PSYCHO-SOCIAL FACTORS AND ACADEMIC ACHIEVEMENT OF PUBLIC SECONDARY SCHOOL STUDENTS IN NYAMAIYA

ZONE NYAMIRA COUNTY

KENYA

A thesis

Presented to the

College of Higher Degrees and Research

Kampala International University

Kampala Uganda

In Partial Fulfillment for the Degree Master of Educational

Management and Administration

By:

Victoria Kanini Kibwea

MED/29256/131/DF

October, 2014

DECLARATION A

I hereby declare that this work is a result of my own effort and has never been submitted for any award in any other University or institution of higher learning and where work of others has been cited due to acknowledgment has been given .

VICTORIA KAHIMI KIBWEA

Name

Margan :-

Signature

APPROVAL

Name

Signature

ii

DEDICATION

To my Lord Jesus Christ, to whom I owe all that I have. The staff that I lean on; my refuge in times of storm and the rock that has founded my success. To my wonderful husband Andrew who has been on my side for strength and encouragement, to my daughters Isabellah, Eunice, Emilly and son Edwin all of whom are the salt and the flavor of my life and last but not least, to my grand children: Jonathan, Alvin, Ella and Maangi, the Jewels in my crown.

ACKNOWLEDGEMENT

My greatest appreciation to my supervisor Dr. Tindi Seje without whose belief in me, patience and forbearance, this research would have been next to impossible. God bless you abundantly. My mentor and inspiration, Dr. Ijeoma, you are great in my heart. Thanks to my boss the D.E.O Nyamira District Mr. Titus Mbatha for granting me permission all through to attend to my studies and collection of Data. Your words of encouragement "go, work hard!" were quite inspiring.

ABSTRACT

The study sought to establish the relationship between psychosocial factors and students' academic achievement in secondary schools in Nyamaiya Zone, Nyamira district. It was motivated by the fact that the academic achievement of most students was low so it was not clear whether psychological factors were responsible or not. Three specific objectives guided the study; to determine the relationship between motivation, social control and self regulation of students and their academic achievement. Using descriptive correlational survey research design, a mix of both qualitative and quantitative approaches and sample size of 254. Data was collected using questionnaires and interview guide and analyzed using SPSS version 16. The study findings indicate that there exists a significant positive relationship between students' motivation, social control and self regulation and their academic achievement. It was therefore concluded that based on this academic achievement is highly supported by the psychosocial factors.

The study therefore recommended that the teachers, teachers and parents need to remain a learning environment that ensures continued motivation of the students. Students should be encouraged to continue exercising their satisfactory or even more than their currently exercised satisfactory level of selft regulation since this help them to perform better. The study recommends that Individualized Education Programs (IEP) for at-risk or gifted students, should be designed to cater for the variation in the PSF basing on the students' varied backgrounds this will be further more useful and needed to design targeted interventions.

TABLE OF CONTENT

DECLARATION A	i
APPROVALi	i
DEDICATIONii	i
ACKNOWLEDGEMENTi	V
ABSTRACT	V
TABLE OF CONTENTv	i
CHAPTER ONE :INTRODUCTION	L
1.1 Background of the study	L
I.1.1 Historical perspective	L
1.1.2 Theoretical perspective	2
1.1.3 Conceptual perspective	3
1.1.4 Contextual perspective	õ
1.2 Statement of the Problem	7
1.3 Purpose of the study	7
.4 Objectives of the study	7
.5 Research Questions	3
.6 Null Hypothesis	3
.7 Scope of the study	3
.8 Significance of Study	}
CHAPTER TWO :LITERATURE REVIEW10)
2.0 Introduction10)
2.1 Theoretical review1)
2.2 Concentual Framework)

CHAPTER THREE :_METHODOLOGY	24
3.0 Introduction	24
3.1 Research Design	24
3.2 Population of the study	24
3.3 Sample Size	24
3.4 Research Instruments	25
3.5 Validity	25
3.6 Reliability	25
3.7 Data Gathering Procedures	26
3.8 Data analysis	27
3.9 Ethical Considerations	28
3.10 Limitations of the Study	28
CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETA	
4.0 Introduction	
CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATION	
5.0 Introduction	
5.1 Discussion	38
5.2 Conclusions	43
- 0 D	43
5.3 Recommendations	
APPENDICES	61

APPENDIX	III INFORMED CONSENT	63
APPENDIX	IV: QUESTIONNAIRES	64
APPENDIX	VI Sample size (s) required from the given population size	67

List of tables

Table 4.1 Respondents' Profile	30
Table 4.2 Level of psycho social factors	D32
Table 4.3: Level of Academic Achievement of students from 2008 to 2013	34
Table 4.4: Relationship between psychosocial factors and academic achievement a 254	

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

1.1.1 Historical perspective

The study of how learners move from little to substantial competence in a domain is modeled in theories of expertise (Ericsson, Krampe, & Tesch-Romer, 1993), and of the development of abilities (Horn & Masunaga, 2006). Historical studies of expertise show that deliberate, well-structured practice is required to develop and maintain high levels of skill (Ericsson et al., 1993). Further, practice must extend over many years. Simon and Chase (1973) estimated that it requires at least ten years of continuous training in a domain of non-trivial complexity to develop expertise. Thus, long-term academic achievement is in part a product of sustained effort.

In contemporary education, Pysco social factors (PSFs) such as motivation, social interaction skills, and environmental support have been widely acknowledged as being important for academic success (Clouder et al., 2008; Lee & Shute, 2010). Additionally, PSFs can be used to assess student risk for academic failure (Lee & Shute, 2010; Zins, Bloodworth, Weissberg, & Wallberg, 2004). PSFs can even be viewed as important outcomes of education.

