.09</b>
Total	Non-participant	347	-14.17	13.39
	Participant	466	-8.91	12.23
	<b>Total</b>	<b>813</b>	<b>-11.16</b>	<b>12.99</b>

Table 4.50 shows means and standard deviations in academic performance of participants and non-participants in co-curricular activities from across fathers’ education levels. . The means and standard deviations obtained by both participants (-8.91±12.23) and non-participants(-14.17±13.39) were negative, meaning there was a decline in academic performance after comparing the students’ performance in KCPE and end of term examination, regardless of their fathers’ education level. Results in Table 4.50 further show that participants in co-curricular activities from background where fathers had attained college and university education level had higher means in academics compared to non- participant from the same background. However, non-participants in co-curricular activities from backgrounds in which fathers had attained just primary and

secondary education showed higher means than participants, implying that non-participants from such backgrounds had better achievement in academic performance than the participants with similar backgrounds. Table 4.51 below shows two-way ANOVA on the influence of participation in co-curricular activities, father’s education level and students’ change in performance.

**Table 4 51: Results of Influence of Participation in Co-Curricular Activities on Academic Performance across Father’s Education Level**

Tests of Between-Subjects Effects					
Dependent Variable: Academic Performance					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9476.309 <sup>a</sup>	7	1353.758	8.541	.000
Intercept	66072.285	1	66072.285	416.880	.000
Education level	1771.555	3	590.518	3.726	.011
Co-curricular	2012.452	1	2012.452	12.697	.000
Education level* cocurricular	2258.736	3	752.912	4.750	.003
Error	127586.377	805	158.492		
Total	238259.203	813			
Corrected Total	137062.685	812			
a. R Squared = .069 (Adjusted R Squared = .061)					

The two-way ANOVA presented in Table 4.51 tested the interactive influence among participation in co-curricular activities, fathers’ education level and academic performance among secondary school students. The findings are that father’s education level ( $F(3,805) = 3.726, p = 0.011$ ) and participation in co-curricular activities ( $F(1,805) = 12.697, p < 0.001$ ) had significant main effect on students’ change in academic performance. Secondly, there was a significant interaction between participation in co-

curricular activities and fathers education level ( $F(3,805) = 4.750, p = 0.003$ ) in influencing change in academic performance. Therefore, the null hypothesis which stated that there is no significant difference in academic performance between participants and non-participants in co-curricular activities based on their fathers education level was not accepted at  $\alpha = 0.05$  level of significance.

The researcher further decided to carry out a post hoc analysis on father's education variable and the results based on Turkey HSD are shown in Tables 4.52 and 4.53.

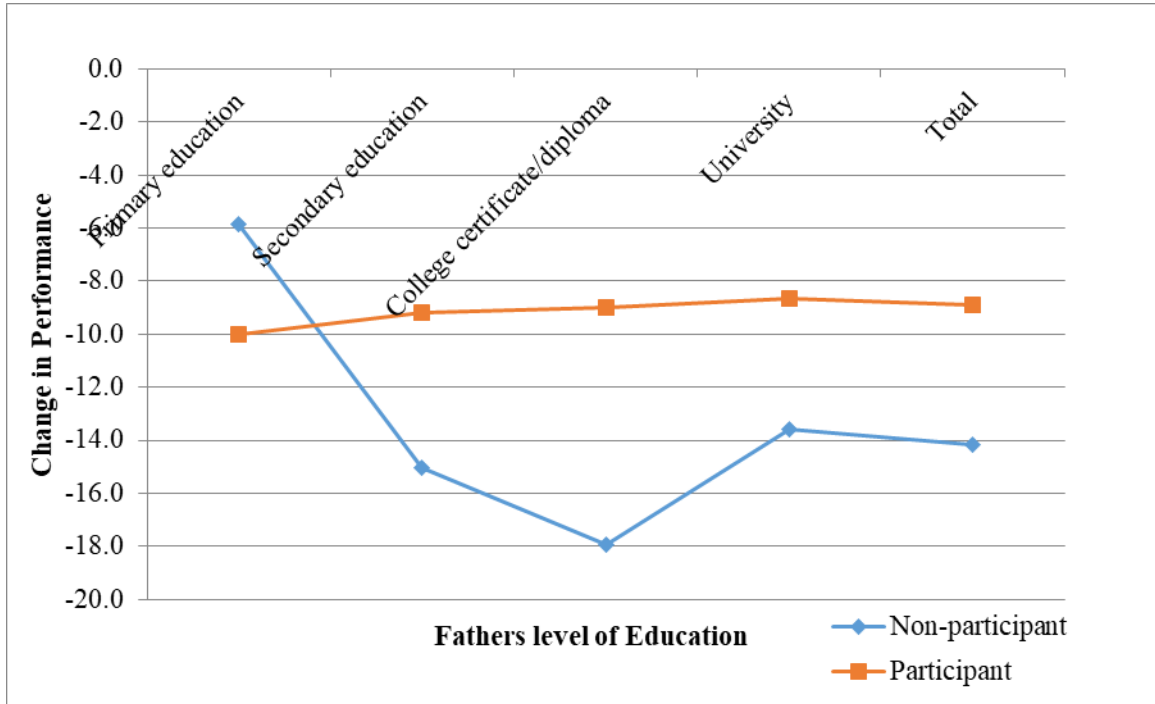
**Table 4 52: Post Hoc Analysis Results on Academic Performance across Father's Education Level**

<b>Multiple comparisons</b>				
<b>Academic performance</b>				
<b>Tukey HSD</b>				
<b>(I) Father's highest level of education</b>	<b>(J) Father's highest level of education</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
Primary education	Secondary education	3.6243	1.88166	.218
	College certificate/diploma	5.0293*	1.74866	.021
	University	2.9178	1.65257	.291
Secondary education	Primary education	-3.6243	1.88166	.218
	College certificate/diploma	1.4051	1.39172	.744
	University	-.7065	1.26890	.945
College certificate/diploma	Primary education	-5.0293*	1.74866	.021
	Secondary education	-1.4051	1.39172	.744
	University	-2.1116	1.06173	.193
University	Primary education	-2.9178	1.65257	.291
	Secondary education	.7065	1.26890	.945
	College certificate/diploma	2.1116	1.06173	.193
Based on observed means.				
The error term is Mean Square (Error) = 158.492.				
*. The mean difference is significant at the .05 level.				

**Table 4 53: Results of the Tukey HSD for Academic Performance across Fathers' Education Levels**

Academic Performance			
Tukey HSD			
Father's highest level of education	N	Subset	
		1	2
College certificate/diploma	218	-12.8323	
Secondary education	131	-11.4272	-11.4272
University	396	-10.7207	-10.7207
Primary education	68		-7.8030
Sig.		.511	.083
Means for groups in homogeneous subsets are displayed Based on observed means. The error term is Mean Square (Error) = 158.492.		d.	

From Tables 4.52 and 4.53, College certificate/diploma ( $\bar{x} = -12.83$ ), secondary education ( $\bar{x} = -11.43$ ) and university ( $\bar{x} = -10.72$ ) have been placed in the same category while primary education ( $\bar{x} = 68.0$ ) has been placed together with university and secondary education. This implies that the significant difference is only between students whose fathers had attained college certificate/diploma and those whose fathers had attained primary education with students whose father's had attained College education having higher decline in academic performance.



**Figure 4 12: Interaction between Father’s Level of Education and Participation in Co-Curricular Activities on Academic Performance of Students**

The results in Figure 4.12 show that academic performance was low among participants as compared to non-participants from families where fathers had secondary, college and university education. Academic performance among non-participants was only low in students whose father had primary level of education. On average, the results show that participation in co-curricular activities reduced academic performance among students.

#### **4.7.4 Influence of Co-Curricular Activities on Self-Concept of Students based on Father’s Occupation**

This section presents the results on the influence of co-curricular activities participation on self-concept of students based on father’s occupation.

**Table 4 54: Means and Standard Deviations on Participation in Co-Curricular Activities, Self-Concept and Father’s Occupation**

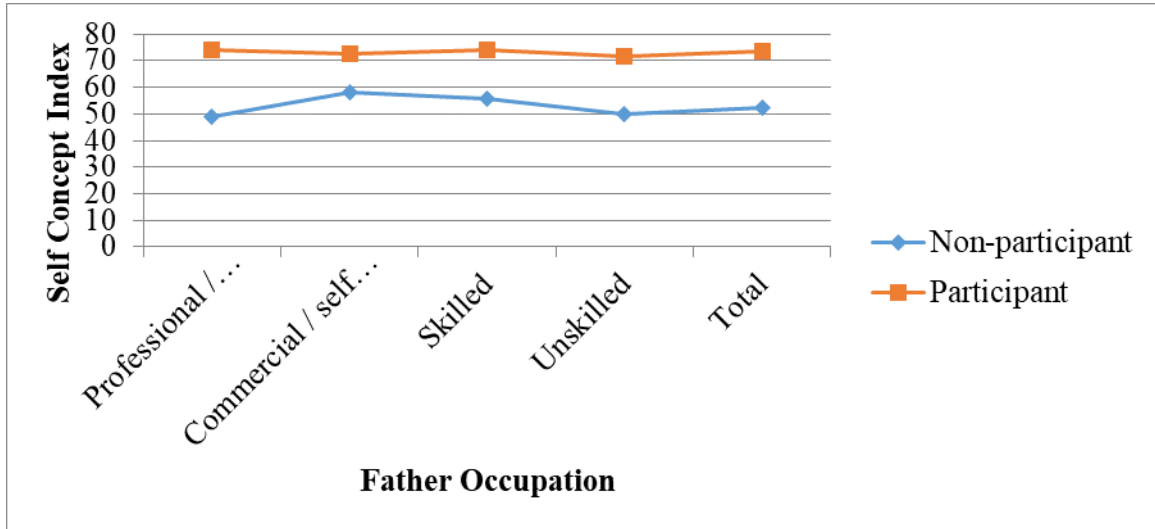
<b>Dependent Variable: Self-Concept Index</b>				
<b>Father’s occupation</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Professional / managerial	Non-participant	147	49.03	23.01
	Participant	163	74.32	12.25
	<b>Sub Total</b>	<b>310</b>	<b>62.33</b>	<b>22.11</b>
Commercial / self employed	Non-participant	48	58.05	20.74
	Participant	108	72.80	15.34
	<b>Sub Total</b>	<b>156</b>	<b>68.26</b>	<b>18.43</b>
Skilled	Non-participant	105	55.49	23.08
	Participant	180	74.18	12.82
	<b>Sub Total</b>	<b>285</b>	<b>67.30</b>	<b>19.50</b>
Unskilled	Non-participant	36	50.14	27.09
	Participant	17	71.67	16.44
	<b>Sub Total</b>	<b>53</b>	<b>57.04</b>	<b>26.08</b>
Total	Non-participant	336	52.46	23.37
	Participant	468	73.82	13.37
	<b>Grand Total</b>	<b>804</b>	<b>64.90</b>	<b>21.05</b>

Table 4.54 shows the means and standard deviations of the participants and non-participants in co-curricular activities across father’s occupation. The overall mean score and standard deviation of the participants was 73.82 ±13.37 while that of the non-participants was 52.46 ±23.37. Secondly, across all father occupations, participants in co-curricular activities had higher mean scores on self-concept compared to non-participants, meaning that participants had better self-concept. The two-way ANOVA was conducted to establish whether the differences in the means were significant. The results are presented in Table 4.55.

**Table 4 55: Two-Way ANOVA for the Influence of Participation in Co-Curricular Activities on Self-Concept across Father Occupations**

<b>Tests of Between-Subjects Effects</b>					
<b>Dependent Variable: Self - concept Index</b>					
<b>Source</b>	<b>Type III Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Corrected Model	93908.112 <sup>a</sup>	7	13415.445	40.781	.000
Intercept	1767047.108	1	1767047.108	5371.509	.000
Occupation	2306.134	3	768.711	2.337	.072
Co-curricular	44513.332	1	44513.332	135.313	.000
Occupation * cocurricular	3072.967	3	1024.322	3.114	.026
Error	261857.437	796	328.967		
Total	3741379.107	804			
Corrected Total	355765.549	803			
a. R Squared = .264 (Adjusted R Squared = .257)					

As shown in Table 4.55, the two-way ANOVA tested the interactive influences among participation in co-curricular activities, self-concept and father occupation. of The findings showed that father’s occupation ( $F(3,796) = 2.337, p = 0.072$ ) had no significant main effect on students’ self-concept, whereas, participation in co-curricular activities ( $F(1,796) = 135.313, p < 0.001$ ) had significant main effect on students’ self-concept. Results further revealed that there was significant interaction between participation in co-curricular activities and father’s occupation ( $F(3,796) = 3.114, p = 0.026$ ) in influencing students’ self-concept level. The difference in occupation is not significant ( $F = 2.337, p = 0.072$ ) and, therefore, post hoc was not necessary.



**Figure 4 13: Interaction Between Participation in Co-Curricular Activities, Self-Concept and Father Occupation**

The results show that students who participated in co-curricular activities had high self-concept as compared to non-participants, regardless of the father's occupation. These findings confirmed that participation in co-curricular activities improved self-concept of all the students across various social economic backgrounds.

#### 4.7.5 Influence of Co-Curricular Activities on Deviant Behaviour of Students Across Father Occupation

This section presents results on the influence of participation in co-curricular activities on deviant behaviour of students across father's occupations.

**Table 4 56: Means and Standard Deviations for Participation in Co-Curricular Activities, Father's Occupation and Students' Deviant Behaviour**

<b>Dependent Variable: Deviance Index</b>				
<b>Father's occupation</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Professional / managerial	Non-participant	147	1.96	.58
	Participant	163	1.26	.29
	<b>Sub Total</b>	<b>310</b>	<b>1.59</b>	<b>.57</b>
Commercial / self employed	Non-participant	48	1.70	.63
	Participant	108	1.24	.26
	<b>Sub Total</b>	<b>156</b>	<b>1.38</b>	<b>.46</b>
Skilled	Non-participant	105	1.84	.72
	Participant	180	1.21	.27
	<b>Sub Total</b>	<b>285</b>	<b>1.44</b>	<b>.57</b>
Unskilled	Non-participant	36	2.06	.79
	Participant	17	1.32	.30
	<b>Sub Total</b>	<b>53</b>	<b>1.82</b>	<b>.76</b>
Total	Non-participant	336	1.90	.66
	Participant	468	1.24	.28
	<b>Grand Total</b>	<b>804</b>	<b>1.51</b>	<b>.58</b>

Data presented in Table 4.56 shows the means and standard deviations of the participants and non-participants in co-curricular activities, deviant behaviour across father occupations. Specifically, the means and standard deviations of participants whose fathers were involved in professional or managerial occupations were  $1.26 \pm 0.29$  whereas non-participants had a mean score and standard deviation of  $1.96 \pm 0.58$ . Participants whose fathers did unskilled jobs had a mean and standard deviation of  $1.32 \pm 0.30$ , while

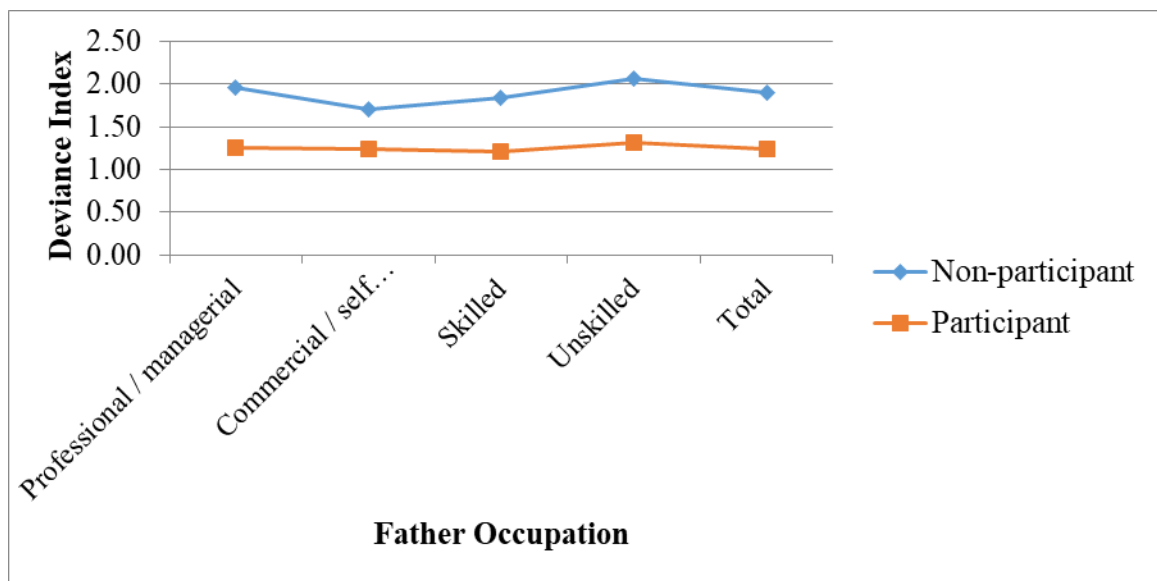
their non-participating counterparts showed a mean and standard deviation of  $2.06 \pm 0.79$ . Thus, reflecting that non-participants from the group of fathers in unskilled jobs had higher level of deviant behaviour compared to the participants. This shows that non-participants had higher mean scores on deviant behaviour compared to participants in co-curricular activities.

Considering father's occupation, the findings showed that, non-participants from backgrounds where fathers were engaged in unskilled jobs were more likely to engage in deviant behaviour compared to those from backgrounds in which fathers were doing professional, skilled and commercial jobs. Table 4.57 depicts the two-way ANOVA for influence of participation in co-curricular activities on students' deviant behaviour across fathers' occupation.

**Table 4 57: Two Way ANOVA for Interaction among Participation in Co-Curricular Activities, Father's Occupation and Students' Deviant Behaviour**

Tests of Between-Subjects Effects					
Dependent Variable :Deviance Index					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	88.850 <sup>a</sup>	7	12.693	56.160	.000
Intercept	1096.578	1	1096.578	4851.807	.000
Occupation	2.962	3	.987	4.369	.005
Co-curricular	44.332	1	44.332	196.148	.000
Occupation * cocurricular	1.310	3	.437	1.933	.123
Error	179.907	796	.226		
Total	2110.422	804			
Corrected Total	268.758	803			
a. R Squared = .331 (Adjusted R Squared = .325)					

As reflected in Table 4.57, the two-way ANOVA allowed the examination of the influence of father's occupation and participation in co-curricular activities on students' deviant behaviour. The findings showed that father's occupation ( $F(3,796) = 4.369, p = 0.005$ ) and participation in co-curricular activities ( $F(1,796) = 196.148, p < 0.001$ ) had significant main effect on students' deviant behaviour. However, the findings from the table further showed that there was a no significant interaction between participation in co-curricular activities and father's occupation ( $F(3,796) = 1.933, p = 0.123$ ) in influencing students' deviant behaviour.



**Figure 4 14: Interaction among Father Occupation, Participation in Co-Curricular Activities and Deviant Behaviour**

The results in Figure 4.14 show that non-participants exhibited more deviant behaviour than students who participated in co-curricular activities across various father occupations. The finding indicates that co-curricular activities reduced deviant behaviour among students whose fathers had varying occupation.