Although many educational policies and interventions stress the improvement of academic achievement, some, more comprehensive educational models have been proposed that describe a broader range of educational outcomes. The goal of these models is to prepare children both for success in school and as life-long learners

through the integration of academic learning and social-emotional development (Bellanca & Brandt, 2010; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Merrell & Gueldner, 2010; Sparks, 2011; Zins et al., 2004). For example, country - wide policies in western, eastern, central and coastal regions of kenya describe the need to incorporate psychosocial skills into educational programs to improve students' academic performance. These programs use grade-appropriate psychosocial standards, guidelines, curriculum modules, checklists, and more (Lantieri, 2008). The integration of PSFs changes the meaning of educational accountability from a focus on achievement testing to helping students become life-long, autonomous learners. The PSFs have had a bearing on the delivery capacities of schools in terms of teacher-student interaction with the students.

1.1.2 Theoretical perspective

This study was underpinned by the Matthew effect theory. This theory was propounded by Ceci & Papierno (2005). And has since then been used in various educational treatments and programs when predicting academic achievement. It refers to a phenomenon that the rich get richer, and the poor get poorer. In many areas of life, the greatest rewards are reaped by the individuals with a higher accumulation of resources (Frank & Cook, 1995). Gottfredson (in press) described that individuals with high general cognitive ability are more likely to attain a higher education level, a job with better prestige, a better income, and generally speaking, have a higher social class and health outcomes than individuals with lower levels of intelligence. Furthermore, high general cognitive ability seems to predict not only better job performance (Gottfredson, 2002; Schmidt & Hunter, 2004) but also higher quality of life (Gottfredson, 1997). For example, in a large-sample longitudinal study, Judge, Klinger, and Simon (2010) found individuals with higher general mental

abilities attain higher incomes and occupational prestige after graduation. In addition, they found that these more able individuals demonstrate increased growth in income and occupational prestige by raising levels of education, training, and job complexity when comparing less able individuals (Judge et al., 2010). Put differently, more-able individuals increase their human capital and benefit more from external resources than less-able individuals. The theory underpin the illustration on the psychosocial factors and their influence on academic attainment for the schools.

1.1.3 Conceptual perspective

Psycho social factors-PSFs are predictors of and mediators for later academic achievement in both secondary and higher education settings (Dymnicki, 2004; Kyllonen, Walters, & Kaufman, 2005; Lounsbury, Welsh, Gibson, & Sundstrom, 2005; Payton et al., 2008; Robbins, Oh, Le, & Button, 2009). Several studies have shown that PSFs such as self-efficacy, motivation, locus of control, attitude toward learning, attention, persistence, use of learning strategies, and learning flexibility add incremental validity to cognitive factors, such as ability and prior achievement, in predicting future academic achievement. Similarly, a review of social and emotional learning in elementary school found that self-awareness, self-management, social awareness, relationship skills, and responsible decision making improve students' academic performance (Payton et al., 2008). Using a large cohort of students from high school, Casillas et al. (in press) proposed a comprehensive assessment model combining PSFs (such as motivation, social control, and self-regulation), behavioral indicators (e.g., absenteeism, being held back), and prior academic achievement with demographic and school context variables to predict academic success. Results of their analyses show that PSFs add modest incremental validity in the assessment model.

PSFs also impact school completion. Over 25% of students who entered public high school in 9th grade in 2003-2004 did not stay on track to graduation four years later (Snyder, 2010). Rumberger and Lim (2008) reviewed studies of dropouts conducted over the past 25 years and found that PSFs such as attitude and characteristics of family and school personnel, along with prior academic achievement and learning behaviors, can differentiate between students who graduate and those who drop out of high school. In studies of college students, Robbins, Allen, Casillas, Peterson, and Le (2006) used a combination of PSFs including academic discipline, social activity, self-regulation, prior academic performance, and achievement test scores to predict the retention of first-year college students. Robbins et al. (2009) found that PSFs added incremental validity (about 3.5% of variance) to the prediction model. Similarly, in studies of graduate students, PSFs such as personality and attitudinal factors added incremental validity to college GPA and standardized exams (e.g., Graduate Record Examinations) in the prediction of attrition and time to degree (Kyllonen et al., 2005). Psychosocial factors (PSFs), such as motivation, social control, and self- regulation, play key roles in classroom learning (Zins et al., 2004). Students need to be highly motivated to learn well in school, to recognize and use the social supports that can facilitate their learning, and to regulate their behaviors and manage their feelings. Some researchers have used the word "non-cognitive" as an umbrella term that includes these sorts of PSFs and other non-ability factors (e.g., Duckworth, 2009; Kyllonen, 2005). For example, Duckworth's (2009) definition of the term "noncognitive" includes capacity and propensity dimensions when predicting achievement. Take self-control as an example, capacity indicates that self-control is "measured as the ability to delay gratification", whereas propensity indicates that self-control is "measured by self-reporter informant ratings of behavior" Many psychological studies, including this one, focus on the propensity dimension, where psychological characteristics are measured by self-report inventories.

Other non-cognitive factors measured by these instruments include an individual's demographic characteristics and life history (biographical data), as well as PSFs. These PSFs include motivation, social engagement, self-regulation, and other factors which are influenced by educational programs and in turn influence students' educational outcomes (Heckman & Rubinstein, 2001; Kyllonen, 2005; Le, Casillas, Robbins, & Langley, 2005; Schmitt et al., 2009). However, instead of using the broad term "non-cognitive," this study shall focus on three specific PSFs: motivation, social control, and self-regulation.

Academic achievement is the outcome of education the extent to which a student, teacher or institution has achieved their educational goals. Academic achievement is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important procedural knowledge such as skills or declarative knowledge such as facts. (Grigorenko et al., 2009; Yen, Konold, & McDemott, 2004)

Individual differences in academic performance have been linked to differences in intelligence and personality. Students with higher mental ability as demonstrated by IQ tests and those who are higher in conscientiousness (linked to effort and achievement motivation) tend to achieve highly in academic settings. Parent's academic socialization is a term describing the way parents influence students' academic achievement by shaping students' skills, behaviors and attitudes towards school. Parent influence students through the environment and discourse parents have with their children. Academic socialization can be influenced by parents' socio-economic status. Highly educated parents tend to have more stimulating learning environments: Payton et al., (2008)

1.1.4 Contextual perspective

Secondary schools in Kenya fall into three categories – government funded, harambe and private. Government funded schools are divided into national, provincial and district levels. Harambee schools do not receive full funding from the government and private schools are run by private organisations or individuals. After taking the primary school leaving exam and successfully passing, government funded schools select students in order of scores. Students with the highest scores gain admission into national schools while those with average scores are selected into provincial and district schools. Harambee schools accept students with low scores. Students who fail examinations either repeat the final school year or pursue technical and vocational education. The latter is divided into technical secondary school (lasting 4 years) and apprenticeships solutions. Since 2010, technical secondary schools student can have access to university programs. Duckworth, 2009, p.279). A number of students also drop out of school by choice due to poor scores.

Under the current system, students attend secondary school for four years before sitting for the school leaving exam at the end of the fourth year. The first class or year of secondary school is known as form 1 and the final year is form 4. At the end of the fourth year, from October to November students sit for the Kenya Certificate of Secondary Education examination. In 2008, the government introduced plans to offer free Secondary education to all Kenyans.

There exist numerous cases of juvenile delinquents in Nyamira County. This at times is largely attributed to many youths who after leaving school, or dropping out of schools, find themselves without jobs and stable income. These youths eventually end up being thieves, robbers and car hijakers. Many pupils continue to leave schools and pour themselves in the streets at an alarming rate. Reasons that make them leave school has to be found if the problem is to be addressed. Its for this reason that the study intends to appraise if psychosocial factors could be responsible for poor attitude towards achievement.

1.2 Statement of the Problem

Low academic achievement in Nyamaiya county is affliated to poor phycho-social factors in public schools such as poor regulation, poor motivation among others. A combination of prior academic achievement and PSFs can predict students' later achievement (ACT, 2008), but interactions between academic achievement and PSFs are not yet fully understood. Although the incremental contributions of PSFs in the prediction of achievement in secondary school level have been addressed in previous research (Casillas et al., in press; Lounsbury, Sundstrom, Loveland, & Gibson, 2003), there are still many questions that need to be investigated. Specifically, it is unclear how student psychosocial factors interact with prior academic achievement and sex when predicting subsequent academic achievement. For example, it is unknown whether PSFs have different effects for students who differ in academic achievement in Nyamaiya county. Some PSF's may be more important in predicting academic success for low-achieving students in science subjects, whereas other PSF's may be more important for predicting the continued academic success of high-achieving students. Similarly, some PSF's may play a more significant role for female students than for male students. The prevalent environment in the compelled the researcher to institute an investigation into the relationship between psychosocial factors and academic achievement of secondary school students in Nyamira sub-county.

1.3 Purpose of the study

The purpose of this study was to investigate the relationship between PSFs academic achievement among secondary school students.

1.4 Objectives of the study

This study was guided by the following specific objectives

1. To examine the relationship between students' motivation and academic achievement in secondary schools in Nyamira county, Kenya

- 2. To investigate the relationship between students' social control and academic achievement in secondary schools in Nyamira county, Kenya
- 3. To establish the relationship between self regulation of students and their academic achievement in secondary schools in Nyamira county, Kenya

1.5 Research Questions

- 1. What is the relationship between students' motivation and academic achievement in secondary schools in Nyamira county, Kenya?
- 2. What is the relationship between students' social control and academic achievement in secondary schools in Nyamira county, Kenya?
- 3. What is the relationship between self regulation of students and their academic achievement in secondary schools in Nyamira county, Kenya?

1.6 Null Hypothesis

- Whether there is a relationship between students' motivation and academic achievement in secondary schools in Nyamira county, Kenya
- There is no relationship between students' social control and academic achievement in secondary schools in Nyamira county, Kenya.
- There is no relationship between self regulation of students and their academic achievement in secondary schools in Nyamira county, Kenya.

1.7 Scope of the study

Geographical scope; The Study was carried out in Nyamira District, found in the former Nyanza Province in Western Kenya. It has a Population of 504, 3599 (as of 2001) .It has doubled and land area of 919Km squared. The main industries are subsistence agriculture and stone quarrying. The study covered the 8 secondary schools in Nyamaiya Zone in Nyamira County. Content scope; the study focused on the psycho social factors, and the relationship between social factors and level of academic achievement.

1.8 Significance of Study

The government of Kenya The findings of the study will open avenues for more research to get possible solutions to low achievement rates in the individual schools. The educationist may use the findings by discussing with other stakeholders like teachers, parents, leaders and students and implement possible solutions to curb the low achievement rates in Nyamira County. This study is meant for professionals to access and approve the validity, originality, reliability and possibility of the problem solving for candidates' integrity. A lot of work remain to be done to define and implement programs to improve people's education in Kenya.

By identifying analyzing factors that hinder child education **policy makers and development agencies** will use this information to improve this planning and programming. The study will generate information that could be utilized by government, NGOs and give rise to future generation.