#### 4.7.6 Influence of Co-Curricular Activities on Academic Performance across their Father's Occupation

This section presents the results for the influence of participation in co-curricular activities on academic performance across father occupations. Table 4.58 shows means and standard deviations of participation in co-curricular activities, academic performance and father's occupation.

**Table 4 58: Means and Standard Deviations for Participation in Co-Curricular Activities, Academic Performance and Father's Occupation**

<b>Dependent Variable: Academic Performance</b>				
<b>Father's occupation</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Professional / managerial	Non-participant	143	-16.39	12.60
	Participant	155	-8.01	12.67
	<b>Sub Total</b>	<b>298</b>	<b>-12.03</b>	<b>13.29</b>
Commercial / self employed	Non-participant	46	-14.80	15.03
	Participant	105	-8.57	11.06
	<b>Sub Total</b>	<b>151</b>	<b>-10.47</b>	<b>12.68</b>
Skilled	Non-participant	101	-10.88	13.93
	Participant	173	-10.31	12.70
	<b>Sub Total</b>	<b>274</b>	<b>-10.52</b>	<b>13.14</b>
Unskilled	Non-participant	35	-13.20	13.37
	Participant	15	-9.11	12.27
	<b>Sub Total</b>	<b>50</b>	<b>-11.98</b>	<b>13.06</b>
Total	Non-participant	325	-14.11	13.61
	Participant	448	-9.06	12.31
	<b>Grand Total</b>	<b>773</b>	<b>-11.18</b>	<b>13.10</b>

Results presented in Table 4.58 depict the means and standard deviations of participants and non-participants in co-curricular activities and academic performance across father occupations. The overall mean and standard deviation of participants was  $-9.06 \pm 12.31$

and for non-participants mean and standard deviation was  $-14.10 \pm 13.61$ . The means for both, participants and nonparticipants across father occupations were negative after comparing their performance in KCPE and end of term examination in the secondary school. However, when comparing the two groups, participants in co-curricular activities had better mean in academic performance than non-participants. It further emerged that those participants whose fathers were in professional jobs, performed better compared to those whose fathers were commercial, skilled and unskilled jobs. A two-way ANOVA was conducted to determine whether differences in the means were significant. The results are presented in Table 4.59.

**Table 4 59: Two-Way ANOVA for Participation in Co-Curricular Activities, Academic Performance and Father Occupations**

Tests of Between-Subjects Effects					
Dependent Variable: Academic Performance					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7102.910 <sup>a</sup>	7	1014.701	6.187	.000
Intercept	53519.441	1	53519.441	326.335	.000
Occupation	364.795	3	121.598	.741	.528
Co-curricular	2386.245	1	2386.245	14.550	.000
Occupation * cocurricular	2157.216	3	719.072	4.385	.005
Error	125461.196	765	164.002		
Total	229267.177	773			
Corrected Total	132564.105	772			
a. R Squared = .054 (Adjusted R Squared = .045)					

The findings presented in Table 4.59 show that whereas father's occupation ( $F(3,765) = 0.741, p=0.528$ ) had no significant main effect on students' academic performance, participation in co-curricular activities ( $F(1,765) = 14.550, p < 0.001$ ) had a significant main effect on students' academic performance, at  $p < 0.05$ . The study found that there

was a significant interaction between father occupation and participation in co-curricular activities ( $F(3,765) = 4.385, p = 0.005$ ) in influencing students' academic performance. The difference in father's occupation is not significant ( $F = 0.741, p = 0.528$ ) and therefore post hoc is not necessary.

#### 4.7.7 Influence of Co-Curricular Activities on Self-Concept of Students Based on Mother Education Level

In this section, the researcher presents analysis of the influence of participation in co-curricular activities on students' self-concept across mother education levels.

**Table 4 60: Means and Standard Deviations on Participation in Co-Curricular Activities, Mother Education Levels and Student Self-Concept**

<b>Dependent Variable: Self-Concept Index</b>				
<b>Mother's highest level of education</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Primary education	Non-participant	67	51.25	23.04
	Participant	56	72.77	14.48
	<b>Sub Total</b>	<b>123</b>	<b>61.05</b>	<b>22.30</b>
Secondary education	Non-participant	89	52.89	24.41
	Participant	114	73.58	14.14
	<b>Sub Total</b>	<b>203</b>	<b>64.51</b>	<b>21.85</b>
College certificate/diploma	Non-participant	98	53.17	24.71
	Participant	188	75.09	12.94
	<b>Sub Total</b>	<b>286</b>	<b>67.58</b>	<b>20.64</b>
University	Non-participant	99	56.99	22.06
	Participant	175	73.70	13.18
	<b>Sub Total</b>	<b>274</b>	<b>67.66</b>	<b>18.71</b>
Total	Non-participant	353	53.81	23.59
	Participant	533	74.07	13.43
	<b>Grand Total</b>	<b>886</b>	<b>66.00</b>	<b>20.69</b>

Table 4.60 shows the means and standard deviations of the participants and non-participants in co-curricular activities and self-concept across mother education levels. Participants, whose mothers had attained primary education level had a mean and standard deviation of  $72.77 \pm 14.48$ ; and the non-participants had  $51.25 \pm 23.04$ . Secondly, the results show that across all mother education levels, participants in co-curricular activities had higher self-concept than the non-participants. Table 4.61 shows the two-way ANOVA for the influence of participation in co-curricular activities on students' self-concept across mother's education level. Table 4.61 shows the two-way ANOVA for the influence of participation in co-curricular activities on students' self-concept across mother's education level.

**Table 4 61: Two Way ANOVA on the Influence of Participation in Co-Curricular Activities on Students' Self-Concept across Mother's Education Level**

Tests of Between-Subjects Effects					
Dependent Variable: Self-Concept Index					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	89015.020 <sup>a</sup>	7	12716.431	38.499	.000
Intercept	3085065.057	1	3085065.057	9340.024	.000
Education level	1059.850	3	353.283	1.070	.361
Co-curricular	77640.488	1	77640.488	235.056	.000
Education level * co-curricular	1018.016	3	339.339	1.027	.380
Error	290008.592	878	330.306		
Total	4237885.654	886			
Corrected Total	379023.612	885			
a. R Squared = .235 (Adjusted R Squared = .229)					

As shown in Table 4.61, the two way ANOVA analysed the influence of mother's education level and participation in co-curricular activities on students' self-concept. .The

findings depict that mother's education level ( $F(3,878) = 1.070, p = 0.361$ ) did not have a significant main effect on students self-concept whereas participation in co-curricular activities ( $F(1,878) = 235.056, p < 0.001$ ) had a significant main effect on students' self-concept. Secondly, there was no significant interaction between participation in co-curricular activities and mother's education level ( $F(3,878) = 1.027, p = 0.380$ ) in influencing students' self-concept level. Therefore, the null hypothesis that there is no significant difference in self-concept between participants and non-participants in co-curricular activities based on their mother's education level was accepted. The difference in mother's education level is not significant ( $F = 1.070, p = 0.361$ ) and therefore post hoc is not necessary.

#### **4.7.8 Influence of Participation in Co-Curricular Activities on Students' Deviant Behaviour across Mother's Education Level**

This section presents the results on the influence of participation in co-curricular activities on students' deviant behaviour across mother's level of education. Table 4.62 presents means and standard deviations of participation in co-curricular activities, students' deviant behaviour across mother's education level

**Table 4 62: Means and Standard Deviations of Participation in Co-Curricular Activities and Students' Deviant Behaviour across Mother's Education Level**

<b>Dependent Variable: Deviance behaviour Index</b>				
<b>Mother's highest level of education</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>
Primary education	Non-participant	67	2.06	.77
	Participant	56	1.24	.27
	<b>Sub Total</b>	<b>123</b>	<b>1.69</b>	<b>.72</b>
Secondary education	Non-participant	89	1.83	.65
	Participant	114	1.18	.18
	<b>Sub Total</b>	<b>203</b>	<b>1.47</b>	<b>.55</b>
College certificate/diploma	Non-participant	98	1.78	.63
	Participant	188	1.24	.23
	<b>Sub Total</b>	<b>286</b>	<b>1.42</b>	<b>.48</b>
University	Non-participant	99	1.68	.58
	Participant	176	1.27	.37
	<b>Sub Total</b>	<b>275</b>	<b>1.41</b>	<b>.50</b>
Total	Non-participant	353	1.82	.66
	Participant	534	1.24	.28
	<b>Grand Total</b>	<b>887</b>	<b>1.47</b>	<b>.55</b>

Table 4.62 shows the means and standard deviations of deviant behaviour among participants and non-participants in co-curricular activities across their mother's level of education (primary, secondary, college and university). Non-participants whose mothers had attained primary education had a mean and standard deviation of  $2.06 \pm 0.77$  on deviant behaviour, while participants showed a mean and standard deviation of  $1.24 \pm 0.27$  in the same category of mother education, Non-participants, whose mothers had attained college education had a mean and standard deviation of  $1.78 \pm 0.63$ , while the participants' mean and standard deviation was  $1.24 \pm 0.23$ . This shows that regardless of mother's education level, non-participants had higher mean scores on the deviant behaviour index

compared to participants. This implies that non-participants were more likely to engage in deviant behaviour compared to participants in co-curricular activities.

Table 4.63 shows Two Way ANOVA for students' participation in co-curricular activities, students' engagement into deviant behaviour across mother's education level.

**Table 4 63: Two-Way ANOVA for the Influence of Participation in Co-Curricular Activities on Students' Deviant Behaviour across Mother's Education Level**

Tests of Between-Subjects Effects					
Dependent Variable: Deviance Index					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	78.833 <sup>a</sup>	7	11.262	52.679	.000
Intercept	1792.567	1	1792.567	8385.096	.000
Education level	2.847	3	.949	4.439	.004
Co-curricular	69.964	1	69.964	327.269	.000
Education level * co-curricular	3.914	3	1.305	6.103	.000
Error	187.913	879	.214		
Total	2175.890	887			
Corrected Total	266.745	886			
a. R Squared = .296 (Adjusted R Squared = .290)					

As shown in Table 4.63, the two -way ANOVA established the influence of of mother's education level (primary, secondary, college and university) and participation in co-curricular activities on students' engagement in deviant behaviour. The findings showed that mother's education level ( $F(3,879) = 4.439, p = 0.005$ ) and participation in co-curricular activities ( $F(1,879) = 327.269, p < 0.001$ ) had significant main effect on students' engagement in deviant behaviour. Secondly, there was a significant interaction between participation in co-curricular activities and mother's education level ( $F(3,879) = 6.103, p < 0.001$ ) in influencing students' level of engagement in deviant behaviour. As

such, null hypothesis that there is no significant difference in deviant behaviour between participants and non-participants in co-curricular activities based on their mother's education level was not accepted at  $\alpha=0.05$  level of significance.

The researcher conducted post hoc analysis on mother's education level and deviant behaviour variables with an aim of identifying which group differed significantly from each other. The results based, on the Tukey HSD are presented in Tables 4.64 and 4.65.

**Table 4 64: Post Hoc Analysis Results on Mother's Education Level across Students' Deviant Behaviour**

<b>Multiple Comparisons</b>				
<b>Deviance Index</b>				
<b>Tukey HSD</b>				
<b>(I) Mother's highest level of education</b>	<b>(J) Mother's highest level of education</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
Primary education	Secondary education	.2238*	.05283	.000
	College certificate/diploma	.2650*	.04986	.000
	University	.2770*	.05015	.000
Secondary education	Primary education	-.2238*	.05283	.000
	College certificate/diploma	.0412	.04243	.766
	University	.0532	.04278	.600
College certificate/diploma	Primary education	-.2650*	.04986	.000
	Secondary education	-.0412	.04243	.766
	University	.0120	.03905	.990
University	Primary education	-.2770*	.05015	.000
	Secondary education	-.0532	.04278	.600
	College certificate/diploma	-.0120	.03905	.990
Based on observed means. The error term is Mean Square(Error) = .214.				
*. The mean difference is significant at the .05 level.				

**Table 4 65: Tukey HSD Results of Student Deviant Behaviour across Mother Education Level**

<b>Deviance Index</b>			
Tukey HSD			
Mother's highest level of education	N		Subset
		1	2
University	275	1.4126	
College certificate/diploma	286	1.4246	
Secondary education	203	1.4658	
Primary education	123		1.6897
Sig.		.662	1.000
Means for groups in homogeneous subsets are displayed Based on observed means. The error term is Mean Square (Error) = .214.			

As shown in Tables 4.64 and 4.65 above, University ( $\bar{x} = 1.41$ ), College ( $\bar{x} = 1.42$ ), and Secondary education ( $\bar{x} = 1.47$ ) have been placed in the same category while Primary education ( $\bar{x} = 1.69$ ) was placed in a different category on its own. This implies that, with respect to engagement in deviant behaviour, students whose mother's had attained primary education differed significantly from other students whose mothers had attained university, college and secondary education,

#### **4.7.9 Influence of Participation in Co-Curricular Activities on Academic**

##### **Performance across Mother Education Level**

This section presents the results on the influence of participation in co-curricular activities on student performance across mother's highest level of education. Table 4.66 presents means and standard deviations for participation in co-curricular activities, and student academic performance across mother education levels.

**Table 4 66: Means and Standard Deviations for Participation in Co-Curricular Activities, Academic Performance across Mother Education Level**

<b>Dependent variable: Academic performance</b>				
<b>Mother's highest level of education</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>
Primary education	Non-participant	61	-10.85	13.53
	Participant	54	-10.11	11.76
	Sub Total	115	-10.50	12.68
Secondary education	Non-participant	88	-18.48	14.96
	Participant	111	-9.12	11.99
	Sub Total	199	-13.26	14.14
College certificate/diploma	Non-participant	97	-12.76	10.23
	Participant	178	-9.57	12.78
	Sub Total	275	-10.70	12.02
University	Non-participant	96	-13.22	14.51
	Participant	164	-8.50	11.95
	Sub Total	260	-10.24	13.13
Total	Non-participant	342	-14.02	13.60
	Participant	507	-9.18	12.21
	Grand Total	849	-11.13	13.00

Results presented in Table 4.66 depict the means and standard deviations for participants and non-participants in co-curricular activities and their academic performance across mother's education level (primary, secondary, college and university). In particular, participants in co-curricular activities and whose mothers had attained secondary education, showed a mean and standard deviation of  $-9.12 \pm 11.99$ , whereas non-participants with the same mother education level, showed a mean and standard deviation of  $-18.48 \pm 14.96$ . The mean scores of both, participants and non-participants across all mothers' education levels were negative when comparing their performances in KCPE and end of term secondary school examination. However,

comparing the two groups, participants in co-curricular activities showed better academic performance than the non-participants. It further emerged that participants whose mothers had attained university education level performed better in academics as compared to those participants whose mothers had attained primary and secondary education. A two-way ANOVA was conducted to determine whether the mean differences were significant. The results are presented in Table 4.67.

**Table 4 67: Two Way ANOVA Statistics on Participation in Co-Curricular Activities, Mother’s Education Level and students’ Academic Performance**

<b>Tests of Between-Subjects Effects</b>					
<b>Dependent Variable: Academic Performance</b>					
<b>Source</b>	<b>Type III Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Corrected Model	7512.203 <sup>a</sup>	7	1073.172	6.643	.000
Intercept	97760.241	1	97760.241	605.152	.000
Education level	1278.014	3	426.005	2.637	.049
Co-curricular	3697.869	1	3697.869	22.890	.000
Education level * Co-curricular	1655.929	3	551.976	3.417	.017
Error	135860.764	841	161.547		
Total	248569.929	849			
Corrected Total	143372.968	848			
a. R Squared = .052 (Adjusted R Squared = .045)					

The findings presented in Table 4.67 show that mother’s education level (primary, secondary, college and university) ( $F(3,841) = 2.637, p = 0.049$ ) and participation in co-curricular activities ( $F(1,841) = 22.890, p < 0.001$ ) had a significant main effect on students’ academic performance, at  $p < 0.05$ . The study found that there was a significant interaction between mother’s education level and participation in co-

curricular activities  $F(3,841) = 3.417, p=0.017$ ) in influencing students' academic performance

#### 4.7.10 Influence of Co-Curricular Activities on the Self-Concept of Students across Mother Occupations

This section presents the results on the influence of co-curricular activities participation on self - concept of students based on mother's occupation. The descriptive statistics showing means and standard deviations for participation in co-curricular activities, mother's occupation and students' self-concept were as shown in Table 4.68.

**Table 4 68: Means and Standard Deviations for Participation in Co-Curricular Activities and Self-Concept across Mother Occupations**

<b>Dependent Variable: Self - concept Index</b>				
<b>Mother's occupation</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Professional / managerial	Non-participant	117	52.16	24.00
	Participant	187	73.52	13.08
	<b>Sub Total</b>	<b>304</b>	<b>65.30</b>	<b>20.83</b>
Commercial / self employed	Non-participant	109	46.51	22.77
	Participant	87	72.71	14.52
	<b>Sub Total</b>	<b>196</b>	<b>58.14</b>	<b>23.46</b>
Skilled	Non-participant	90	61.40	22.75
	Participant	188	74.16	13.56
	<b>Sub Total</b>	<b>278</b>	<b>70.03</b>	<b>18.06</b>
Unskilled	Non-participant	16	60.68	22.92
	Participant	29	78.28	10.11
	<b>Sub Total</b>	<b>45</b>	<b>72.02</b>	<b>17.80</b>
Total	Non-participant	332	53.22	23.87
	Participant	491	73.90	13.39
	<b>Grand Total</b>	<b>823</b>	<b>65.56</b>	<b>20.97</b>

Table 4.68 shows the means and standard deviations for the self-concept index of participants and nonparticipants in co-curricular activities across mother occupation categories. The overall mean and standard deviation for the self-concept index of participants was  $73.90 \pm 13.39$  and of non-participants was  $53.22 \pm 23.87$ . The mean and standard deviation on the self-concept index for those participants in co-curricular activities whose mothers were involved in unskilled jobs was  $78.28 \pm 10.11$ ; and for non-participants it was  $60.68 \pm 22.92$ . Additionally, the mean and standard deviation on the self-concept index of those participants whose mothers were involved in professional or managerial jobs was  $73.52 \pm 13.08$ ; whereas, non-participants from the same professional/managerial had a mean and standard deviation of  $52.16 \pm 24.00$ . Thus suggesting that participants in co-curricular activities had higher self-concept as compared to non-participants in the professional/managerial category of mother occupation. It further emerged that participants whose mothers were involved in unskilled occupations had a higher self-concept index compared to those whose mothers were in professional/managerial occupations. A Two Way ANOVA was conducted to find out whether there were significant differences in means and the results are presented in Table 4.69.

**Table 4 69: Results of the Two Way ANOVA for the Influence of Participation in Co-Curricular Activities on Self-Concept across Mother Occupation**

Tests of Between-Subjects Effects					
Dependent Variable: Self - concept Index					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	97368.365 <sup>a</sup>	7	13909.766	42.952	.000
Intercept	1823222.748	1	1823222.748	5629.999	.000
Occupation	8823.225	3	2941.075	9.082	.000
Co-curricular	41028.125	1	41028.125	126.692	.000
Occupation * cocurricular	5212.531	3	1737.510	5.365	.001
Error	263930.158	815	323.841		
Total	3898569.654	823			
Corrected Total	361298.523	822			
a. R Squared = .269 (Adjusted R Squared = .263)					

As shown in Table 4.69, the two-way ANOVA tested the influence of student participation in co-curricular activities on their self-concept across mother occupations. The findings showed that mother's occupation ( $F(3,815) = 9.082, p < 0.001$ ) and participation in co-curricular activities ( $F(1,815) = 126.692, p < 0.001$ ) had significant main effect on students' self-concept. Secondly, there was significant interaction between participation in co-curricular activities and mother's occupation ( $F(3,815) = 5.365, p = 0.001$ ) in influencing students' self-concept level.