CHAPTER TWO LITERATURE REVIEW

2.0 Introduction

This section deals with the theoretical review, conceptual frame work as well as the related studies, objective by objective

2.1 Theoretical review

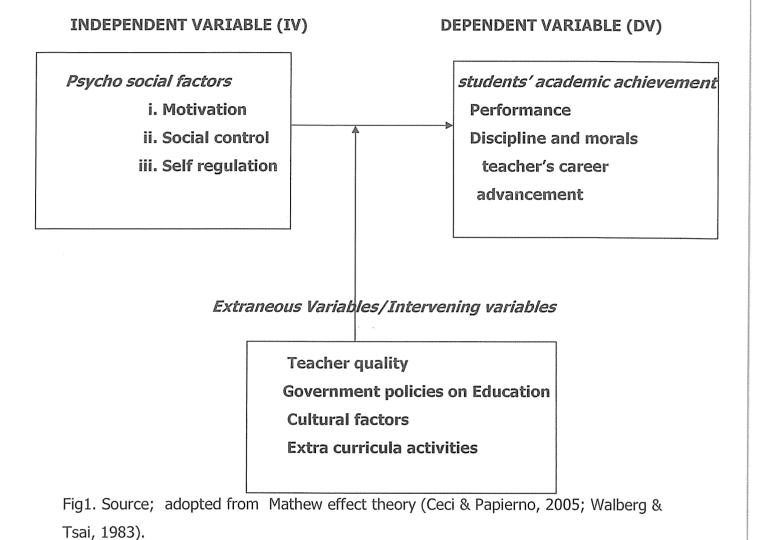
The Matthew effect theory has been found in various educational treatments and programs when predicting academic achievement (Ceci & Papierno, 2005; Walberg & Tsai, 1983). It refers to a phenomenon that the rich get richer, and the poor get poorer. In many areas of life, the greatest rewards are reaped by the individuals with a higher accumulation of resources (Frank & Cook, 1995). Gottfredson (in press) described that individuals with high general cognitive ability are more likely to attain a higher education level, a job with better prestige, a better income, and generally speaking, have a higher social class and health outcomes than individuals with lower levels of intelligence. Furthermore, high general cognitive ability seems to predict not only better job performance (Gottfredson, 2002; Schmidt & Hunter, 2004) but also higher quality of life (Gottfredson, 1997). For example, in a large-sample longitudinal study, Judge, Klinger, and Simon (2010) found individuals with higher general mental abilities attain higher incomes and occupational prestige after graduation. In addition, they found that these more able individuals demonstrate increased growth in income and occupational prestige by raising levels of education, training, and job complexity when comparing less able individuals (Judge et al., 2010). Put differently, more-able individuals increase their human capital and benefit more from external resources than less-able individuals.

Although the vast majority of educational research examines means and correlations, the variability of scores often increases over time. Increases in variance have been found in several studies of interventions and school characteristics (e.g., Ceci & Papierno, 2005; Konstantopoulos, 2008; Stanovich, 1986; Walberg & Tsai, 1983). For example, a large-sample longitudinal study using the National Assessment of Educational Progress (NAEP) found that prior educational background, current educative experience and motivation are collinear. Each variable individually and all three together significantly predict academic achievement. However, the advantages of these three factors in predicting achievement are cumulative. For instance, students who have advantages in prior educational background are more likely to have better current educative experience and motivation. In addition, the cumulative advantages of these three factors significantly predict academic achievement. Therefore, the achievement gap often increases over time when comparing students from different educational backgrounds (Walberg & Tsai, 1983).

Similarly, Borkowski and Peck (1986) found that when young gifted and non- gifted children concurrently received the same cognitive strategy training, the achievement gap significantly increased comparing the differences between the beginning and the end of the training program. Thus, when giving the same educational resources (e.g., instruction or learning environment) to all children, more able children often benefit more than less able children, and consequently the achievement gap between these two child groups increases across time (Borkowski & Peck, 1986; Ceci & Papierno, 2005). Although middle school students are not directly represented in these studies, it seems reasonable to hypothesize that high ability or high achieving middle school students may gain more over time in achievement from particular PSFs, including motivation, social control, and self-regulation, than low ability or low achieving students.

2.2 Conceptual Framework

Conceptual frame-work showing the relationship between Psycho social factors and students achievement



12

Achievement motivation

The term "motivation" in this study refers to motivation to achieve academic outcomes in educational settings via certain personality characteristics and attitudes. Although the earliest scientific studies of human motivation date back to Freud's work in the late 19th century (Atkinson, 1964; McClelland, 1961), it is believed that research- based theories of achievement motivation using clinical approaches were derived from Murray's concept of motives and grounded in experimental studies conducted by McClelland and his colleagues (Dweck, 2000; McClelland, Atkinson, Clark, & Lowell,1953). Murray (1938) defined *n Achievement* (need for achievement), as the need "to overcome obstacles, to exercise power, to strive to do something difficult as well and as quickly as possible" (p. 80). Instead of providing a precise definition of achievement motivation, McClelland et al. (1953) described achievement motivation in terms of "affect in connection with evaluated performance" (p. 79). Specifically, they argued that children were more likely to show higher achievement motivation when they felt the need to conform to external standards of excellence, typically imposed by their parents and the surrounding culture (McClelland et al., 1953). In addition, Maslow (1954) proposed a basic need hierarchy consisting of physiological needs, safety needs, belongingness and love needs, esteem needs, and self-actualization needs. The esteem needs include the desire for achievement, mastery, and competence (Maslow, 1954). These various theories of achievement motivation were widely studied until the beginning of the 1970s (Elliot, 1997).

In the 1970s, trait-based approaches to understanding need achievement were criticized for failing to incorporate goals and cognitions (e.g., beliefs and attributions) (Dweck, 2000). In response to these criticisms, studies of educational achievement changed from a trait paradigm to a social-cognitive paradigm that focuses on the

relationship between antecedents, mental representations, and consequences (Olson & Dweck, 2008). Achievement motivation was described in terms of psychological mechanisms, environment, and interventions, rather than as a trait (Olson & Dweck, 2008). For example, Dweck (2000) argued that people have personal theories in which they view abilities either as fixed (an entity theory) or as a malleable (an incremental theory). Those who hold an entity theory of ability view their intelligence as an unchangeable trait. However, those who hold an incremental theory view their intelligence as something that can be developed through effort and education. As might be expected, students with an incremental perspective show better performance when facing challenging tasks (Dweck, 2000; 2008). Attributing setbacks and failures in learning to a lack of effort rather than to a lack of ability results in greater persistence in learning (Dweck, 2000; Weiner, 1985).

In more recent studies (Casillas et al., in press; Le et al., 2005; Robbins e al.,(2004), Robbins and his colleagues used the term "motivation" to capture the broad concept of motivation in educational environments. They described motivation in terms of students' personal characteristics that elicit and maintain their drive in goal-oriented learning activities and that foster their academic success. These personal characteristics at the secondary-school and college levels include, but are not limited to, academic discipline, commitment, optimism, conscientiousness, goal focus, and academic self- confidence (Casillas et al., in press; Le et al., 2005).

Social control

The term "social control" in this study refers to students' perception of their family's engagement, particularly family members' attitudes regarding the value of education and their involvement in school activities, and their relationships with school personnel. It also includes perceptions of school safety. Social control was first defined as "the ability of social groups or institutions to make norms or rules effective" (Reiss,1951, p. 196), and this definition of social control has been used to explain delinquency as, in part, a failure of the individual to perceive or accept social controls from their environment (Hirschi, 1969; Reiss, 1951). The main idea of social

control in a control theory of delinquency is that when individuals perceive expectations from and have relationships with people or social groups in the surrounding environment, they have a lower likelihood of breaking social norms (Hirschi, 1969). In particular, the notion of attachment, a key element of social bonds, includes the relationships between students and both their family members and school personnel (Hirschi, 1969; Wiatrowski, Griswold, & Roberts, 1981). Therefore, from a sociological perspective, family members' attitudes towards education and their involvement in their child's education as well as the student's relationships with school members are all embedded within social control theory and are consequently related to children's delinquent behaviors (Hirschi,1969; Reiss, 1951).

Social control also can be construed as students' perception of personal and physical resources in the social environment that would support them in their learning (Robbins et al., 2009). For example, students who perceive school personnel or family members as providing higher levels of support in school activities are more likely to seek out teacher support and other learning resources in school. On the other hand, students who disengage from educational support social groups, such as family and school, have fewer opportunities to achieve learning goals. Further, when students perceive their school as having a safe climate, they are less likely to show deviant behaviors and are more likely to engage in learning activities (Goldstein, Young, & Boyd, 2008; Sprague & Walker, 2005).

Self-regulation

The term "self-regulation" in this study refers to the degree to which students appropriately regulate and express their feelings and behaviors, as well as how they think about the consequences of behavior in school contexts. In contrast to social control, self- regulation is more aligned with the concept of personal

control, which is defined as "the ability of the individual to refrain from meeting needs in ways which conflict with the norms and rules of the community" (Reiss, 1951, p.196). As in Reiss's (1951) theory, some self-regulation studies have emphasized how to regulate deviant behavior and maintain appropriate behavior by focusing on avoiding disruptive and anti-social behavior (Rothman, Baldwin, & Whertel, 2004; Schunk, 2005).

In addition to investigating the regulation of behavior, other self-regulation studies specifically address regulating emotions and feelings, which researchers have described as emotion regulation, emotion-related regulation, or emotional control (Cole, Martin, & Dennis, 2004; Eisenberg & Spinrad, 2004; Gross, 1998; Robbins et al., 2009). Gross (1998) broadly defined emotional regulation as the process by which individuals alter the emotions they have, when they have them, and how they experience and express them. Eisenberg and Spinrad (2004) described emotional self regulation as "emotion as regulated," (Cole et al., 2004) thereby including goal-directed behavior. They defined emotion-related self regulation as:

...the process of initiating, avoiding, inhibiting, maintaining, or modulating the occurrence, form, intensity, or duration of internal feeling states, emotion-related physiological, attentional processes, motivational states, and/or the behavioral concomitants of emotion in the service of accomplishing affect-related biological or social adaptation or achieving individual goals. (p.338)

When achieving a goal is made more difficult by emotional reactions and feelings, some students will be better able to regulate these emotions and thus more likely to attain their goals. In a recent meta-analytic path analysis of college performance and retention, Robbins et al. (2009) used the term emotional control to

describe how students manage or regulate those attitudes and feelings that directly influence their learning. Rather than separately considering two self-regulatory mechanisms, behavior regulation and emotion regulation, Carver (2004) proposed two basic regulatory processes: the approach process and the avoidance process. Emotions are embedded into each process, both of which show feelings as poles in an affective dimension of the processes. Given an interweavement of behavior and affect control systems, individuals are more likely to demonstrate behavior with an appropriate combination of quickness (reactions) and stability (feelings) (see Carver, 2004, for discussion).