A post hoc analysis on students' self-concept across mother's occupation was conducted with an aim of identifying which group differed significantly from each other. The results of this analysis are presented in Table 4.70.

**Table 4 70: Post Hoc Analysis Test on Student's Self-Concept across Mother's Occupation**

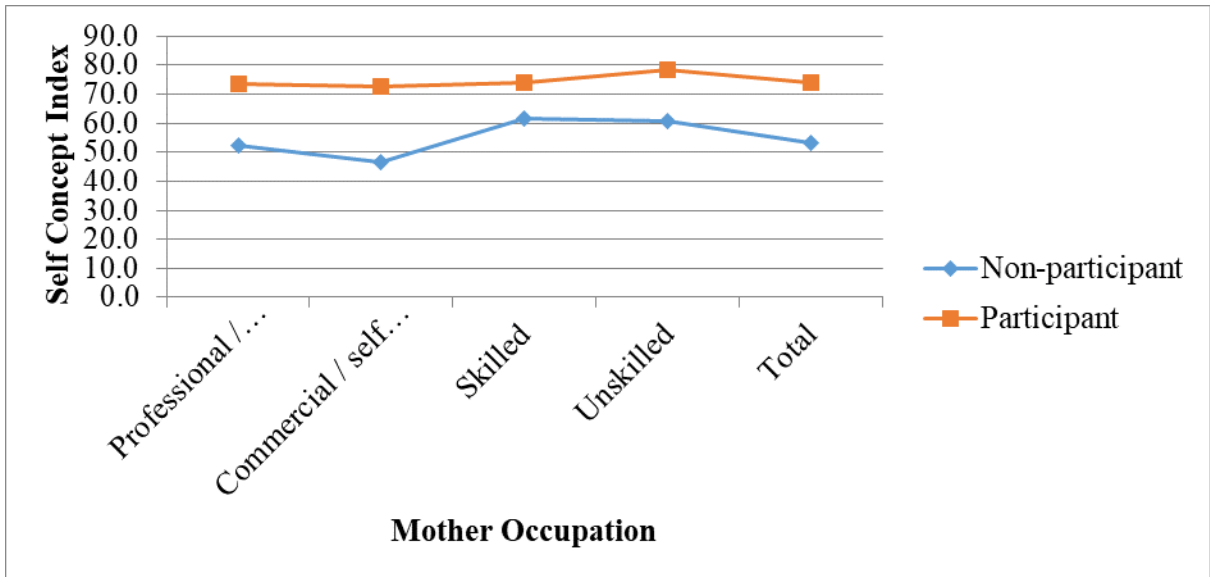
<b>Dependent Variable: Self-Concept Index</b>				
<b>(I) Mother's occupation</b>	<b>(J) Mother's occupation</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
professional / managerial	commercial / self employed	7.1632*	1.64849	0.000
	skilled	-4.7226*	1.49337	0.009
	unskilled	-6.7199	2.87432	0.090
commercial / self employed	professional / managerial	-7.1632*	1.64849	0.000
	skilled	-11.8858*	1.67843	0.000
	unskilled	-13.8831*	2.97468	0.000
skilled	professional / managerial	4.7226*	1.49337	0.009
	commercial / self employed	11.8858*	1.67843	0.000
	unskilled	-1.9974	2.8916	0.901
unskilled	professional / managerial	6.7199	2.87432	0.090
	commercial / self employed	13.8831*	2.97468	0.000
	skilled	1.9974	2.8916	0.901
Based on observed means.				
The error term is Mean Square(Error) = 323.841.				
* The mean difference is significant at the 0.05 level.				

**Table 4 71: Tukey HSD Results on Student's Self-Concept across Mother Occupation**

	N	Subset		
		<b>1</b>	<b>2</b>	<b>3</b>
commercial / self employed	196	58.1394		
professional / managerial	304		65.3026	
skilled	278		70.0251	70.0251
unskilled	45			72.0225
Sig.		1	0.186	0.831
Means for groups in homogeneous subsets are displayed.				
Based on observed means.				
The error term is Mean Square (Error) = 323.841.				

The results presented in Table 4.70 and 4.71 shows that self-concept for students with professional/managerial was significantly different from those whose mother had

commercial/self-employed and skilled occupation. The results further show that self-concept for students whose mother had commercial/self-employed occupation was significantly different from the other occupation.



**Figure 4 15: Interaction Between Mothers’ Occupation and Participation in Co-Curricular Activities on Self-Concept of Students**

The results in Figure 4.15 clearly show that participants had high self-concept compared to non-participants across all the occupations of the mother. These findings demonstrate that non-participants had low self-concept regardless of the occupation of the mother as compared to participants. The findings further implied that co-curricular activities had a positive influence of self -concept of students regardless of the mother’s occupation.

**4.7.11 Influence of Participation in Co-Curricular Activities on Deviant Behavior of Students Based on Mother’s Occupation**

This section presents the results for the influence of student participation in co-curricular activities on deviant behaviour of students based on mother’s occupation. Table 4.72

shows means and standard deviations of participation in co-curricular activities and deviant behaviour across mother occupations.

**Table 4 72: Means and Standard Deviations of Student Participation in Co-Curricular Activities and Student Deviant Behaviour across Mother Occupations**

<b>Dependent Variable: Deviance Index</b>				
<b>Mother's occupation</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Professional / managerial	Non-participant	117	1.85	0.57
	Participant	187	1.28	0.34
	<b>Sub Total</b>	<b>304</b>	<b>1.50</b>	<b>0.52</b>
Commercial / self employed	Non-participant	109	2.10	0.69
	Participant	87	1.17	0.19
	<b>Sub Total</b>	<b>196</b>	<b>1.69</b>	<b>0.70</b>
Skilled	Non-participant	90	1.54	0.60
	Participant	188	1.22	0.24
	<b>Sub Total</b>	<b>278</b>	<b>1.33</b>	<b>0.42</b>
Unskilled	Non-participant	16	1.80	0.80
	Participant	29	1.16	0.09
	<b>Sub Total</b>	<b>45</b>	<b>1.39</b>	<b>0.57</b>
Total	Non-participant	332	1.85	0.66
	Participant	491	1.23	0.27
	<b>Grand Total</b>	<b>823</b>	<b>1.48</b>	<b>0.56</b>

Table 4.72 shows the means and standard deviations for deviant behaviour of across mother occupations. Specifically, the mean and standard deviation for participants, whose mothers were involved in professional/managerial jobs, was  $1.28 \pm 0.34$ , as opposed to the non-participants with the same category of maternal occupation, whose mean and standard deviation was  $1.85 \pm 0.57$ . Among participants whose mothers were in unskilled jobs, the mean and standard deviation was  $1.16 \pm 0.09$ , while the non-participants, who had the same unskilled maternal occupation background showed a mean and standard deviation of  $1.80 \pm 0.80$ . Thus making it evident that non-participants had a higher mean

score on deviant behaviour compared to the participants. The findings also showed that non-participants, with the mothers' engagement in commercial occupation were more likely to engage into deviant behaviour compared to those non-participants whose mothers were occupied in professional, unskilled and skilled jobs. Table 4.73 presents the two-way ANOVA for influence of participation in co-curricular activities on student deviant behaviour across mother's occupation.

**Table 4 73: Results of the ANOVA for Influence of Student Participation in Co-Curricular Activities on Student Deviant Behaviour across Mother Occupations**

Tests of Between-Subjects Effects					
Dependent Variable: Deviance Index					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	90.507 <sup>a</sup>	7	12.930	63.295	.000
Intercept	994.455	1	994.455	4868.184	.000
Occupation	8.002	3	2.667	13.057	.000
Co-curricular	40.582	1	40.582	198.663	.000
Occupation * co-curricular	9.896	3	3.299	16.148	.000
Error	166.485	815	.204		
Total	2061.219	823			
Corrected Total	256.993	822			
a. R Squared = .352 (Adjusted R Squared = .347)					

As shown in Table 4.73, the two-way ANOVA revealed the influence of participation in co-curricular activities on student deviant behaviour across mother occupations. . The analysis showed that mother's occupation ( $F(3,815) = 13.057, p < 0.001$ ) and student participation in co-curricular activities ( $F(1,815) = 198.663, p < 0.001$ ) had significant effect on students' deviant behaviour. Further, it emerged that there was a significant

interaction between student participation in co-curricular activities, student deviant behaviour across mother occupations ( $F(3,815) = 16.148, p \leq 0.001$ )

A post hoc analysis on students' deviant behaviour across mother's occupation was conducted with an aim of identifying which group differed significantly from each other.

The results of this analysis are presented in Table 4.74.

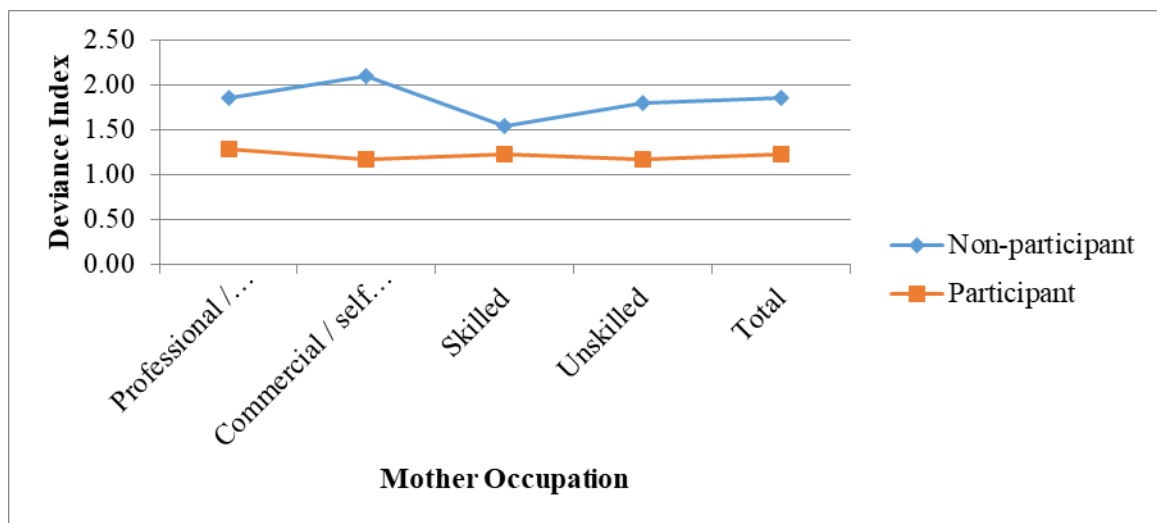
**Table 4 74: Post Hoc Analysis Test on Students' Deviance Behaviour across Mother's Occupation**

<b>Multiple Comparisons</b>				
<b>Dependent Variable: Deviance Index</b>				
<b>(I) Mother's occupation</b>	<b>(J) Mother's occupation</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
Professional / managerial	Commercial / self employed	-.1842*	0.0414	0.000
	Skilled	.1778*	0.03751	0.000
	Unskilled	0.116	0.07219	0.375
Commercial / self employed	Professional / managerial	.1842*	0.0414	0.000
	Skilled	.3619*	0.04215	0.000
	Unskilled	.3002*	0.07471	0.000
Skilled	Professional / managerial	-.1778*	0.03751	0.000
	Commercial / self employed	-.3619*	0.04215	0.000
	Unskilled	-0.0618	0.07262	0.830
Unskilled	Professional / managerial	-0.116	0.07219	0.375
	Commercial / self employed	-.3002*	0.07471	0.000
	Skilled	0.0618	0.07262	0.830
Based on observed means.				
The error term is Mean Square (Error) = .204.				
* The mean difference is significant at the 0.05 level.				

**Table 4 75: Tukey HSD Results on Students' Deviance Behaviour across Mother's Occupation**

Mother's occupation	N	Subset		
		1	2	3
Skilled	278	1.3254		
Unskilled	45	1.3872	1.3872	
Professional / managerial	304		1.5032	
Commercial / self employed	196			1.6873
Sig.		0.723	0.203	1
Means for groups in homogeneous subsets are displayed.				
Based on observed means.				
The error term is Mean Square(Error) = .204.				

The results presented in Tables 4.74 and 4.75 show significant differences in academic performance between students, whose mothers were in professional/managerial jobs and those, whose mothers were in commercial/self-employed and skilled jobs. The results further show that academic performance among students whose mothers were in commercial/self-employed occupations differed significantly from students with mothers in other occupations.



**Figure 4 16: Interaction among Participation, Deviant Behaviour and Mother Occupations**

The results in Figure 4.16 show that participants in co-curricular had a lower deviant behaviour index compared to non-participants across all mother occupations. The findings also show that non-participants exhibited deviant behaviour more often than participants regardless of the mothers' occupation.

#### 4.7.12 Influence of Participation in Co-curricular Activities on Academic Performance across Mother Occupations

This section presents the results of influence of student participation in co-curricular activities on academic performance across mother occupations. Table 4.76 shows the means and standard deviations participation in co-curricular activities, academic performance across mother occupations

**Table 4 76: Means and Standard Deviations of Participation in Co-Curricular Activities, Student Academic Performance across Mother Occupations**

<b>Dependent Variable: Academic Performance</b>				
<b>Mother's occupation</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Professional / managerial	Non-participant	114	-14.44	11.33
	Participant	182	-9.50	11.88
	<b>Sub Total</b>	<b>296</b>	<b>-11.41</b>	<b>11.90</b>
Commercial / self employed	Non-participant	106	-15.59	12.96
	Participant	84	-6.54	12.10
	<b>Sub Total</b>	<b>190</b>	<b>-11.59</b>	<b>13.33</b>
Skilled	Non-participant	86	-10.92	16.79
	Participant	176	-9.59	11.98
	<b>Sub Total</b>	<b>262</b>	<b>-10.03</b>	<b>13.73</b>
Unskilled	Non-participant	16	-13.72	13.32
	Participant	27	-15.34	13.35
	<b>Sub Total</b>	<b>43</b>	<b>-14.74</b>	<b>13.20</b>
Total	Non-participant	322	-13.84	13.66
	Participant	469	-9.34	12.15
	<b>Grand Total</b>	<b>791</b>	<b>-11.17</b>	<b>12.97</b>

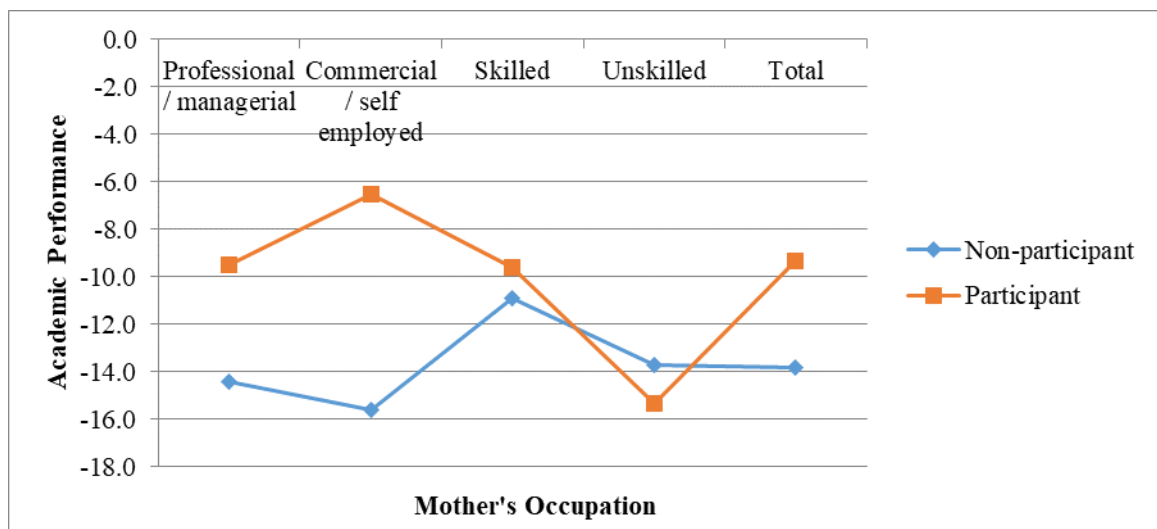
Results presented in Table 4.76 show the overall mean and standard deviation for academic performance of participants as  $-9.034 \pm 12.14$  and that of non-participants as  $13.84 \pm 13.65$ . Academic performances of both, participants and non-participants across mother occupation were negative, meaning there was decline in academic performance between the KCPE examinations at the end of the primary school and the end of first term examination in the first year of secondary school. Participants in co-curricular activities had better academic performance than non-participants. However, non-participants, whose mothers were in unskilled job category performed better than participants whose mothers were also in the unskilled category.

A two-way ANOVA was conducted to determine whether the differences in the mean were statistically significant. The results of this ANOVA are presented in Table 4.77.

**Table 4 77: Results of the ANOVA for Participation in Co-Curricular Activities, Academic Performance and Mother Occupations**

Tests of Between-Subjects Effects					
Dependent Variable: Academic Performance					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6617.263 <sup>a</sup>	7	945.323	5.865	.000
Intercept	60020.026	1	60020.026	372.396	.000
Occupation	807.833	3	269.278	1.671	.172
Co-curricular	1230.925	1	1230.925	7.637	.006
Occupation * co-curricular	1941.002	3	647.001	4.014	.008
Error	126197.985	783	161.172		
Total	231593.871	791			
Corrected Total	132815.249	790			
a. R Squared = .050 (Adjusted R Squared = .041)					

The findings presented in Table 4.77 show that though mother occupations ( $F(3,783) = 1.671, p = 0.172$ ) had no significant effect on students' academic performance, student participation in co-curricular activities ( $F(3,783) = 7.637, p = 0.006$ ) had a significant main effect on students' academic performance. It further emerged that there was significant interaction between mother occupations and participation in co-curricular activities ( $F(3,783) = 4.014, p = 0.008$ ) in influencing students' academic performance. Since the difference in mother occupations is not significant ( $F = 1.671, p = 0.172$ ) a post hoc test was not necessary.



**Figure 4 17: Interaction among Participation in Co-Curricular Activities, Academic Performance and Mother Occupations**

The results in Figure 4.17 show though both, participants and no-participants showed a decline in academic performance, the participants showed a lower level of decline compared to non-participants across all mother occupations. The results clarify that largest decline in academic performance was among participants whose mothers were

involved in unskilled jobs. The findings suggest that mother's occupation influenced academic performance for students who participated in co-curricular activities in their schools.

#### **4.7.13 Influence of Student Participation in Co-Curricular Activities on Student Self-Concept across Guardian Occupation**

This section presents the results of participation in co-curricular activities on the self-concept of students across guardian occupation. Presented in Table 4.78 are the means and standard deviations of self-concept among participants and non-participants across guardian occupations.