Referring to the definition of emotion-related regulation, Eisenberg, Smith, Sadovsky and Spinrad (2004) argued that individuals who show optimal emotionrelated regulation should be able to demonstrate acceptable and appropriate reactions in a spontaneous manner. Further, ineffective forethought before responses often leads to dysfunctions in self-regulation (Zimemrman, 2000). Acting before thinking is a key factor in impulsivity, which is a form of behavioral dis inhibition and that results in a lack of behavioral control (Dickman, 1990; Patton, Stanford, & Barratt, 1995; White et al., 1994). Dickman (1990) defined impulsivity as a general tendency to react quickly and inaccurately with limited forethought. Specifically, impulsivity includes two traits, functional impulsivity and dysfunctional impulsivity. Behaviors of functional impulsivity indicate that individuals respond to situations quickly and inaccurately when this style is optimal or beneficial, whereas behaviors of dysfunctional impulsivity often results in undesirable problems or risky behaviors (Dickman, 1990). In addition to dysfunctional impulsivity, behaviors of acting before thinking are conceptualized as motor impulsiveness (Patton et al., 1995), spontaneity (Gerbing, Ahadi, & Patton, 1987; Wu & Clark, 2003), and lack of planning (Smith et al., 2007). These impulsive or spontaneous reactive behaviors

without forethought often lead to antisocial/risky behaviors and poor academic performance (Romer, 2010; Smith et al., 2007; White et al., 1994).

In sum, motivation, social control and self-regulation can be summarized as follows. Based on achievement motivation theories, motivation refers to motivation to attain academic success through personality characteristics and attitudes. Based on social control theories, social control refers to students' perception of family members' attitudes regarding the value of education and involvement in school life and activities, as well as students' perceptions of their relationships with school personnel and of school safety. Based on theories of behavior and emotion self-regulation, self-regulation refers to the degree to which students appropriately regulate their feelings and both antisocial and impulsive behaviors in school. In the following section, studies investigating the prediction of academic achievement in secondary settings from PSFs are reviewed.

The prediction of academic achievement from PSFs such as motivation, social control, and self-regulation has been studied extensively. Academic achievement is variously estimated by grade point average, standardized achievement test scores, and level of degree attained, depending on the study. In addition to relationships between PSFs and academic achievement, the links among PSFs, school-level factors, and academic achievement are also discussed in this section.

Motivation and academic achievement

Numerous studies have shown that students with higher motivation are more likely to attain better academic outcomes (Covington, 2000; Csikszentmihalyi, Rathunde, & Whalen, 1993; Deci, Vallerand, Pelletier, & Ryan, 1991; Dweck, 2000; Hustinx, Kuyper, van der Werf, & Dijkstra, 2009; Pintrich & De Groot, 1990; Steinmayr & Spinath, 2009). Martin (2009) argued that secondary school students are less likely to be motivated and engaged when compared to elementary school and college

students. Less motivated students are more likely to show poor academic achievement and therefore have a greater likelihood of dropping out between grades 10 and 12 (Allensworth & Easton, 2007; Balfanz, Herzog, & Mac Iver, 2007; Neild, Balfanz, & Herzog, 2007; Rumberger & Lim, 2008). Furthermore, Heckman and Rubinstein (2001), who examined students with General Education Degrees (GEDs), found that, even though GED recipients had higher average ability than other high-school drop outs, GED recipients demonstrated poor persistence and an inability to plan ahead when compared with peers who had not dropped out of high school. One possible explanation of relationships between motivation and academic achievement is that students who are highly motivated academically choose more stimulating learning environments where they develop better academic skills (Shiner, 2000).

Not all studies support the importance of motivation in the prediction of achievement. For example, Gagné and St Pére (2001) studied female 8 graders in an all-girl high school and found motivation did not predict academic achievement after controlling for students' cognitive ability. Critics of the study suggested that the failure of observe effects for motivation reflected a restricted range of motivation in the sample, the use of an instrument lacking construct validity, a domain-unspecific measure, or a short- term study design (Hustinx et al., 2009; Steinmayr & Spinath, 2009).

Bandura (1997) described how the perceived causes of success and failure influence an individual's anticipatory cognitive motivators which, in turn, affect performance. There may be sex differences in the types of attributions students make. For example, Assouline and her colleagues found that female gifted students were more likely to attribute general school academic success to long-term effort, whereas male gifted students were more likely to attribute success to ability (Assouline, Colangelo,

Ihrig, & Forstadt, 2006).

Social control and academic achievement

Students with better social skills and more involvement in extracurricular activities have better academic achievement, and earn higher salaries in their chosen field (Fredricks, Blumenfeld, & Paris, 2004; Lleras, 2008). Dropouts show less engagement with school activities and tend to have estranged relationships with teachers and peers (Renzulli & Park, 2000; Rumberger & Lim, 2008). On the other hand, students who have strong relationships with teachers and peers are more likely to attend class (Allensworth & Easton, 2007). Also, students perform better in safer schools (Creemers, 1994; Gronna& Chin-Chance, 1999).

In addition to school environment, family plays an important role in students' learning. When students perceive support from parents, they tend to adjust better during the transition between middle school and high school (Isakson & Jarvis, 1999). Meta- analytic studies show that parent involvement, especially parental aspirations and expectations for education, predict academic achievement (Fan & Chen, 2001; Hill & Tyson, 2009). Also, Eamon (2005) argued that differential parenting practices might lead to the sex differences in achievement. Specifically, female students might receive more rules or supervision from parents, and, in turn, perform better in school. In sum, social control -- including relationships with school personnel, school safety, and family engagement in school learning -- is a significant predictor of later academic achievement.

Self-regulation and academic achievement

Self-regulation of behavior and emotion correlates significantly with academic achievement in middle school students. Antisocial behaviors and failures to regulate their emotions are related to poor academic achievement (Fredricks et al., 2004; Gumora & Arsenio, 2002; Wentzel, 1993). Similarly, Finn and Rock (1997) examined a large sample of minority, low-income students in grades 8 to 12. They found that better students were less likely to engage in disruptive behaviors. These findings are consistent with other developmental studies, which describe cascading effects of

students' aggressive or disruptive behavior, emotions, and academic achievement (Masten et al.,2005; Moilanen, Shaw, & Maxwell, 2010). Along these lines, students who display behavior problems in childhood are more likely to have lower academic achievement in secondary school and have a higher likelihood of showing emotional problems in young adulthood (Masten et al., 2005). Male students are especially likely to demonstrate disruptive behaviors (e.g., Cohn & Modecki, 2007; Zimmer-Gembeck, Geiger & Crick, 2005). Some studies also show that emotional problems, such as anger, sadness, or depression, are mildly related to poor academic achievement in 7th and 8th grades (e.g., Fredricks et al., 2004; Roeser, Eccles, & Sameroff, 2000). On the other hand, studies show that students who could regulate impulsive behaviors were more likely to have better academic achievement (Duckworth & Seligman, 2005; Hair & Hampson, 2006; Spinella & Miley, 2003).

Although many studies show linear relationships between self-regulation and academic achievement (e.g., Duckworth & Seligman, 2005; Gumora & Arsenio, 2002; Wentzel, 1993; Wolfe & Johnson, 1995), Robbins et al. (2006) found a curvilinear relationship between emotion regulation and GPA in college students. That is, too high or too low emotion regulation was associated with poor GPA in the freshman year of college.

The interplay of PSFs and academic achievement

Snow, Corno, and Jackson (1996) argued that affective (e.g., emotion), conative (e.g., motivation), and cognitive individual differences should be considered simultaneously when predicting students' scholastic performance. Some current studies attempt to use comprehensive assessment models that include a broader sampling of these constructs when investigating the incremental validity of PSFs at the K-12 level and beyond (e.g., Allen, Robbins, & Sawyer, 2010; Casillas et al., in press; Kyllonen et al.,2005; Lee & Shute, 2010; Robbins et al., 2006). For example, Robbins and his colleagues examined college students' PSFs using an assessment model that included motivational, social control, and self-regulatory factors (Le et al., 2005; Robbins et al., 2004). They argued that academic discipline, social activity, and

emotional control show incremental power beyond prior academic achievement in predicting first-year college academic performance (Robbins et al., 2006). Also, social control has been identified a strong predictor of college retention (Robbins et al., 2009). Along similar lines, Kyllonen and his colleagues reviewed past studies and proposed a theoretical model that combines personality, attitude, and quasi-cognitive factors to predict graduate students' attrition and time to degree (Kyllonen et al., 2005). In their research on middle school students, Lounsbury et al. (2003) studied $220~7^{\mbox{th}}$ graders and $290~10^{\mbox{th}}$ graders, and they found that aggression and work drive together explained 18% and 21% of the variance in 7th grade and 10th grade GPA respectively. Also, all Big Five personality traits (i.e., agreeableness, conscientiousness, emotional stability, extraversion, and openness) as a set contributed an additional 5% of the variance in the prediction of $7^{\mbox{th}}$ grade GPA beyond aggression and work drive. Similarly, using the dominance analysis technique. Casillas et al. (under review) found that PSFs demonstrated 19% relative predictive strength in comparison with personal variables, school variables, and past academic achievement when predicting early high school GPA.

Past findings have shown that certain PSFs can predict academic achievement. For example, DiPerna, Volpe, and Elliott (2002, 2005) found that previous achievement had a direct effect on motivation which, in turn, had an indirect effect on later achievement. Dotterer, Hoffman, Crouter, and McHale (2008) found parent-adolescent conflict predicted later achievement, and vice versa. Maughan, Rowe, Loeber, and Stouthamer-Loeber (2003) argued that reading problems can influence depressed mood. In summary, to some extent, academic achievement may directly influence various PSFs.

PSFs, school-level effects, and academic achievement

Some studies of secondary school students have found relationships between school-level factors such as school climate (e.g., academic emphasis, teacher variables, principal leadership), school characteristics (e.g., class size, percentage of minority students), and students' academic achievement (Finn, Pannozzo, & Achilles, 2003; Hoy, Sweetland, & Smith, 2002; Lee & Shute, 2010), whereas other studies show little or no relationship between school-level factors and achievement outcomes after first controlling for prior academic achievement (Allen, Bassiri, & Noble, 2009; Shapson, Wright, Eason, & Fitzgerald, 1980). In addition to studying relationships between school- level factors and academic achievement, studies show school-level factors may or may not affect students PSFs (ACT, 2009; Finn & Voelkl, 1993; Weishew & Peng, 1993). For example, some studies show that smaller class size and lower percentages of minority students are positively related to high levels of students' engagement (Finn & Voelkl,1993). However, other studies argue that class size, percentage of minority students and free/reduced lunch recipients, and studentteacher ratio are generally unrelated to PSFs (ACT, 2009, Glovinsky-Fahsholtz, 1992; Weishew & Peng, 1993).

Critical analysis of the literature

The literature as stated clearly depicts the author's views on the aspects of psychosocial factors affecting the academic achievement of schools. Whereas the literature is clear and indeed establish the relationship, it lags short of time, most of the authors work is presented are before 2010, the location geographically, the authors studies are in different countries not Kenya. These therefore establish the gap that present a challenge and the need for a study in the republic of Kenya to establish the prevalent situation for enhanced decision making.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter deals with research design, research population, sample size, instrumentation, validity, reliability, data gathering procedures, data analysis, ethical considerations and limitations of the study.

3.1 Research Design

This research study employed descriptive correlational survey research design. The study was descriptive since it described the indicators of Psycho-social factors and the students' achievement in secondary schools. The study is correlational since it relates the two variables of the study; psycho-social factors and academic achievement.