**Table 4 78: Means and Standard Deviations of Self-Concept among Participants and Non-Participants in Co-Curricular Activities across Guardian Occupations**

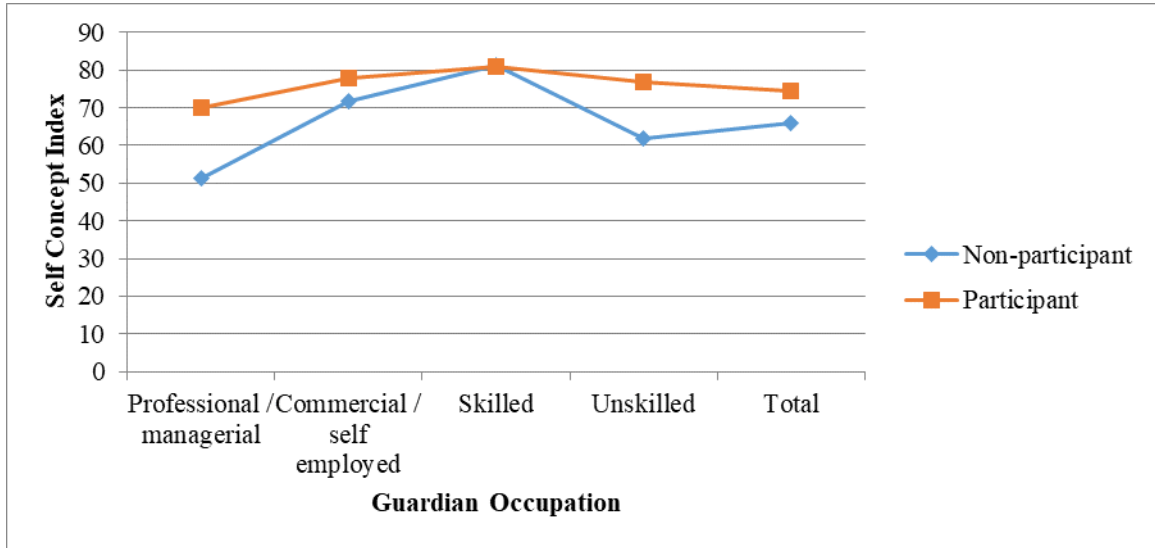
<b>Dependent Variable: Self - concept Index</b>				
<b>Guardian's occupation</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Professional / managerial	Non-participant	3	51.25	23.15
	Participant	22	70.17	15.41
	<b>Sub Total</b>	<b>25</b>	<b>67.90</b>	<b>17.09</b>
Commercial / self employed	Non-participant	8	71.88	14.94
	Participant	21	77.93	12.63
	<b>Sub Total</b>	<b>29</b>	<b>76.26</b>	<b>13.31</b>
Skilled	Non-participant	1	81.25	00.00
	Participant	3	80.97	16.38
	<b>Sub Total</b>	<b>4</b>	<b>81.04</b>	<b>13.38</b>
Unskilled	Non-participant	4	61.98	23.78
	Participant	5	76.75	11.03
	<b>Sub Total</b>	<b>9</b>	<b>70.19</b>	<b>18.26</b>
Total	Non-participant	16	66.12	19.25
	Participant	51	74.64	14.15
	<b>Grand Total</b>	<b>67</b>	<b>72.61</b>	<b>15.79</b>

Table 4.78 shows the means and standard deviations of self-concepts among participants and non-participants in co-curricular activities across guardian occupations. The overall mean and standard deviation of self-concept for participants was  $74.64 \pm 14.15$  while that of the non-participants was  $66.11 \pm 19.24$ . Participants in co-curricular activities whose guardians did unskilled jobs, showed a mean and standard deviation of  $76.75 \pm 11.03$  for self-concept, while non-participants with guardians within the unskilled category showed a mean and standard deviation of  $61.98 \pm 23.78$  in self-concept. Additionally, participants, whose guardians were in the professional job group category, had a mean of  $70.17 \pm 15.41$ , while the non-participants returned a mean and standard deviation of  $52.25 \pm 23.15$  in self-concept. Overall, participants displayed higher self-concept. It also emerged that participants whose guardian were in skilled jobs had higher self-concept compared to those whose guardians were engaged in commercial, unskilled or professional/managerial job groups.. Table 4.79 presents results of the two-way ANOVA for participation in co-curricular activities and self-concept across guardian occupation,

**Table 4 79: ANOVA Results of Participation in Co-Curricular Activities and Students' Self-Concept across Guardian Occupations**

Tests of Between-Subjects Effects					
Dependent Variable: Self-Concept Index					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2919.459 <sup>a</sup>	7	417.066	1.818	.101
Intercept	140221.514	1	140221.514	611.326	.000
Occupation	1800.896	3	600.299	2.617	.059
Co-curricular	667.047	1	667.047	2.908	.093
Occupation * co-curricular	429.148	3	143.049	.624	.603
Error	13532.985	59	229.373		
Total	369674.957	67			
Corrected Total	16452.444	66			
a. R Squared = .177 (Adjusted R Squared = .080)					

The two-way ANOVA examined the influence of participation in co-curricular activities on the self-concept of students across guardian occupations. The analysis showed that guardian's occupation ( $F(3, 59) = 2.617, p = 0.059$ ) and participation in co-curricular activities ( $F(1, 59) = 2.908, p = 0.093$ ) had no significant effect on students' self-concept. Secondly, there was no significant interaction between participation in co-curricular activities and guardian's occupation ( $F(3, 59) = 0.624, p = 0.603$ ) in influencing students' self-concept level. Since the difference in guardian occupation is not significant ( $F = 2.617, p = 0.059$ ), a post hoc is not necessary.



**Figure 4 18: Interaction among Participation in Co-Curricular Activities, Self-Concept and Guardian Occupation**

The results show that non-participants had low self-concept compared to participants across different guardian occupations, except for skilled occupations, in which both, nonparticipants and participants showed equal self-concept index.

#### **4.7.14 Influence of Participation in Co-Curricular Activities on Students' Deviant Behaviour Based on Guardian's Occupation.**

This section presents the results on the influence of co-curricular activities participation on deviant behaviour of students based on guardian's occupation. Table 4.80 shows the means and standard deviations of participation in co-curricular activities and deviant behaviour across guardian occupations.

**Table 4 80: Means and Standard Deviations of Participation in Co-Curricular Activities and Student Deviant Behaviour across Guardian Occupations**

<b>Dependent Variable: Deviance Index</b>				
<b>Guardian's occupation</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Professional / managerial	Non-participant	3	1.43	0.67
	Participant	22	1.18	0.19
	<b>Sub Total</b>	<b>25</b>	<b>1.21</b>	<b>0.27</b>
Commercial / self employed	Non-participant	8	1.23	0.16
	Participant	21	1.18	0.22
	<b>Sub Total</b>	<b>29</b>	<b>1.19</b>	<b>0.20</b>
Skilled	Non-participant	1	1.10	0.00
	Participant	3	1.33	0.06
	<b>Sub Total</b>	<b>4</b>	<b>1.28</b>	<b>0.13</b>
Unskilled	Non-participant	4	1.20	0.16
	Participant	5	1.20	0.17
	<b>Sub Total</b>	<b>9</b>	<b>1.20</b>	<b>0.16</b>
Total	Non-participant	16	1.25	0.29
	Participant	51	1.19	0.19
	<b>Grand Total</b>	<b>67</b>	<b>1.21</b>	<b>0.22</b>

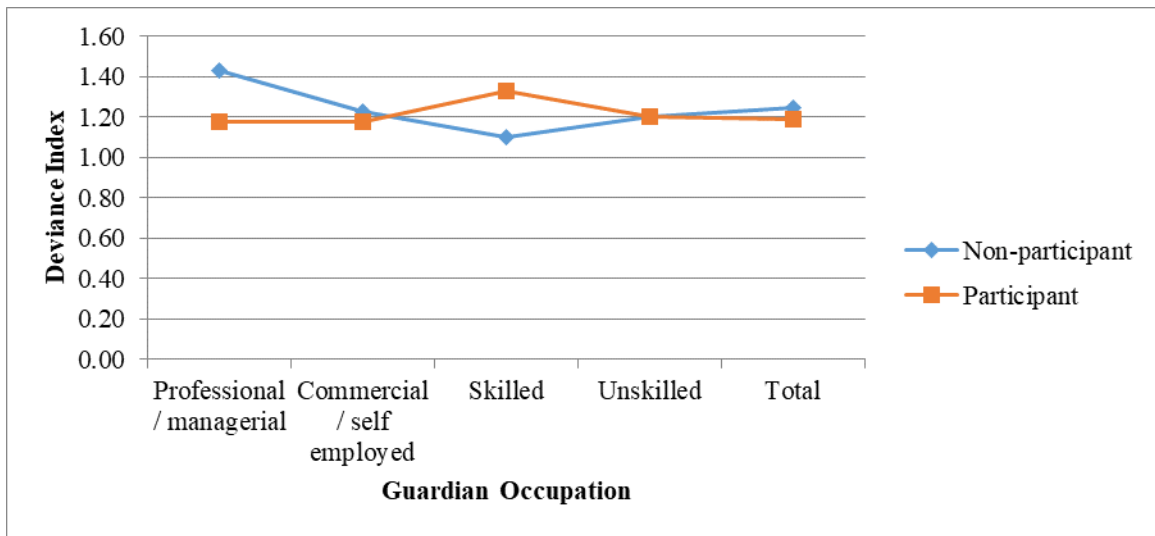
Table 4.80 shows the means and standard deviations for student deviant behaviour of participants and nonparticipants in co-curricular activities based on socio-economic status as categorized according to the guardian's occupation. Overall, the mean score and standard deviation of non-participants was  $1.25 \pm 0.29$ , while that of participants was  $1.19 \pm 0.19$ . Participants in co-curricular activities, whose guardians were involved in professional jobs, had a mean of  $1.18 \pm 0.19$  on deviant behaviour index, whereas, non-participants showed a mean and standard deviation of  $1.43 \pm 0.67$  on deviant behaviour. Participants, whose guardians were occupied in commercial jobs reflected a mean and standard deviation of  $1.18 \pm 0.22$  on the deviance behaviour index. On the other hand, the non-participant mean and standard deviation was  $1.23 \pm 0.16$  for deviant behaviour.

Table 4.81 The ANOVA in Table 4.81 shows whether the differences in means were significant or not.

**Table 4 81: Results of ANOVA for Participation in Co-Curricular Activities, Student Deviant Behaviour across Guardian’s Occupations**

Tests of Between-Subjects Effects					
Dependent Variable:	Deviance Index				
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.244 <sup>a</sup>	7	.035	.697	.674
Intercept	41.593	1	41.593	830.900	.000
Occupation	.089	3	.030	.591	.623
Co-curricular	.002	1	.002	.033	.856
Occupation * co-curricular	.171	3	.057	1.135	.342
Error	2.953	59	.050		
Total	100.640	67			
Corrected Total	3.198	66			
a. R Squared = .076 (Adjusted R Squared = -.033)					

As shown in Table 4.81, the two-way ANOVA determine the influence of participation in co-curricular activities on student deviant behaviour across guardian occupations. . The findings show that guardian’s occupation ( $F(3, 59) = 0.591, p = 0.623$ ) and participation in co-curricular activities ( $F(1, 59) = 0.033, p = 0.856$ ) had no significant effect on students’ deviant behaviour. The findings in the table further showed that there were no significant interaction between participation in co-curricular activities and guardian’s occupation ( $F(3, 59) = 1.135, p = 0.342$ ) in influencing students’ deviant behaviour. The difference in guardian’s occupation is not significant ( $F = 0.591, p = 0.623$ ) and, therefore, post hoc is not necessary.



**Figure 4 19: Interaction among Participation in Co-curricular Activities, Student Deviant Behaviour and Guardian Occupations**

The results in Figure 4.19 show that deviant behaviour among participant students whose guardians are in professional jobs was low compared to non-participants. However, the findings show slight difference in deviant index in participants and non-participants across guardian occupations.

#### **4.7.15 Influence of Participation in Co-Curricular Activities on Student Academic Performance across Guardian Occupations**

This section presents results on the influence of participation in co-curricular activities on student academic performance based on guardian occupations. Table 4.82 presents means and standard deviations for participation in co-curricular activities, student academic performance across guardian occupations.

**Table 4 82: Means and Standard Deviations of Participation in Co-Curricular Activities, Student Academic Performance and Guardian Occupations**

<b>Dependent Variable: Academic Performance</b>				
<b>Guardian's occupation</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Professional / managerial	Non-participant	3	-22.48	14.66
	Participant	22	1.40	13.42
	<b>Sub Total</b>	<b>25</b>	<b>-1.47</b>	<b>15.43</b>
Commercial / self employed	Non-participant	8	-14.36	16.11
	Participant	20	-7.99	7.62
	<b>Sub Total</b>	<b>28</b>	<b>-9.81</b>	<b>10.81</b>
Skilled	Non-participant	1	-19.86	00.00
	Participant	3	-8.68	8.49
	<b>Sub Total</b>	<b>4</b>	<b>-11.48</b>	<b>8.90</b>
Unskilled	Non-participant	4	-10.54	21.88
	Participant	5	-21.51	7.23
	<b>Sub Total</b>	<b>9</b>	<b>-16.63</b>	<b>15.46</b>
Total	Non-participant	16	-15.27	16.24
	Participant	50	-5.25	12.55
	<b>Grand Total</b>	<b>66</b>	<b>-7.68</b>	<b>14.08</b>

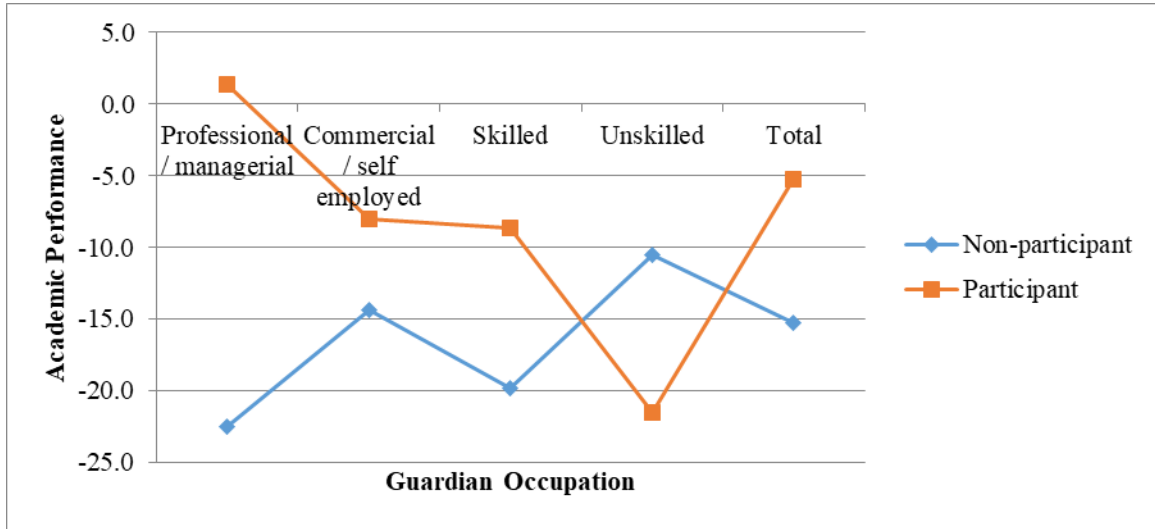
Table 4.82 shows the means and standard deviations of participants and non-participants in co-curricular activities and academic performance across guardian occupations. The overall mean score and standard deviation of the participants was  $5.2523 \pm 12.54$ , whereas, that of non-participants was  $-15.27 \pm 16.24$ . Comparing the two groups, participants in co-curricular activities had a better academic performance than non-participants. It further emerged that, participants, whose guardians were in professional jobs, had better academic performance as compared to the participants whose guardians in unskilled, skilled and commercial jobs. On the other hand, non-participants whose guardians were involved in unskilled jobs had better academic performance than those whose guardians were involved in professional, commercial and skilled jobs. Table 4.83

shows results of the two-way ANOVA for participation in co-curricular activities, academic performance and guardian occupations.

**Table 4 83: Two-Way ANOVA on the Influence of Participation in Co-Curricular Activities, Academic Performance and Guardian Occupations**

Tests of Between-Subjects Effects					
Dependent Variable: Academic Performance					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3969.595 <sup>a</sup>	7	567.085	3.687	.002
Intercept	4630.147	1	4630.147	30.103	.000
Occupation	195.890	3	65.297	.425	.736
Co-curricular	396.758	1	396.758	2.580	.114
Occupation * cocurricular	1484.102	3	494.701	3.216	.029
Error	8921.040	58	153.811		
Total	16784.798	66			
Corrected Total	12890.634	65			
a. R Squared = .308 (Adjusted R Squared = .224)					

The findings presented in Table 4.83 show that guardian occupations ( $F(3, 58) = 0.425$ ,  $p = 0.736$ ) and participation in co-curricular activities ( $F(1, 58) = 2.580$ ,  $p = 0.114$ ) had no significant main effect on students' academic performance, at  $p < 0.05$  level of significance. However, the study revealed that there was significant interaction between guardian occupations and participation in co-curricular activities ( $F(3, 58) = 3.216$ ,  $p = 0.029$ ) in influencing student academic performance. The difference in guardian's occupation is not significant ( $F = 0.425$ ,  $p = 0.736$ ) and, therefore, post hoc is not necessary.



**Figure 4 20: Interaction among Participation in Co-Curricular Activities, Student’s Academic Performance and Guardians’ Occupation**

The results in Figure 4.20 show that academic performance among non-participants and participants varied depending on the guardian occupation. Participants whose guardians were doing professional jobs had better performance .On the other hand , non-participants whose guardians were doing unskilled jobs had better performance. The findings implied that guardian profession influenced the change in academic performance among both students who participated in co-curricular and non-participants.

**4.8 Influence of Participation and Non-participation in Drama, Sports and Music across Self-concept, Deviance Behaviour and Academic Performance**

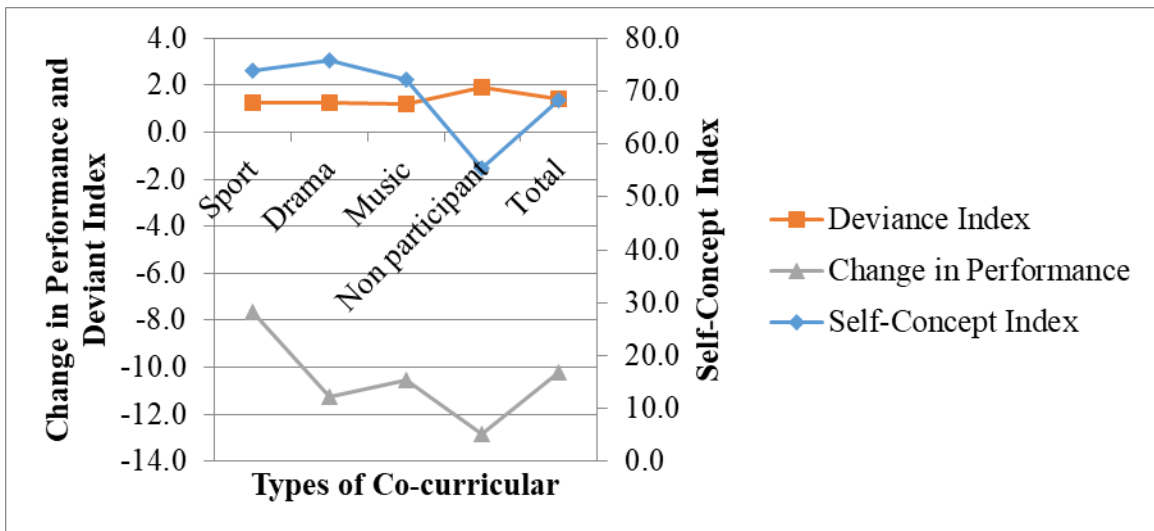
This section presents data on participants in drama, sports and music and non-participants across the three dependent variables of self-concept, deviance behaviour and academic performance. The results of this analysis are presented in Tables 4.84, 4.85, 4.86, 4.87 and 4.88.

**Table 4 84: Means and Standard Deviations in Self-Concept, Deviant Behaviour and Academic Performance of Participants and Non participants in Co-Curricular Activities**

<b>Variables</b>		<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Self-Concept Index	Sport participants	331	73.87	13.92
	Drama participants	116	75.87	12.44
	Music participants	114	72.12	13.46
	Non participants	245	55.49	21.55
	<b>Total</b>	<b>806</b>	<b>68.32</b>	<b>18.46</b>
Deviance Index	Sport Participants	332	1.24	00.29
	Drama Participants	116	1.23	00.28
	Music Participants	114	1.22	00.22
	Non participant	245	1.89	00.67
	<b>Total</b>	<b>807</b>	<b>1.43</b>	<b>00.53</b>
Academic Performance	Sport Participants	314	-7.66	11.84
	Drama Participants	114	-11.28	12.60
	Music Participants	106	-10.55	11.64
	Non participants	237	-12.86	15.30
	<b>Total</b>	<b>771</b>	<b>-10.19</b>	<b>13.24</b>

Table 4.84 shows the means and standard deviations for self-concept, deviant behaviour and academic performance of participants in sports, drama and music, and the non-participants. With regard to self-concept, participants in drama had a mean and standard deviation of  $75.87 \pm 12.44$ ; participants in sport showed a mean and standard deviation of  $73.87 \pm 13.92$ , while participants in music had a mean and standard deviation of  $72.12 \pm 13.46$ . This shows that participants in drama had higher self-concept compared to participants in music, sports and non-participants in co-curricular activities. In terms of deviant behaviour, participants in sports showed a mean score and standard deviation of  $1.24 \pm 0.29$ , participants in drama had a mean and standard deviation of  $1.23 \pm 0.28$  while participants in music had a mean and standard deviation of  $1.22 \pm 0.22$ . The findings

showed that non-participants in co-curricular activities were more likely to engage in deviant behaviour as compared to participants. However, comparing participants in sports, music and drama, participants in sports were more likely to engage in deviant behaviour compared to those in drama and music. In respect to academic performance, participants in sports had a mean and standard deviation of  $7.66 \pm 11.84$ , participants in music had a mean and standard deviation of  $10.55 \pm 11.64$  while participants in drama had a mean and standard deviation of  $-11.28 \pm 12.60$ . These means suggest that participants in sports showed better academic performance than participants in music, drama and non-participants.



**Figure 4 21: Interaction among Participation in Co-Curricular Activities (Drama, Sports and Music) on Self-Concept, Deviant Behaviours and Academic Performance of Secondary School Students**

The results in Figure 4.21 show that self-concept, deviant behaviour and academic performance of students slightly changed depending on the type of the co-curricular activities they participated in.

**Table 4 85: Summary of the Two-Way ANOVA on the Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance**

		ANOVA				
Variables		Sum of Squares	df	Mean Square	F	Sig.
Self-Concept Index	Between Groups	58792.184	3	19597.395	72.917	.000
	Within Groups	215546.67	802	268.761		
	Total	274338.85	805			
Deviance Index	Between Groups	74.500	3	24.833	129.62	.000
	Within Groups	153.836	803	.192		
	Total	228.336	806			
Academic Performance	Between Groups	3844.580	3	1281.527	7.487	.000
	Within Groups	131285.42	767	171.167		
	Total	135130.00	770			

The Two Way ANOVA in Table 4.85, showed a main effect of participation in co-curricular activities on student self-concept ( $F(3,802) = 72.917, p < 0.001$ ), deviant behaviour ( $F(3,803) = 129.62, p < 0.001$ ) and academic performance ( $F(3,767) = 7.487, p < 0.001$ ). This implies that participation in co-curricular activities had a significant influence on student self-concept, deviant behaviour and academic performance.

A post hoc analysis on the influence of student participation in co-curricular activities on self-concept, deviant behaviour and academic performance was conducted with an aim of identifying which group differed significantly from each other. The results of this analysis are presented in Table 4.86.

**Table 4 86: Multiple Comparisons of Participation in Sport, Drama and Music on Self-Concept, Deviant Behaviour and Academic Performance**

<b>Tukey HSD</b>					
<b>Dependent Variable</b>	<b>(I) Which co - curricular activity do you do?</b>	<b>(J) Which co - curricular activity do you do?</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
Self-Concept Index	Non participant	Sport	-18.38056 <sup>*</sup>	1.38165	.000
		Drama	-20.38378 <sup>*</sup>	1.84767	.000
		Music	-16.63030 <sup>*</sup>	1.85864	.000
	Sport	Non participant	18.38056 <sup>*</sup>	1.38165	.000
		Drama	-2.00322	1.76886	.670
		Music	1.75026	1.78032	.759
	Drama	Non participant	20.38378 <sup>*</sup>	1.84767	.000
		Sport	2.00322	1.76886	.670
		Music	3.75348	2.16205	.306
	Music	Non participant	16.63030 <sup>*</sup>	1.85864	.000
		Sport	-1.75026	1.78032	.759
		Drama	-3.75348	2.16205	.306
Deviance Index	Non participant	Sport	.65662 <sup>*</sup>	.03686	.000
		Drama	.66109 <sup>*</sup>	.04933	.000
		Music	.67217 <sup>*</sup>	.04962	.000
	Sport	Non participant	-.65662 <sup>*</sup>	.03686	.000
		Drama	.00447	.04721	1.000
		Music	.01555	.04751	.988
	Drama	Non participant	-.66109 <sup>*</sup>	.04933	.000
		Sport	-.00447	.04721	1.000
		Music	.01108	.05772	.997
	Music	Non participant	-.67217 <sup>*</sup>	.04962	.000
		Sport	-.01555	.04751	.988
		Drama	-.01108	.05772	.997
Academic Performance	Non participant	Sport	-5.19643 <sup>*</sup>	1.12576	.000
		Drama	-1.57336	1.49121	.717
		Music	-2.31005	1.52873	.431
	Sport	Non participant	5.19643 <sup>*</sup>	1.12576	.000
		Drama	3.62306	1.43059	.056
		Music	2.88637	1.46966	.203

	Drama	Non participant	1.57336	1.49121	.717
		Sport	-3.62306	1.43059	.056
		Music	-.73669	1.76529	.976
	Music	Non participant	2.31005	1.52873	.431
		Sport	-2.88637	1.46966	.203
		Drama	.73669	1.76529	.976
*. The mean difference is significant at the 0.05 level.					

Post-hoc analysis using Tukey's HSD showed that there was a significant mean difference between non-participants and participants in drama ( $p=0.000$ ), music ( $p=0.000$ ) and sports ( $p=0.000$ ) on self-concept level and deviance behaviour. Secondly, there was a significant mean difference between non-participants and participants in sports on academic performance. However, there were no significant mean difference between non-participants and participants in music and drama on academic performance. Results presented in Table 4.87 depict comparison of participants in co-curricular activities and non-participants self-concept level.

**Table 4 87: Tukey HSD Results on Self-Concept**

Self-Concept Index			
Tukey HSD			
Music, Drama and Sport	N	Subset for alpha = 0.05	
		1	2
Non participant	245	55.4880	
Music	114		72.1183
Sport	331		73.8686
Drama	116		75.8718
Sig.		1.000	.164
Means for groups in homogeneous subsets are displayed.			

As shown in Table 4.87, Tukey's HSD test showed that non-participants ( $\bar{x} = 55.49$ ), were placed in their own category while participants in music ( $\bar{x} = 72.12$ ), sport

( $\bar{x} = 73.87$ ) and drama ( $\bar{x} = 75.87$ ) in a different category. This implies that there was a significant difference between non-participants and participants in drama, music and sports on self-concept level.

The findings presented in Table 4.88 shows comparisons of engagement in deviant behaviour between participants in co-curricular activities and non-participants

**Table 4 88: Tukey HSD Results on Deviant Behaviour**

Deviance Index			
Tukey HSD			
Which co - curricular activity do you do?	N	Subset for alpha = 0.05	
		1	2
Music	114	1.2213	
Drama	116	1.2324	
Sport	332	1.2369	
Non participant	245		1.8935
Sig.		.989	1.000
Means for groups in homogeneous subsets are displayed.			

Post-hoc analysis using Tukey’s HSD showed that participants in music ( $\bar{x} = 1.22$ ), sport ( $\bar{x} = 1.23$ ) and drama ( $\bar{x} = 1.24$ ) have been placed in the same category while non-participants ( $\bar{x} = 1.89$ ) were placed in a different category. This implies that there was a significant difference in deviant behaviour between participants in drama, music and sports and non-participants. Table 4.89 presents results of the Tukey HSD test on academic performance. This test was conducted with an aim of identifying between participants and non-participants, which group differed significantly from each other.

**Table 4 89: Tukey HSD Results on Academic Performance**

<b>Academic Performance</b>			
<b>Tukey HSD</b>			
<b>Which co - curricular activity do you do?</b>	<b>N</b>	<b>Subset for alpha = 0.05</b>	
		<b>1</b>	<b>2</b>
Non participant	237	-12.8564	
Drama	114	-11.2830	-11.2830
Music	106	-10.5463	-10.5463
Sport	314		-7.6599
Sig.		.402	.069
Means for groups in homogeneous subsets are displayed.			

Tukey's HSD test results revealed that non-participants ( $\bar{x} = -12.86$ ), participants in drama ( $\bar{x} = -11.28$ ) and participants in music ( $\bar{x} = -10.55$ ) have been placed in the same category, while participants in sports ( $\bar{x} = -7.66$ ) has been placed together with participants in drama and participants in music. This implies that the significant difference is only between non-participants and participants in sports with participants in sports having the highest academic performance.

#### **4.9 Multivariate Analysis of Variance (MANOVA) for Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance**

To determine whether mean differences among the participants and non-participants in co-curricular activities on a combination of the dependent variables (self-concept, deviant behaviour and academic performance) were likely to have occurred by chance, a Multiple Analysis of Variance (MANOVA) was conducted. The means and standard deviations

obtained on participation in co-curricular activities across deviant behaviour, self-concept and academic performance were first presented in Table 4.90.

**Table 4 90: Differences in Means among the Participants and Non-Participants across Deviant Behaviour, Self-Concept and Academic Performance**

<b>Study variables</b>	<b>Participation</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Deviance Index	Non-participant	385	1.83	0.66
	Participant	533	1.23	0.26
	<b>Total</b>	<b>918</b>	<b>1.48</b>	<b>0.56</b>
Self-Concept Index	Non-participant	385	53.82	22.88
	Participant	533	74.24	13.37
	<b>Total</b>	<b>918</b>	<b>65.68</b>	<b>20.61</b>
Academic Performance	Non-participant	385	-13.63	13.56
	Participant	533	-9.01	12.07
	<b>Total</b>	<b>918</b>	<b>-10.95</b>	<b>12.91</b>

As shown in Table 4.90, there were differences in means among the participants and nonparticipants on self-concept, deviant behaviour and academic performance. Specifically, participants had a mean and standard deviation of  $1.23 \pm 0.26$  on deviant behaviour while non-participants showed a mean and standard deviation of  $1.83 \pm 0.66$ . With respect to self-concept, participants had a mean and standard deviation of  $74.24 \pm 13.37$  while non-participants had a mean and standard deviation of  $53.82 \pm 22.88$ . In terms of academic performance, participants produced a mean and standard deviation of  $-9.01 \pm 12.07$  while non-participants had a mean and standard deviation of  $-13.63 \pm 13.56$ . When comparing the differences in the mean differences between the participants and nonparticipants, the findings showed that participants were more likely to have higher self-concept, higher academic performance and less likely to engage into deviant behaviour compared to their counterparts. Table 4.91 shows Box's test of equality of covariance matrices

**Table 4 91: Box's Test of Equality of Covariance Matrices**

<b>Box's Test of Equality of Covariance Matrices<sup>a</sup></b>	
Box's M	456.514
F	75.806
df1	6
df2	4703785.673
Sig.	.000
Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.	
a. Design: Intercept + co-curricular	

Box's M test revealed that there was a significant difference between participants and nonparticipants in co-curricular activities, meaning that the group variances were not equal. Further analysis was conducted through the Multiple Analysis of Variance and the results are presented in Table 4.92.

**Table 4 92: MANOVA for Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance**

<b>Multivariate Tests<sup>b</sup></b>						
<b>Effect</b>		<b>Value</b>	<b>F</b>	<b>Hypothesis df</b>	<b>Error df</b>	<b>Sig.</b>
Intercept	Pillai's Trace	.978	13324.645 <sup>a</sup>	3.000	914.000	.000
	Wilks' Lambda	.022	13324.645 <sup>a</sup>	3.000	914.000	.000
	Hotelling's Trace	43.735	13324.645 <sup>a</sup>	3.000	914.000	.000
	Roy's Largest Root	43.735	13324.645 <sup>a</sup>	3.000	914.000	.000
Co-curricular	Pillai's Trace	.338	155.240 <sup>a</sup>	3.000	914.000	.000
	Wilks' Lambda	.662	155.240 <sup>a</sup>	3.000	914.000	.000
	Hotelling's Trace	.510	155.240 <sup>a</sup>	3.000	914.000	.000
	Roy's Largest Root	.510	155.240 <sup>a</sup>	3.000	914.000	.000
a. Exact statistic						
b. Design: Intercept + co-curricular						

As shown in Table 4.92, there were statistically significant differences in influence of participation and non-participation on self-concept, deviant behaviour and academic performance ( $F(3,914) = 155.240, p = 0.000$ ; Wilks' Lambda  $\lambda = 0.662$ ). This means that on a linear combination of the three dependent variables of self-concept, deviant behaviour and academic performance, there are significant differences between participants in co-curricular activities and those who do not participate in co-curricular activities.

**Table 4 93: Levene's Test of Equality of Error Variances**

<b>Levene's Test of Equality of Error Variances<sup>a</sup></b>				
	<b>F</b>	<b>df1</b>	<b>df2</b>	<b>Sig.</b>
Deviance Index	660.394	1	916	.000
Self-Concept Index	146.848	1	916	.000
Academic Performance	5.318	1	916	.021
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.				
a. Design: Intercept + co-curricular				

Table 4.93 shows results of the Levene's test of equality of variances for each of the three dependent variables. The findings revealed that statistically variances of error among deviant behaviour ( $F(1,916) = 660.394, p \leq 0.001$ ), self-concept ( $F(1,916) = 146.848, p \leq 0.001$ ) and academic performance ( $F(1,916) = 5.318, p = 0.021$ ) were all significant. The finding implied that the variance of the error term was not constant across groups. A Post Hoc Tests of Tukey HSD was conducted to determine how dependent variables differed from the independent variables; and the results of the analysis are presented in Table 4.94.

**Table 4 94: Post Hoc Tests of Tukey HSD for the Three Dependent Variables (Deviance Index, Self-Concept and Academic Performance)**

<b>Tests of Between-Subjects Effects</b>						
<b>Source</b>	<b>Dependent Variable</b>	<b>Type III Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Corrected Model	Deviance Index	81.925 <sup>a</sup>	1	81.925	370.629	.000
	Self-Concept Index	93244.928 <sup>b</sup>	1	93244.928	288.375	.000
	Academic Performance	4783.031 <sup>c</sup>	1	4783.031	29.584	.000
Intercept	Deviance Index	2089.155	1	2089.155	9451.381	.000
	Self-Concept Index	3665774.244	1	3665774.244	11337.001	.000
	Academic Performance	114603.754	1	114603.754	708.836	.000
Co-curricular	Deviance Index	81.925	1	81.925	370.629	.000
	Self-Concept Index	93244.928	1	93244.928	288.375	.000
	Academic Performance	4783.031	1	4783.031	29.584	.000
Error	Deviance Index	202.475	916	0.221		
	Self-Concept Index	296184.950	916	323.346		
	Academic Performance	148097.748	916	161.679		
Total	Deviance Index	2294.535	918			
	Self-Concept Index	4349060.452	918			
	Academic Performance	262919.791	918			
Corrected Total	Deviance Index	284.399	917			
	Self-Concept Index	389429.878	917			
	Academic Performance	152880.779	917			
a. R Squared = .288 (Adjusted R Squared = .287)						
b. R Squared = .239 (Adjusted R Squared = .239)						
c. R Squared = .031 (Adjusted R Squared = .030)						

As shown in Table 4.94, participation in co-curricular activities had a significant main effect on students' engagement into deviance behaviours ( $F(1,916) = 370.629, p=0.000$ ), self-concept  $F(1,916) = 288.375, p=0.000$ , and academic performance  $F(1,916) = 29.584, p=0.000$ ). The results therefore show that participants and non-participants differed significantly in terms of their self-concept, deviant behaviour and academic performance. Table 4.95 indicates estimated marginal means between participants and non-participants in co-curricular activities in terms of their self-concept, academic performance and deviance behaviours.

**Table 4 95: Estimated Marginal Means on Participation in Co-Curricular Activities across Deviance Behaviour, Self-Concept and Change in Performance**

<b>Dependent Variable</b>	<b>Participation</b>	<b>Mean</b>	<b>Std dev.</b>
Deviance Index	Non-participant	1.83	.024
	Participant	1.23	.020
Self-Concept Index	Non-participant	53.82	.916
	Participant	74.24	.779
Change in Performance	Non-participant	-13.63	.648
	Participant	-9.01	.551

Table 4.95 shows that participants in co-curricular activities had a mean score and standard deviation of  $1.23 \pm 0.20$  while non participants had a mean and standard deviation of  $1.83 \pm 0.024$ . On the self-concept index, participants had a mean s and standard deviation of  $74.24 \pm 0.779$  while the non-participants' mean and standard deviation were  $53.82 \pm 0.916$ . With regard to academic performance, participants had a mean score and standard deviation of  $-9.01 \pm 0.551$  while non-participants had a mean and standard deviation of  $-13.63 \pm 0.648$ . Thus indicating that participants in co-curricular activities had better self-concept and academic performance; and rarely engaged in deviant behaviour as compared to non-participants

## CHAPTER FIVE: DISCUSSION

### 5.1 Introduction

This chapter presents a discussion of the study findings. The findings are based on the objectives of the study and discussed, not only in the context of studies reviewed in Chapter two, but also any other new relevant literature and evidence.

### 5.2 Demographic Characteristics of the Study Respondents

The proportion of male students (53.9%) who participated in the study was slightly higher compared to that of female students. According to Thibault *et al.* (2010), female participation in competitive sports activities is less compared to that of male. Similarly, Hallmann and Wicker (2011) concluded that male participation in co-curricular activities is high compared to female, especially in sports. However, in their study on gender variation in extra-curricular activity participation and perceived life chances in adolescents, Mello and Worrell (2008) established that there were gender differences in co-curricular activity participation and perceived life chances among adolescents. Majority of the male adolescents were more involved in athletic and organized groups, whereas more female adolescents participated in artistic and religious activities (Mello and Worrell, 2008). With regard to academic class level, majority of the students (36.3%) were in Form three followed by those in Form two, Form four with Form ones showing the lowest participation. This is because in most cases, Form three classes is when the talent exhibited at lower levels, mature. Additionally, by this level, participants in co-curricular activities may have had a lot of exposure to co-curricular activities. They have been in school for sufficiently longer duration during which their competitiveness and talent inclinations have been noted by teachers and peers who encourage them to join the

school extra-curricular teams. These findings concurred with those of Bulinda's (2002) who established that teenagers improve their performance through their experiences and age. Bulinda's study further found that most the participants and non-participants were from extra-county and national schools.

Participants for the study were drawn from the schools which had participated in co-curricular activities competitions from the regional level. However, this criteria excluded most of the sub-county schools from the study. Sub-County schools tend to lack facilities and equipment that facilitates greater participation in co-curricular activities (Crawford, et al., 2008). Wangai (2012) revealed that over 60.0% of the students stated that funding for co-curricular activities was inadequate which affected their participation in sports and games. Most of the students also added that infrastructural facilities for co-curricular activities in their schools were not adequate. In reference to academic performance, participants in co-curricular activities had performed well in KCPE (mean score of 360.13) as compared to non-participants (mean of 358.19). Rathore, Chaudhry and Azad (2018) suggest that participation in co-curricular activities enhances class attendance of students, which in turn, plays an important role in achieving good academic performance. In addition, most of the participants work as a team, even form study groups that eventually helps them improve their academic performance (Adeyemo, 2010).

With regard to types of co-curricular activities participated in by the students while in primary school, the study revealed that 38.1% had participated in soccer, 29.2% in athletics, 57.0% in music, and 43.0% in drama. When comparing participation by sports, drama and music, 59.0% had engaged in sports, 41.5% in music and 20.6% in drama. Thus showing that the activity of sports had already attracted majority of the participants.

The difference in the number of participants was attributed to the fact that sports competitions are spread throughout the year, unlike drama and music in which competitions take place once in a year. The researcher also sought to determine the participant and non-participant evaluation of their academic performance during the previous end of term secondary school examinations. It emerged that most students felt that their performance had been average. However, when comparing the participants and non-participants, participants in co-curricular activities in secondary schools performed better in academics than non-participants.

### **5.3 Influence of Participation in Competitive Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance of Secondary School Students**

One of the main goals of this study was to establish the influence of participation or non-participation in competitive co-curricular activities on the self-concept, deviant behaviour and academic performance of secondary school students in Kenya.

#### **5.3.1 Influence of Participation and Non-participation in Co-Curricular activities on Self-Concept of Secondary School Students in Kenya**

This study assessed the influence of participation and non-participation in co-curricular activities on self-concept. The findings showed that participation in co-curricular activities helped students to improve their self-concept. Results of the T-test statistics indicated that there was a significant difference between participants and non-participants self - concept level ( $t(593) p < 0.001$ ) (Table 4.15). Thus implying that participants in co-curricular activities had higher self-concept than non-participants. These findings are in agreement with Kiptala and Kimengi (2014); Knifsend and Graham (2012); and Taliaferro, Rienzo and Donovan (2010) that students who took part in sports had a higher

self-concept than those who did not participate in sports. The study by Kiptala and Kimengi (2014) showed that participation in sports assisted students develop skills such as self-confidence and competitive skills, which assisted them in learning the value of teamwork, and experience how to win and how to lose. In addition, this study established that there was a critical connection between participation in sports participation and students' self-concept. This implies that students who participate in sports were more positive and had higher self-confidence compared to non-participants. Brown (2010) found that students who participate in extra-curricular activities have higher self-esteem and self - confidence because they take pride in the being rewarded for their good accomplishment. Hence they gain self-respect, self-esteem and self-confidence. Similarly, Rafiullah, Fakhar and Jehanzaib (2017) established that university students, who participated in the extra-curricular activities, had positive self--concept and improved academic performance compared to the students who did not participate in extra-curricular activities. Rafiullah, et al. (2017) established that students who actively engaged in extra-curricular activities developed social connections and teamwork; and had better control over their emotions compared to non-participants. Rinn and Winger (2007) opined that higher physical abilities and self-concepts were identified positively with adolescents who engage in sports, as opposed to those who were dormant in sports activities. Johnson and Eason (2016) reported that students who participated in the extra-curricular activities had positive self-concept and an improved academic performance compared to non- participants.

Post-hoc analysis using Tukey's HSD revealed that there was a significant difference in the means between non-participants and participants in drama ( $p < 0.001$ ), music

( $p < 0.001$ ) and sports ( $p < 0.001$ ) regarding self-concept level (Table 4.90). Participants in drama had a higher mean score followed by participants in sports and then in music. This implies that participants in drama had higher self-concept than participants in sports and music. Contrary to these findings, Olmedilla, Toro and Abenza (2016) opined that students who are physically active in sport had higher levels of physical and emotional self-concept compared to the students who are not physically active and did not participate in sport. The findings further showed that participants in co-curricular activities had higher self-concept than non-participants. In line with these findings, Kort-Butler and Hagen (2011) also found that students, who participated in school-based extra-curricular programmes, had higher self-esteem compared to those who did not participate. This is because participation in co-curricular activities boosts self-concept by helping students develop confidence and a positive perception of the school and other students (Ghaxanfar, 2015). Similarly,

Lam (2011) reported positive relationship between students' participation in extra-curricular and their confidence levels. However, the Lam study did not find any significant differences between students' involvement in extra-curricular activities and their social aptitudes. This implies that students' participation in extra-curricular activities did not have a significant influence on students' social skills.

### **5.3.2 Influence of Participation and Non-Participation in Co-Curricular Activities on Deviant Behaviour**

This study aimed at investigating the influence of participation and nonparticipation in co-curricular activities on deviant behaviour. The findings for current study showed that most participants never or rarely engaged in deviant behaviour, while a significant

number of the non-participants engaged in deviant behaviour. These results correspond with those of Coto's (2016) who found significant association between participation in extra-curricular activities and adolescents' substance use. Coto (2016) also revealed that adolescents who participated in both, academic-based and fine arts clubs, decreased the possibility of their engagement in substance use as compared to non-participants. Similarly, Kronholz (2012) concluded that students, who get involved in extra-curricular activities, are more focused on their goals, have self-discipline and good time management. Kronholz (2012) further elaborated that students, who focused exclusively on academic performance and rarely participated in extra-curricular activities, lacked focus on their goals, self-discipline and time-management.

Analysis in the current study revealed that participants in co-curricular activities were less likely to engage in deviant behaviour compared to non-participants; Thus suggesting that participation in co-curricular activities had a positive impact on students' behaviour. Rambaree, Mousavi and Ahmadi (2017) reported similar findings that participation in sports protected young people against drug abuse. On the other hand, Veliz, Schulenberg and Megan (2015) discovered that participation in at least one competitive sport during the 12th grade, presented a greater likelihood of these participants engaging in drinking during the past two weeks, compared to their peers who did not participate in sports during their 12th grade year. Additionally, students who participated in high-contact sports, such as football, ice hockey, lacrosse, and wrestling, were more likely to have abused alcohol and marijuana over the past 30 days compared to peers who had not participated in such sports during their 12<sup>th</sup> grade year.

In the Kenyan context, Karimi, Njoroge, and Kamau (2018) found that participation in co-curricular activities occupies learner's minds and diverts their attention from vices such as drugs and substance abuse and immoral activities. The most commonly abused drugs by both, participants and non-participants in co-curricular activities were bhang (marijuana), alcohol and miraa (*Catha edulis*). Other abused substances mentioned included tobacco, Kubeli, cigarettes and heroine. In agreement with these findings, recent studies have shown that there is a relatively high proportion of learners who come into contact with different drugs, particularly alcohol, tobacco, and cannabis, which can serve as a form of access, or bridge, to using other substances (Dunn & Thomas, 2012; Goncy & Mrug, 2013). Additionally, a report released by NACADA in 2004 revealed that one in every three high school students took alcohol. Another 8.3% smoked cigarettes while almost one in every ten (9.1%) chewed miraa. About 3% smoked bhang or harder hard drugs like heroin, cocaine, mandrax and tranquilizers (NACADA, 2004b). The Masese, Nasongo and Ngesu (2012) report rated that majority of the secondary school student's abuse alcohol, followed by miraa (Khat) and then tobacco. They further added that the main reason for abusing these drugs (alcohol, miraa and tobacco) was that they were not illegal and that they were easily purchased.

### **5.3.3 Influence of Participation and Non-Participation in Co-Curricular Activities on Academic Performance**

The results of this study established that both, participants and non-participants reflected decreased academic performance between their KCPE examinations and end of term secondary school examinations. However, participants in competitive co-curricular activities obtained higher mean scores than non-participants. This shows that

participation in co-curricular activities had a positive impact on their academic performance. These findings concur with those of, Everett (2011), who found that there was a positive correlation between students' participation in co-curricular activities and their academic performance. The Everett study showed that students who engaged in extra-curricular activities performed better in academics compared to students who did not participate in extra-curricular activities. The current study also showed that participants in co-curricular activities were less absent from school without permission as compared to non-participants. In support of these results, Everett (2011) further reported that students who participated in co-curricular activities had a good school attendance record compared to non-participants, which eventually led to a positive impact on their academic performance.

Further, analysis showed that there was a significant difference in academic performance between the participants and non-participants in co-curricular activities ( $t(772) = 5.38$ ,  $p < 0.001$ ). This means that participants performed better in academics than non-participants. Findings of the current study agree with those of Adeyemo (2010), who found that students' participation in extra-curricular activities (sports, drama music, scouting and dance) influenced their achievement in physics. This is because students who participate in extra-curricular activities, can easily form study groups to learn together and from each other. Thus, improving their performance in physics.

Similarly, Ahmad, Rahman, Ali, Rahman and Al-Azad (2015) observed that participants in extra-curricular activities generally seem to benefit as there was evidence of better examination results, higher self-concept, higher standardized test scores and educational attainment. This was probably because of the already existing extra-curricular activity

cohesive team that also allowed academic learning and consequential improvement in academic performance. The results of the current study concur with those of Cosden, Morrison, Gutierrez and Brown (2012) who affirmed that students who participate in extra-curricular activities were more likely to get higher grades and other academic achievements than students who do not participate in extra-curricular activities. Doolittle and Rukavina, (2014) confirmed benefits of participation in extra-curricular activities by providing evidence of increased academic achievement among the youth following participation in high school football.

The current study showed that Post-hoc analysis using Tukey's HSD revealed that there was a significant mean difference between non-participants and participants in sports on academic performance. This means that participants in sports had better academic performance than non-participants. Conversely, Tubic, *et al.* (2015) found no statistically significant differences in academic achievement between students engaged in sport and those who are not. However, results in Tubic's study showed that there was no significant mean difference between non-participants and participants in music and drama on academic performance. This finding differs from that of Daniyal, Nawaz & Hassan (2012) who report that students' participation in sports, drama and other literary activities positively influences their academic achievements. Gitonga (1998) was more emphatic that participants in sports consistently performed better than non-participants in educational achievement. The major factors which influenced participants' academic performance were parental social economic status (SES), KCPE marks and the type of school (Gitonga, 1998).

## **5.4 Gender Differences in the Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance.**

The second objective of the study was to examine gender differences in the influence of participation in co-curricular activities on self - concept, deviant behaviour and academic performance.

### **5.4.1 Gender Differences in the Influence of Participation in Co-Curricular activities on Self-Concept**

The finding of this study indicated that participants in co-curricular activities obtained higher mean scores on self-concept compared to non-participants. Participation in co-curricular activities helped students develop social ties, personality skills and build their identities, and hence, enhance their self-concept. Female participants and non-participants in the current had higher mean scores on self-concept compared to their male counterparts. This implies that female students had higher self-concept compared to male students. These findings agree with those of Olmedilla, Toro & Abenza (2016) who found that female students, who participate in extra-curricular activities, have a greater emotional self-concept compared to female non-participants and male participants. Participants developed skills for controlling their emotions and also in responding adequately to different situations in daily life. However, contrary to the above results, Magoc, Tomaka, Shamaley, & Bridges (2016) reported that male students performing better in physical activities than their female counterparts. They also reported that male students had greater self-efficacy for PA, greater perceived ability to set goals and make plans for PA, and greater expectancies that PA would produce psychological effects such as, reduced stress, improve body image, and enhance their competitive ability. Similarly,

Tubic, Dordic and Pocek, (2012) reported that in terms of gender, sports engagement of the male subjects has a significantly higher effect on self-perception of sports competence, social acceptance, as well as general self-worth as compared to female students.

The ANOVA showed that there was a significant interaction between gender and participation in co-curricular activities ( $F(1,954) = 23.954, p < 0.001$ ) in influencing students' self-concept in this study. This implies that female participants had higher self-concept than male participants. These results differed with those of Kimengi and Kiptala (2014) whose study revealed that there were no significant differences on students' self-concept across gender. In the same vein, Bowker, Gadboi and Cornock (2003) found that male students reported greater satisfaction with weight and appearance; there were no gender differences in general self-worth between male and female students. More so, results showed that more female students, who participated in competitive sports, reported lower levels of perceived athletic competence and global self-worth but reported higher self-esteem when they participated in more non-competitive sports. Additionally, sport participation predicted participants' self-esteem when the gender and type of sport were moderating factors. In disagreement with the findings of Karimi, Njoroge & Kamau (2018) that determined the influence of co-curricular activities on the development of holistic learners in public secondary schools in Kiambu County. The Karimi, Njoroge and Kamau study found that there was negative correlation between participation in co-curricular activities and students' personality development, self-efficacy, cognitive, inter-personal values among other aspects. Thus in their study both, male and female student

participation in co-curricular activities did not have a significant influence on their self-concept.

#### **5.4.2 Gender Differences in the Influence of Participation in Co-Curricular Activities on Deviant Behaviour**

From the results of the study, it was established that both, male participants and non-participants had higher mean scores on deviant behaviour compared to female participants and non-participants. Thus, clearly indicating that female students were less likely to engage in deviant behaviour as compared to male students. The findings further showed an interaction between gender and participation in co-curricular activities ( $F(1,955) = 23.314, p < 0.001$ ) in influencing students' engagement in deviant behaviour. Trinh (2013) posited that participation in extra-curricular activities had a positive impact on both male and female behaviour. From the Trinh study, it emerged that student participation in extra-curricular activities, such as sports and arts, reduces both weekly drinking and marijuana intake. In particular, participation in arts reduces weekly drinking among male students and marijuana use among female students. Additionally, participation in non-organized activities and sports reduces regular smoking and marijuana use among male students only. Even though weekly drinking is positively associated with participation in organized sports among males, the association is likely to counter unobserved differences between participants in organized sports and non-participants (Trinh, 2013).

The findings from the current study further showed that male participants in co-curricular activities were less likely to engage in deviant behaviour compared to male non-participants. Male participants in co-curricular activities are closely supervised by their

coaches and hence, they are less likely to engage in deviant behaviour as compared to male non-participants. This finding concurs with those of Gardner *et al.*, (2009) who found that the prospect of non-violent delinquency among boys who participate in sports was lower than for boys who do not participate in extra-curricular activities after adjusting for race, family structure, parental education, and prior non-violent problem behaviour and physical violence. However, Abdu Raheem, (2013) argued that socio cultural variables such as gender, class and status, have a profound effect on drug use among both, sports participants and non-participants. Darling, Caldwell and Smith (2005) found out that students' who took part in non-formal activities were less inclined to utilize drugs than their partners who never participated in non-formal activities. This is because participation in co- curricular activities keeps students lively and triggers a sense of teamwork, consequently instilling a sense of responsibility towards others and a drive to adhere to constructive behavioural norms and best performance (Women's Sports Foundation Report, 2015).

The above studies were further supported by Kwan et al., (2014) who established that teenagers who took part in sports were more averse to take part in the drug use, particularly non-cannabis drugs. Essentially, half of the reviews established that there was an unconstructive association linking sports involvement and marijuana consumption. Nonetheless, the review found that taking part in sports was associated highly with adolescents' alcohol use.

### **5.4.3 Gender Differences in the Influence of Participation in Co-Curricular Activities on Academic Performance.**

The study found that female participants had better academic performance than male participants. Female participants show greater readiness to fight the pressure and competition in the classroom and also try to invest more effort in academics in order to be successful in male dominated society. On the other hand, male participants perceive that success in co-curricular activities brings more benefits to them in terms of popularity in a peer group than their academic achievement. Therefore, majority of them try to maintain this status through stronger orientation towards co-curricular activities than towards schooling and academic obligations. It was further established that male non-participants had better academic performance than the female non-participants. This appears to be in agreement with the Rathore, Chaudhry & Azad (2018) report that students, involved in co-curricular or non-class room activities, had good academic performance compared to students who did not participate in any co-curricular activities. This, suggesting that participation in co-curricular activities enhances class attendance of students which then play an important role in achieving good academic performance in exams. These findings in the current study appear to support those by Rathore, et al., (2018) who had earlier revealed that participants in co-curricular activities were rarely absent from school without permission in comparison to non-participants. In terms of gender, the study found out that when both male and female students participated in non-classroom activities, female students performed better in academics compared to male students.

The two-way ANOVA revealed significant interaction between gender and participation in co-curricular activities ( $F(1,916) = 8.566, P < 0.004$ ) in influencing students' change in

academic performance. In concurrence with the results, Ritchie (2018) established that there was a significant relationship between gender and students' academic achievement. Male students had lower GPAs compared to female students. In addition, the study found a higher likelihood of females participating in co-curricular activities than males. . The Chachra, *et al.* (2009) examination of gender differences in co-curricular activities among engineering students established that female students evaluated the significance of co-curricular activities altogether higher than their male partners. The study further found that female students' involvement is often spread across more than one co-curricular activity, whereas men's contribution has a tendency to be centred on one exceptional activity.

### **5.5 Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance of Students across Various Types of School**

The third objective of the study was to determine the influence of co-curricular activities on self-concept, deviant behaviour and academic performance of students across various types of school.

#### **5.5.1 Influence of Participation in Co-Curricular Activities on Self-Concept across Various Types of School**

Regarding this objective, the study found that students who participated in co-curricular activities from the sub-county schools, county, extra county and national schools obtained a higher mean score on self-concept inventory scale as compared to non-participants from the same schools. This implies that participants had higher self-concept than nonparticipants. Participants in co-curricular activities had opportunity for peer interactions which enhances their social skills and also helps them to learn how to

manage their emotions. In addition, participants in national and extra county schools obtained higher mean scores than those in county and sub-county schools, meaning they had higher self-concept than their counterparts. Large schools (national and extra-county) having greater resources, offered equal opportunities to all students to participate in a variety of co-curricular activities depending on choice. The two-Way ANOVA revealed that there was no significant interaction between school type and participation in co-curricular activities ( $F(3,938) = 2.314, p < 0.074$ ) in influencing students' self-concept. In agreement with the findings, Tubic (2013) found that a positive relationship between students' sports engagement and academic achievement can be explained in terms of personality traits developed in an individual owing to sport. These personality traits range from emotional stability and motivation for achievement to integrated functions such as conscientiousness and responsibility. Turbic (2013) further affirmed that an individual, who has learned through sports or other co-curricular activities, knows how to cope with stress, achieve goals, show capabilities developed through hard work, and will have more trust in his or her own abilities, which will eventually contribute to a higher efficiency in the learning process. These traits are reflected in school conditions and other spheres of life. For instance, a study by Jordan, (1999) cited in Kamau, et al. (2015) revealed that impoverished high schools (sub-county schools) often have weaker co-curricular programmes, student governments, and athletic programmes. Moreover, sports such as crew, fencing, golf, and tennis are very rare for students attending poor, urban comprehensive high schools.

### **5.5.2 Influence of Participation in Co-Curricular Activities on Deviant Behaviour across Various Types of School**

From the study findings, non-participants from sub-county, county, extra county and national schools were more likely to engage in deviant behaviour as compared to participants in co-curricular activities. It further emerged that non- participants from Sub-county schools were more likely to engage frequently in deviant behaviour as compared to those from County, Extra-County and National schools. The difference could be attributed to the fact that most of the sub-county schools are day schools and students are not closely monitored, hence, they are exposed to deviant behaviour such as drug and substance abuse as they go to and from school. The two-way ANOVA showed that school type ( $F(3,939) = 13.476, p < 0.001$ ) and participation in co-curricular activities ( $F(1,939) = 270.974, p < 0.001$ ) had a significant effect on students' engagement in deviant behaviour (Table 4.27). These findings are in agreement with the findings of Kamau, et al., (2015) who found that there was a significant difference among students from National schools, County schools and District schools on the school connectedness. Students from National schools who participated in athletics and non- participants were more connected to school as compared to those in County schools and Sub-county schools. Large schools (National schools) having greater resources giving equal opportunities to all students to participate in variety of sports activities depending on choice (Gitonga & Akpata, 1998).

### **5.5.3 Influence of Co-Curricular Activities on Academic Performance of Students Across Various Types of School**

It emerged from the analysis that participants in co-curricular activities from County, Extra County and National schools had higher mean scores in academics as compared to non- participant from the same schools. However, in Sub-county schools, non-participants ( $M=-3.56$ ) had higher mean score than participants ( $M=-6.53$ ) meaning they had better academic performance. Earlier on, Garcia (2012) reported that students from small schools spent more time participating in extra-curricular activities than students from larger schools for equivalent work hours. The author speculated that this could have a negative impact on their academic performance.

The two-way ANOVA showed that there was significant interaction between school type and participation in co-curricular activities ( $F(3,900) = 2.862, p=0.036$ ) in influencing students' academic performance. This implies that participation in co-curricular activities had a positive impact on students' academic performance across three types of the school, that is; County, Extra County and National schools. This finding deviates from the results of the study by Tubic, Djordjic, Milic and Protic-Gava (2015) who established that students' engagement and participation in sports at the Local level, National level and International level did not have a statistically significant relation with their academic performance. This study also established that students who participated in sports were more devoted in these activities and hence spent most of their time doing exercise rather than studying. Ritchie (2018) observed that there was a significant correlation between students' academic performance and the school type. Students attending co-educational schools had a positive correlation with GPA. In terms of gender, this study found that

students who attended female boarding high schools had better academic achievement than the male students in boarding high schools. In another study, Turner (2010) established that activities such as music and drama helped students develop logical and investigative skills which greatly improve on their academic performance. Similarly, Eady and Wilson (2004) established that music can impact learning in core subjects and also add to the achievement of core objectives in learning. Contrary to the findings, Roland (2010) argued that participating in ECAs sometimes consumed more time and energy than students can handle, which then affected their academic performance. This finding was further supported by Anderson (2011) who affirmed that engaging in extra-curricular activities can overwork students mentally and physically and take away the time which can be used for study. According to them, consequently, students' participation in extra-curricular activities can lead to negative effects on their academic performance.

### **5.5 Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance across Students Different Academic Levels**

The fourth objective of the study was to establish the influence of participation in co-curricular activities on self-concept, deviant behaviour and academic performance across different academic levels classes. The discussions of the main findings are presented below.

#### **5.5.1 Influence of Participation in Co-Curricular Activities on Self-Concept across Students of Different Academic Levels**

The study established that participants across all the academic levels (Form one, two, three and four) had higher mean scores than non-participants in self-concept, meaning

that participants had higher self-concept than non-participants. However, the two-way ANOVA revealed that there was significant interaction between class level and participation in co-curricular activities ( $F(3,951) = 3.213, p=0.022$ ) in influencing students' self-concept. The results concurred with Traves, Harre and Overall (2012) whose study revealed that teenagers participating in dance, theatre and music develop a positive sensation towards their life and they were capable of coping with the challenges they face in life. Similarly, in, Kort-Butler & Hageven (2011), in their study that examined the influence of participation in school based extra-curricular activities on adolescents' self-esteem, found that age had a linear relationship with self-esteem over time. Additionally, it emerged that changes in both, the initial level of self-esteem and the growth of self-esteem over time were significantly influenced by the type of extra-curricular activity. In another study, Russell-Bowie, (2013) explored the improvement of self-concept of children aged between 8 and 12 years from different social and cultural foundations and established that self-concept of those pupils involved in the creative arts programme expanded more extensively than that of the non-creative arts programme pupils. Correspondingly, the Darrow, et al. (2009) study that investigated the consequences of involvement in a Melody Mentorship Programme on the confidence of 24 pre-adult young ladies, found that participation in music enhanced student self-esteem

### **5.5.2 Influence of Participation in Co-Curricular Activities on Deviant Behaviour across Students of Different Academic Levels**

Most students in secondary schools are in their adolescence stage. During this stage, students experiment on things which negatively or positively influence their life. Drug and substance abuse, alcohol taking and smoking cigarettes are some of the most

common deviant behaviours that most of the students experiment on while in secondary school. In the current study, it was evident that both, participants and non-participants in co-curricular activities were abusing bhang, drinking alcohol and chewing miraa. Other drugs mentioned included tobacco, Kubeli, Khat, cigarettes and heroine. According to Howie, Lukacs, Pastor, Reuben and Mendola (2010), teenagers between the ages of 9 and 17, learn to make their own decisions and control their behaviour. This is a critical time for learners to be involved in co-curricular activities because they are under occupied in enriching learning experiences under supervision, and guidance of teachers or coaches. Participation in extra-curricular activities at this stage, therefore, helps them to resist unsafe behaviour such as drug and alcohol use, and other anti-social activities.

From the study findings, levels of engagement in deviant behaviour among the students' participants in co-curricular activities and the non-participants were compared. The study found that form three students engaged in deviant behaviours most frequently, followed by Form four's, then Form two's and finally Form one's. In addition, it emerged that participants in all academic levels obtained lower scores as compared to non-participants on the scale measuring their frequency of engagement in deviant behaviour. This means that non- participants in all class levels were more likely to engage in deviant behaviour as compared to participants. Results further revealed that participation in co-curricular activities had a positive impact on students; meaning participants were less likely to engage in deviant behaviour as compared to non-participants. Contrary to the findings, Agans and Geldhof (2012) found that teenagers participating in individual sports had more bad habits than those participating in team sports. The main reason was that, in teamwork adolescents are trained to have a sense of responsibility and a drive to adhere

to constructive behavioural norms unlike in the team sport participation. Similarly, Metzger et al., (2009) found that adolescents who participate in sports were more engaged in drug and substance usage and school absenteeism as compared to teenagers involved in academic clubs and performing arts, or those who were not involved in any extra- curricular activities. In the Kenyan context, Masese, Nasongo and Ngesu (2012) found that secondary school students who are inactive in extra-curricular activities like sports, debate, drama, music clubs and study groups are at high risk of engaging in deviant behaviours. It further emerged that most of the students who are involved in deviant behaviours are in form two. The reason given was that majority of these students are in the stage of “self-discovery” and hence they are easily influenced by their peers to experiment with some drug and substances which act as one of the main causes of strikes in secondary schools (NACADA, 2017).

### **5.5.3 Influence of Co-Curricular Activities on Academic Performance across Students of Different Academic Levels**

The study found that participants in co-curricular activities performed better in academics as compared to non-participants. It was further established that non-participants in form two had the highest decline in academic performance compared to non-participants in Form one, three and four. It also emerged that participants in co- curricular activities in Form three had better academic performance than those in Form four, two and one. The ANOVA showed significant interaction between participation in co-curricular activities and class level ( $F(3,913) = 3.011, p=0.029$ ) in influencing change in academic performance. In line with the findings, Bulinda (2000) observed that adolescents’ improvement on their academic performance depended on their experiences and age.

Contrary with the above findings, Singh and Mishra (2014) studying extra-curricular activities and student's performance in government and private secondary schools, established that there was no significant difference in the academic performance of students participating in yoga, horse riding, sport activities, dance and music across different age groups; that is, age 13-14 years (Form one) and 15 to 16 years (Form two).

## **5.6 Influence of Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance of Students from Different Social Economic Status**

The fifth objective of the study was to the influence of co-curricular activities on self-concept, deviant behaviour and academic performance of students across social economic status. . The discussions of the findings are given in sections 5.6.1, 5.6.2 and 5.6.3.

### **5.6.1 Influence of Co-Curricular Activities on Self-Concept across Social Economic Status**

The results showed that participants in co-curricular activities from across all social economic backgrounds considered by the current study had higher mean scores than their non-participating. This could therefore, be surmised that participants had a higher self-concept than non-participants. Blomfield and Barber (2011) reported similar findings about participants in extra-curricular activities having higher self-worth and social self-concept than non-participants among adolescents from low socio-economic status schools. The same study further found that there was a strong and positive correlation between developmental experiences that occurred during extra-curricular activities and general self-worth, social and academic self-concept among these adolescents from low social economic status schools. Similarly, Covay and Carbonaro (2010) also revealed

similar significant relationship between extra-curricular participation and socioeconomic status.

### **5.6.2 Influence of Co-Curricular Activities on Deviant Behaviour of Students across Social Economic Status**

The study found that non-participants from different socio-economic background were more likely to engage in deviant behaviours compared to participants in co-curricular activities from the same background. Moreover, non-participants from backgrounds in which parents had lower education level (primary and secondary) were more likely to engage in deviant behaviours compared to those from backgrounds in which parents had attained higher education level (college and university). With regard to parental occupation, non-participants whose fathers were in unskilled jobs were more likely to engage in deviant behaviours compared to those whose fathers were in professional, skilled and commercial occupations. Secondly, non-participants, whose mothers were engaging in commercial jobs, were more likely to engage in deviant behaviours compared to those whose mothers were engaged in professional, unskilled and skilled jobs. According to Trinh (2013), participation in extra-curricular activities lowers engagement in risky behaviour among the female students from low socio-economic status compared to female students from high socio-economic status. However, among the male students, socio-economic status did not have a significant influence on their engagement in risky behaviour. Ersado (2005) established that parental education was highly associated with the students' dropout rates in the school. For instance, parents with low education levels are more likely to see poor school attendance and a higher school drop-out rate among of their children, than parents with higher levels of education to Azizi (2009) found that students with family problems always 'hung-out' with friends

and faced higher levels of discipline problems compared to students with no such problems. The study, however, did establish that students discipline problems did not depend on parents' educational background.

In several secondary schools in Kenya, 'rioting' has been one of the most common behavioural problems among the students. According to Kamotho (2009), the main causes of strikes in schools include overloaded 8.4.4. Curriculum, drug and substance misuse, congested environmental conditions in schools, pressure for good academic performance, autocratic school administration, adolescent identity crisis, reduced parental responsibility, poor prefect systems and culture of impunity in society. Kiptela (2011) established that many students in secondary schools have a negative attitude towards authority and discipline in school. This attitude mediates all activities undertaken in school and eventually influences their behaviour. In this regard, the school should put in place effective disciplinary measures to eradicate these behavioural problems and promote good academic performance and healthy living. One measure that the school can put in place is to ensure that apart from formal curriculum, students participate in non-formal curriculum such as sports, music and drama clubs. This will help them to avoid idleness which mainly creates room for engagement in deviant behaviours such as drugs and substance abuse.

### **5.6.3 Influence of Participation in Co-Curricular Activities on Academic Performance of Students across Social Economic Status**

From the study findings, it emerged that participants in co-curricular activities from backgrounds where parents had higher academic qualifications (college and university) obtained higher mean scores in academics compared to non- participants from the same

home backgrounds. This means that participants in o-curricular activities had better academic performance than nonparticipants from the same background. These findings seem to agree with those of, Wormington, Corpus and Anderson (2012) who stated that students from high socio- economic status reported the strongest academic performance and greatest extra-curricular activities participation. According to Swanson (2012), in order to contribute to the family's financial needs, students from lower socio-economic status frequently hold part-time jobs after schools or full-time jobs when they are not in school., This, in turn, hinders their ability to participate in extra-curricular activities. Additionally, as the number of children in a lower SES family increases, participation in extra-curricular activities from children in that family decreases significantly.

However, non-participants in co-curricular activities from backgrounds in which parents had low academic qualifications (primary and secondary education), scored higher means in academic performance compared to participants from the same background. This implies that non-participants from backgrounds in which parents had lower academic levels, had better academic performance compared to participants. With regard to parental occupation, the study found that from backgrounds in which fathers, mothers and guardians were in professional jobs, participants had better academic performance compared to those from backgrounds in which parents and guardians were involved in commercial, skilled and unskilled jobs. Highly educated parents act as role models and transmit values of education to their children. In addition, they train their children to live healthy life by encouraging them to participate in co-curricular activities in school. However, from backgrounds in which mothers were did unskilled jobs, non-participants in co-curricular activities produced better academic performances than participants from

the same backgrounds. The findings in this study support those of Rintaugu, et al (2012) who established that, at the university level, the participants in athletics came from families where parents had attained university education and were doing white collar-jobs. Thus suggesting that parental occupation is a constructive force on students' involvement in extra-curricular activities. Mwanga, Gaudin and Ngunzo (2017) noted that family plays an important role in the development of athletic talent as well as influencing their academic performance.

### **5.7 Influence of Participation in Sport, Drama and Music on Self-concept, Deviance Behaviour and Academic Performance**

Participants in drama had improved self-concept compared to those in music, sports and non-participants in co-curricular activities. The current study supported the findings of Mansour, Martin, Anderson, Gibson, Liem and Sudmalis (2018), who had established a relationship between participation in various forms of creative and performing arts such as dance, drama, film, music, visual arts and their self-concept among young adults.

In reference to deviant behaviour, the study found that, although non-participants in co-curricular activities were more likely to engage in deviant behaviour, participant in sports were more likely to engage in deviant behaviour compared to those in drama and music. These finding may be due to differences in peer group experiences in sport. The Eccles study (2008) found higher association between participation in sports and alcohol abuse and other risky behaviour, compared to participation in performing arts. Similarly, Lisha, Crano, and Delucchi (2014) found that youth involved in sports are more likely to use alcohol and marijuana. A report by Canadian Centre on Substance Abuse (2014) showed that sport participation, in general, is associated with an increased experience with

alcohol use, while it appears to be protective against most drug use. However, in reference to academic performance, participants in sports out-performed those in music, drama and non-participants. The findings concurred with those of Rees and Sabia (2010) who, in their survey on the relationship between academic achievement and sports participation in high school and junior high school, discovered positive relationship between students' participation in sports and GPAs, which could have been mediated by individual fixed effects such as motivation, future-orientedness, and self-discipline.

Similarly, Knifsend and Graham (2012) observe that student participation in sports enhances academic performance and at the same time promotes fundamental life skills. Taliaferro, Rienzo and Donovan (2010) added that youth sports participation contributes social competence, problem-solving skills, self-esteem, and self-efficacy, locus of control, academic achievement and school attendance, while reducing juvenile arrests, teen births, and school drop-out rate. Conversely, Fredrick and Eccles (2008) established that participation in performing arts such as theater, choir, and band and academic and service clubs, is more consistently associated with higher grades and academic values than is participation in sports. Davenport (2010) established an association linking involvement in music with high school accomplishment. Learners with musical education consistently have considerably higher verbal recall, leading to better English and Mathematics scores. In the same vein, Ongonga, et al., (2010) argued that music enhances knowledge in the areas of Mathematics, Science, Geography, History, Foreign Language, Physical Education and Vocational training. The study found that students who participated in music were highly connected in schools and had an improved reading comprehension compared to non- participants.

## **CHAPTER SIX: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 Introduction**

This chapter presents summary of the major findings, conclusions and recommendations.

The chapter also recommends areas for further studies.

### **6.2 Summary of the Major Findings**

The following is the summary of the study findings based on the objectives.

#### **6.2.1 Influence of Participation and Non-Participation in Competitive Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance**

Participants in co-curricular activities had higher self-concept, better academic performance and were less likely to engage in deviant behaviour than non-participants.

This means that participation in co-curricular activities had a positive impact on students' self-concept, academic performance and students' behaviour.

Comparing the influence of the three co-curricular activities -Sport, Music and Drama - on student self-concept, deviant behaviour and academic performance, the study found that with regard to self-concept, participants in drama had better self-concept when compared to those in music and sports. When considering deviant behaviour, participants in sports were more likely to engage in deviant behaviours compared to those in drama and music; whereas participants in sports had better performance than those in music and drama with regard to academic performance.

### **6.2.2 Gender Differences in the Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance**

With regard to gender, female participants and non- participants had higher self-concept than male students. They were less likely to engage in deviant behaviour than male students. It also emerged that female participants in co-curricular activities showed better academic performance compared to the male participants. However, among the non-participants, males had better academic performance than females. This revealed significant interaction between gender and participation in co-curricular activities.

### **6.2.3 Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance among Students across Types of Schools**

Considering school types, participants in co-curricular activities in extra county schools had higher self-concept than their counterparts in National, County and Sub-County schools. With regard to deviant behaviours, non-participants from Sub-County, County, Extra-County and National schools were more likely to engage in deviant behaviours than participants in co-curricular activities. It further emerged that non- participants from Sub-County schools were more likely to engage in deviant behaviours compared to those from County, Extra-County and National schools. In reference to academic performance, participants in co-curricular activities from County, Extra-County and National schools revealed better academic performance than non- participant from the same schools. However, in Sub-County schools, non-participants had better academic performance than participants.

#### **6.2.4 Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance across Academic Levels**

With regard to influences across student academic levels, participants in co-curricular activities across all academic levels (Form one, two, three and four) had higher self-concept than non-participants. However, non-participants across all academic levels were more likely to engage in deviant behaviours compared to participants. When comparing the level of deviant engagement among the non-participants in Forms one, two, three and four, the study found that Form threes engaged in deviant behaviours most frequently, followed form fours, Form twos and Form ones in that descending order. Regarding academic performance, participants in co-curricular activities had better academic performance than non-participants. It was further noted that non-participants in Form two had the highest decline in academic performance compared to non-participants in Form one, three and four.

#### **6.2.5 Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance of Students across Social Economic Status**

Regarding the influence of participation on self-concept, deviant behaviour and academic performance across all socio-economic dimension so parental education level and occupation category, participants across all socio-economic factors of parental education level and occupation category, had higher self-concept than non-participants. Non-participants from backgrounds in which parents had just primary or secondary education, and were engaged in unskilled jobs, were more likely to engage in deviant behaviours than those from background where parents had attained higher education level (college

and university) and were in professional and skilled jobs. With regard to academic performance, participants in co-curricular activities from backgrounds in which parents had higher academic qualifications to college and university levels and were in professional jobs, had better academic performance than non-participant from the same home backgrounds.

#### **6.2.6 Influence of Participation in Sport, Drama and Music on Self-concept, Deviance Behaviour and Academic Performance**

Comparing the influence of student participation in sports, drama and music, the study found that participants in drama had elevated self-concept in comparison to those in music, sports and non-participants. In terms of deviant behaviour, the study revealed that, although non-participants in co-curricular activities were more likely to engage in deviant behaviour, participants in sports were more likely to engage in deviant behaviours compared to those in drama and music. These findings may be due to differences in peer group experiences in sports as compared to other activities like music and drama. However, with regard to academic performance, participants in sports performed better than those in music, drama and non-participants.

### **6.3 Conclusions**

The following conclusions have been drawn from the findings:

- i. Participation in co-curricular activities has a positive influence on students' self-concept, deviant behaviour and academic performance.
- ii. There was significant interaction between gender and participation in co-curricular activities in influencing students' self-concept, engagement in deviant behaviours and academic performance.

- iii. There was no significant interaction between school type and participation in co-curricular activities in influencing students' self-concept. However, in terms of deviant behaviours and academic performance, the study concludes that there was a significant interaction between school type and participation in co-curricular activities in influencing students' engagement in deviant behaviours and academic performance.
- iv. There was a significant interaction between academic level and participation in co-curricular activities in influencing students' self-concept, engagement in deviant behaviours and academic performance.
- v. There was no significant interaction between participation in co-curricular activities and parental education level in influencing students' self-concept. However, in terms of deviant behaviours and academic performance, the study concludes that there was a significant interaction between parental education and participation in co-curricular activities in influencing students' engagement in deviant behaviours and academic performance.
- vi. With regard to the socio-economic status of occupation, father's occupation had no significant effect on students' self-concept whereas participation in co-curricular activities had significant effect on students' self-concept.
- vii. In terms of deviant behaviours and academic performance, there was a significant interaction between father's occupation and participation in co-curricular activities in influencing students' engagement in deviant behaviours and academic performance

- viii. Mother's occupation and participation in co-curricular activities had significant effect on students' self-concept, deviant behaviour and academic performance.
- ix. The study found that there was no significant interaction between participation in co-curricular activities and guardian's occupation in influencing students' self-concept and deviant behaviour. However, there was significant interaction between guardian's occupation and participation in co-curricular activities in influencing students' academic performance.

#### **6.4 Recommendations of the Study**

Based on the findings, the following policy and practice recommendations are made:

##### **6.4.1 Recommendations for Practice**

- i. Schools should encourage students to participate in sport, drama and music in schools. This will help them to develop self-confidence, gain skills for solving their own problems, learn to work as a team, learn leadership skills, and also help them avoid engaging into risky behaviour.
- ii. Parents should be positive about competitive co-curricular activities available in schools and support their children's participation in them. It is possible that some may build a job out of the participation. They should learn that success in life is not only achieved through excelling in academics.
- iii. The school administrators should organize seminars and forums for all the school stakeholders to emphasise the importance of students involvement in co-curricular activities and their influences on student educational, self-concept and behaviour outcomes.

#### **6.4.2 Recommendations for Policy**

- i. The Ministry of Education Science and Technology, school administrators, teachers and parents should collectively ensure that students participate in co-curricular activities. Student indiscipline should be a collective responsibility of all stakeholders in education.
- ii. The Ministry of Education Science and Technology should use excellence in co-curricular activities when meriting schools. This will augment the significance of co-curricular activities, in cognizance of its contribution to an all-inclusive education.
- iii. As a responsibility of the school management board, a well-balanced blend of varied co-curricular activities should be included in the formal curriculum.

#### **6.5 Recommendations for Future Research**

The following are the study areas recommendations for future research

- i. There is need to replicate the current study in primary schools and universities in
- ii. Kenya. This could broaden the body of knowledge on the advantages of students' involvement in co-curricular activities on students' self-concept, deviant behaviour and academic performance.
- iii. A longitudinal study should be carried out to examine the types of physical and other co-curricular activities needed to produce improvement in academic performance, self-concept and deviant behaviour.
- iv. A similar study should be conducted in other regions in Kenya to determine whether the regions produce the same results or are there any other mediating factors in other regions

- v. Future research using a qualitative approach should be done to capture the contextual aspects of participation in co-curricular activities in secondary schools in Kenya to highlight the participation and non-participation as well as barriers to participation in co-curricular activities.
- vi. Studies targeting Sub-county schools could be carried out to examine the reasons for their low participation in competitive co-curricular activities.

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## APPENDICES

### APPENDIX A: STUDENTS ASSENT FORM

My name is Agnes Wanjiku Kamau I am a PhD student at Kenyatta University. I am conducting a study on “The Influence of Participation in Co-Curricular Activities on Self-Concept, Deviant Behaviour and Academic Performance of Secondary School Students in

Central Region, Kenya”. Findings in the study will inform evidence-based guidelines on issues involving student engagement in co-curricular activities to the Ministry of Education, Science and Technology (MOEST), school administration and teachers. Taking part in this study is on voluntary basis and it is taken as noble undertaking which will lead to generation of information and yield knowledge in the research field.

#### **Procedures to be followed**

Participation in this study will require you complete a questionnaire which will be collected by the researcher or the research assistant. Participation is voluntary. One can withdraw from participation without any consequences and still benefit from the information gathered as well as the findings. However, you are allowed to ask any question related to the study at any one time.

#### **Confidentiality**

The participant will not be personally identified by name. Instead, the researcher will assign a secret code digit which will guard your identity. Any identification information from questionnaires will be destroyed immediately after data collection. Therefore, it will be difficult to tell which questionnaire responses were whose. The results will be strictly for the purpose of this study and publication in journals.

#### **Contact Information**

For any queries you may contact Dr. Gitonga on 0727649790, Dr. Bulinda on 0722677266 or the Kenyatta University Ethical Review Committee Secretariat on [chairman.kuerc@ku.ac.ke](mailto:chairman.kuerc@ku.ac.ke), [secretary.kuerc@ku.ac.ke](mailto:secretary.kuerc@ku.ac.ke), [ercku2008@gmail.com](mailto:ercku2008@gmail.com)

**Rewards for Participation**

There will be no payment for any input in this study. However, students will benefit from the study as the findings will show how participation in co-curricular activities relates with variables of self-concept, absenteeism, and drug abuse, which influences their academic performance.

**Participant’s statement**

I have understood the above information in regards to my involvement in this study. I am contented with the answers given to all the questions that I have raised. I have decided to participate in this study voluntarily without being forced. I am aware that all the information I provide will be treated with utmost confidentiality.

Participants name: .....

Signature: ..... Date: .....

**Researcher’s statement**

I have explained to the study respondents in a language they comprehend the measures to be taken in the study and the significance of the study.

Name: Agnes Wanjiku Kamau

**Signature**.....

**Date**.....

## APPENDIX B: QUESTIONNAIRE FOR STUDENTS

### Introduction

This questionnaire is intended to collect information about participation in co-curricular activities, self-concept, deviant behaviour and academic performance. You are requested to answer by ticking the suitable responses to the questions or information required. All your answers to the questions in questionnaire will not be disclosed to any one and will be utilised by the researcher for the purpose of this study only. Therefore, you are advised not to include your name or mention the name of your school anywhere in this questionnaire.

### Section A: Background Information

Tick the appropriate response as it applies to you.

1. Indicate your gender  Male  Female
2. Indicate your Class  Form 1  Form 2  Form 3  Form 4
3. Type of school:  National  County  Extra-County  Sub-County
4. Date of birth.....
5. What marks did you attain in KCPE examination?.....
6. Did you participate in co-curricular activities when in primary school?  
 Yes  No
7. If Yes in 6 above, which activities / games did you participate in?  
**A. Sports**  Soccer  Volleyball  
 Netball  Athletics

Others (specify).....

**B. Performing Arts** [ ] Music [ ] Drama

8. Which co-curricular activity do you participate in now?

[ ] Sport [ ] Drama [ ] Music

9. How do you rate your performance in last year examination?

[ ] Very good [ ] Good [ ] Average

[ ] Fair [ ] Poor

10. Which is the highest education level attained by your parents/guardians?

<b>Father</b>	<b>Mother</b>
[ ] Primary education	[ ] Primary education
[ ] Secondary education	[ ] Secondary education
[ ] College certificate/diploma	[ ] College certificate/diploma
[ ] University	[ ] University
Other	Other

(specify).....(specify).....

11. What is the occupation of your parents/guardians?

Father's occupation .....

Mother's occupation .....

Guardian's occupation .....

12. If retired, what was their occupation before retirement?

Father.....

Mother.....

Guardian.....

**Section B: Deviant Behaviour**

In the table below, rate your behaviour at school by ticking in the appropriate box for each behaviour presented. Use the ratings ranging from Very often to Never as shown below.

Very Often (**VO**) Often (**O**) Rarely (**R**) Never (**N**)

<b>Behaviour at school</b>	<b>VO</b>	<b>O</b>	<b>R</b>	<b>N</b>
Being absent from school without permission				
Being punished by teachers for making noise in class				
Fighting with other students in school				
Being sent home for discipline problems				
Smoking cigarettes				
Drinking alcohol				
Use of drugs e.g. Bhang, Miraa (Khat), Heroin, Cocaine				
Failure to complete assignments/ homework				
Sneaking out of school				
Bullying junior students in the school				

**Section C: Self-Concept Inventory**

Everyone thinks differently about school. Each statement has possible answers. Please answer each item on the table below by ticking (√) against the most appropriate blank. There are no right or wrong answers. Please use the key given.

**Key: PN- Practically Never; VO- Very Often**

	<b>PN</b>	<b>VO</b>
Have you ever thought of yourself as an outstanding student?		

Are you ever worried about other people regarding you as a success or a failure in your school?		
Academically, do you ever think that you have more ability in than a number of your classmates?		
Do you ever have feelings of being less capable in academics than your classmates?		
Do you consider yourself a worthwhile student in school?		
Have you ever considered yourself having better capability to read and understand articles and textbooks than most students?		
Do you often find yourself having problems expressing your ideas when doing your oral or written class assignments?		
Most of the time, do you sincerely like yourself?		
Have you ever doubted yourself as a worthy person?		
Do you think of yourself as a generally competent person who can do most things well in school?		
Are you worried about what other people think of you?		
Do you get worried when others criticize you on your behaviour or performance?		
Are you always feeling proud of, or pleased with, your looks and appearance?		
Do you often feel nervous or uncomfortable when called upon to speak in front of others?		
How often do you feel that you have a strong sense of self-worth?		
Are you often concerned when your academic performance is not progressing well?		

*Thank you for participating*

### APPENDIX C: DOCUMENT ANALYSIS

Serial No..... Participant [ ]                      Non-Participant [ ]

<b>School attendance</b>	
Total number of days the student was absent during the term	.....
Absent with permission	Yes [ ]                  No [ ]
Absent without permission	Yes [ ]                  No [ ]
<b>Deviant behaviour</b>	
Frequency of punishment for deviance on the student	.....
3.Student suspension for deviance	Yes [ ]                  No [ ]
Student involved in drug related incident	Yes [ ]                  No [ ]
5.If yes, which type of drug/substance	.....
<b>Academic performance</b>	
6.Student's KCPE examination marks	.....
Student end of term examination marks	.....

## APPENDIX D: STANDARDIZATION OF SCORES

$$x = \frac{y - \bar{y}}{ay} ax + \bar{x}$$

X= Desired standard score x=Constant mean ax=Standard deviation

constant y=A given raw score y= A given mean score for the raw data

ay= Standard deviation for the raw data for which y is the mean score

Source: Gitonga, (1998)

## APPENDIX E: TRAINING SCHEDULE FOR RESEARCH ASSISTANTS

<b>JUNE 2018</b>		
<b>Day</b>	<b>Time</b>	<b>Task</b>
Day 1	4.00pm- 6.00pm	Introduce purpose of the study  Introduce study locale and number of schools to be  sampled  Familiarize with the items in the questionnaire
Day 2	4.00pm- 6.00pm	<ul style="list-style-type: none"><li>• Recommend ways of collecting the data</li><li>• Questionnaire administration</li><li>• Collection of the filled in questionnaires</li><li>• Coding of the questionnaires</li></ul>

## APPENDIX F: RESEARCH AUTHORIZATION – GRADUATE SCHOOL



### KENYATTA UNIVERSITY GRADUATE SCHOOL

E-mail: [kubps@yahoo.com](mailto:kubps@yahoo.com)  
[dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)  
Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 810901 Ext. 57530

#### Internal Memo

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**FROM:** Dean, Graduate School **DATE:** 18<sup>th</sup> January, 2018

**TO:** Ms. Agnes Kaman **REF:** H87/31957/15  
C/o Department of Physical & Health Education  
Kenyatta University

**SUBJECT:** APPROVAL OF RESEARCH PROPOSAL

---


We acknowledge the receipt of your revised Research Proposal entitled "Participation in Competitive co-Curricular Activities and Self-Concept, Deviant Behaviour and Academic Performance of Secondary School Students in Central Region, Kenya" as per recommendations raised by the Graduate School Board of 10<sup>th</sup> January, 2018.

You may now proceed with your Data collection, subject to clearance with the Director General, National Commission for Science, Technology & Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking Forms per semester. The form has been developed to replace the progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

By copy of this letter, the Registrar (Academic) is hereby requested to grant you substantive registration for your Ph.D. studies.

Thank you.

  
ELIJAH MUTUA  
FOR: DEAN, GRADUATE SCHOOL

c.c. Registrar (Academic) Att; Mr. Likam  
Chairman, Department of Physical & Health Education

Supervisor

1. Dr. Elijah Rintaugu  
C/o Department of Rec. Mngt. & Exer. Science  
Kenyatta University
2. Dr. Mugala H. Bulinda  
C/o Department of Physical & Health Education  
Kenyatta University

EM/cno

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*Committed to Creativity, Excellence & Self-Reliance*

## APPENDIX G: ETHICAL REVIEW



### KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE

Fax: 8711242/8711575

Email: [kuerc.chairman@ku.ac.ke](mailto:kuerc.chairman@ku.ac.ke)

[kuerc.secretary@ku.ac.ke](mailto:kuerc.secretary@ku.ac.ke)

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P. O. Box 43844,

Nairobi, 00100

Tel: 8710901/12

Our Ref: KU/ERC/ APPROVAL/VOL.1 (62)

Date: 24<sup>th</sup> /05/2018

Agnes Wanjiku Kamau  
Kenyatta University  
P.O. Box 43844-00100  
NAIROBI

Dear Agnes,

**APPLICATION NUMBER: PKU791/1185 PARTICIPATION IN COMPETITIVE CO-CURRICULAR ACTIVITIES AND SELF- CONCEPT, DEVIANT BEHAVIOUR AND ACADEMIC PERFORMANCE OF SECONDARY SCHOOLS STUDENT IN CENTRAL REGION, KENYA"**

1. **IDENTIFICATION OF PROTOCOL**

The application before the committee is with a research topic "Participation in Competitive Co-Curricular Activities and Self- Concept, Deviant Behavior and Academic Performance of Secondary Schools Student in Central Region, Kenya " received on 19<sup>th</sup> January, 2018 and discussion on 16<sup>th</sup> February, 2018

2. **APPLICANT**

Agnes Wanjiku Kamau

3. **SITE**

Central Region, Kenya

4. **DECISION**

The committee has considered the research protocol in accordance with the Kenyatta University Research Policy (section 7.2.1.3) and the Kenyatta University Ethics Review Committee Guidelines and **APPROVED** that the research may proceed for a period of ONE year from 16<sup>th</sup> February, 2018.

5. **ADVICE/CONDITIONS**

- i. Progress reports are submitted to the KU-ERC every six months and a full report is submitted at the end of the study.
- ii. Serious and unexpected adverse events related to the conduct of the study are reported to this committee immediately they occur.
- iii. Notify the Kenyatta University Ethics Committee of any amendments to the protocol.
- iv. Submit an electronic copy of the protocol to KUERC.

When replying, kindly quote the application number above.

If you accept the decision reached and advice and conditions given please sign in the space provided below and return to KU-ERC a copy of the letter.



**DR. TITUS KAHIGA**  
CHAIRMAN ETHICS REVIEW COMMITTEE

I, AGNES KAMAU.....accept the advice given and will fulfill the conditions therein.

Signature.....[Signature]..... Dated this day of 24/05/2018..... 2018.

cc.

DVC-Research Innovation and Outreach

## APPENDIX H: RESEARCH AUTHORIZATION NACOSTI



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: 020-400 7000,  
0713 788787, 0735404245  
Fax: +254 20-218215, 218249  
Email: dg@nacosti.go.ke  
Website: www.nacosti.go.ke  
When replying please quote:

NACOSTI, Upper Kabete  
Off Waiyaki Way  
P.O. Box 50623-00100  
NAIROBI-KENYA

Ref No. **NACOSTI/P/18/87383/21075**

Date: **31<sup>st</sup> January, 2018**

Ms. Agnes Wanjiku Kamau  
Kenya University  
P.O Box 43844-00100  
**NAIROBI.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Participation in co-curricular activities and self-concept, deviant behavior and academic performance of secondary school students in Central Region, Kenya”* I am pleased to inform you that you have been authorized to undertake research in **selected Counties** for the period ending **31<sup>st</sup> January, 2019.**

You are advised to report to **the County Commissioners and the County Directors of Education, selected Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a **copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System

*G.P. Kalerwa*  
**GODFREY P. KALERWA MSc., MBA, MKIM**  
**FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioners  
Selected Counties.

The County Directors of Education  
Selected Counties.

## APPENDIX I: RESEARCH PERMIT

### CONDITIONS

1. The License is valid for the proposed research, research site specified period.
2. Both the License and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This License does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this License including its cancellation without prior notice.



REPUBLIC OF KENYA



National Commission for Science,  
Technology and Innovation

RESEARCH CLEARANCE  
PERMIT

Serial No.A 17326

CONDITIONS: see back page

THIS IS TO CERTIFY THAT:  
**MS. AGNES WANJIKU KAMAU**  
of KENYATTA UNIVERSITY, 0-1001  
KALIMONI, has been permitted to  
conduct research in *Kiambu , Kirinyaga*  
*, Muranga , Nyandarua , Nyeri*  
*Counties*

on the topic: **PARTICIPATION IN CO  
CURRICULAR ACTIVITIES AND SELF  
CONCEPT, DEVIANT BEHAVIOUR AND  
ACADEMIC PERFORMANCE OF  
SECONDARY SCHOOL STUDENTS IN  
CENTRAL REGION, KENYA**

for the period ending:  
**31st January, 2019**

  
Applicant's  
Signature

Permit No : NACOSTI/P/18/87383/21075  
Date Of Issue : 31st January, 2018  
Fee Received :Ksh 2000



  
Director General  
National Commission for Science,  
Technology & Innovation