3.2 Population of the study

The parent population consisted of all the students in public secondary schools in Nyamaiya zone. The zone has 8 secondary schools with 792 students, Therefore the parent population was 792 students which again was the target population due to their numbers.

3.3 Sample Size

In this study, all the secondary schools were selected to participate. Morgan and Krecjie (1970) table of sample size determination was used to arrive at the sample size which was given as 254.

Table 3.1 below shows the respondents of the study with the following categories: Category of respondents, target population and sample size. Purposive sampling procedure with attention to inclusive exclusive criteria was then used to arrive at the exact number of the respondents.

Table 3.1: Respondents of the study

Schools	Students' population	Sample
Total sample size	792	254

Source; Schools

3.4 Research Instruments

The research tools that were utilized in this study include: (1) Adopted and standardized questionnaire from (Robins & David (2001). The questionnaire has two sections. Section A deals with profile of the respondents, Section B deals with Psycho social factors. (2) Data on students' achievement was collected using a researcher devised mark sheet. An interview guide was further used to gather perceptual data based on qualitative domain from the respondents.

3.5 Validity

To ensure that the instrument used was valid, face validity was done by the supervisors and other research consultants. Content validity index was also ascertained by the researcher and his supervisor. These authorities declared the instrument valid and suitable for use in the study.

3.6 Reliability

The instrument was piloted on the teachers that were not included in the study sample and modified to improve their validity and reliability coefficients to at least 0.70. Items with validity and reliability coefficients of at least 0.70 are accepted as valid and reliable in research Amin, (2005). Reliability estimates the consistency of the measurement. The reliability test involves a "test and retest" exercise. This means the instruments was subjected to a representative sample.

According to Amin (2005) validity of instrument is determined by the formula:

$$CVI = \frac{RQ}{TQ}$$

Legends

$$CVI1 = \frac{21}{28}$$

$$CVI2 = \frac{20}{28}$$

$$CVI3 = \frac{22}{28}$$

Therefore:

$$CVI = \frac{\text{CVI}_{1} + \text{CVI}_{2} + \text{CVI}_{3}}{3}$$

$$CVI = \frac{0.750 + 0.714 + 0.785}{3}$$

Answer: CVI = 0.741

3.7 Data Gathering Procedures Data Gathering Procedures

Before the administration of the questionnaires

from the school authorities in charge and selected through systematic random

- 3. The respondents were explained about the study and were requested to sign the Informed Consent Form (Appendix 3).
- 4. Reproduced more than enough questionnaires for distribution.
- 5. Selected research assistants who assisted in the data collection; briefed and oriented them in order to be consistent in administering the questionnaires.

During the administration of the questionnaires

- 1. The respondents were requested to answer completely and not to leave any part of the questionnaires unanswered.
- 2. The researcher and assistants emphasized retrieval of the questionnaires within five days from the date of distribution.
- 3. On retrieval, all returned questionnaires were checked if all were answered.

After the administration of the questionnaires

The data gathered was collated, encoded into the computer and statisticallytreated using the Statistical Package for Social Sciences (SPSS).

1. On retrieval, all returned questionnaires were checked if all were answered.

After the administration of the questionnaires

The data gathered was collated, encoded into the computer and statistically treated using the Statistical Package for Social Sciences (SPSS).

3.8 Data analysis

In line with the research design, the analysis of data was mainly quantitative (ie statistical), and computer aided (using SPSS) and was at three levels; Uni variate, bi variate and multi variate. At the univariate level, the study utilized simple statistics (mainly frequency counts and arithmetic means), while at bi variate level, cross tabulations, t-test and correlation analysis were utilized. At multi variate level, the study opted for multiple linear regression analysis for establishing the influence of the dependent variable on the independent variable. The main analysis was done objective by objective testing the hypotheses simultaneously, all the three objectives were analyzed using Pearsons' linear correlation coefficient (PLCC). The regression analysis R² (coefficient of determination) was computed to determine the influence of

the dependent variable (Academic Achievement) on the independent variable (Psycho social factors). The following numerical values and interpretations were used For the *level of psychosocial factors*

Mean Range	Response Mode	Interpretation
3.5-4.00	Strongly Agree	Always
2.5-3.49	Agree	Often
1.5-2.49	Disagree	Rarely
1.00-1.49	Strongly Disagree	Never

3.9 Ethical Considerations

To ensure confidentiality of the information provided by the respondents and to ascertain the practice of ethics in this study, the following activities were implemented by the researcher:

- 1. Sought permission to adopt the standardized questionnaire on psycho social factors through a written communication to the author.
- 2. The respondents and schools were coded instead of reflecting the names.
- 3. Solicited permission through a written request to the concerned officials of the secondary schools included in the study.
- 4. Requested the respondents to sign in the *Informed Consent Form* (Appendix 3)
- 5. Acknowledged the authors quoted in this study and the author of the standardized instrument through citations and referencing.
- 6. Present the findings in a generalized manner.

3.10 Limitations of the Study

In view of the following threats to validity, the researcher claimed an allowable 5% margin of error at 0.05 level of significance. Measures were also indicated in order to minimize if not to eradicate the threats to the validity of the findings of this study.

1. Extraneous variables which are beyond the researcher's control such as respondents' honesty, personal biases and uncontrolled setting of the study.

2. The respondents might have not been very honest on certain items though the researcher will explain most of the concepts to enable the respondents understand them better.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This section deals with the presentation, analysis and interpretation of the data pertaining to the profile of the respondents, Psycho social factors, students' achievement and the relationship between psychosocial factors and students' achievement in schools.

The analysis and presentation of data in this section was based on the objectives of the study.

Table 4.1 Respondents' Profile

Gender	Frequency	Percent. %
Male	149	58.66
Female	105	41.33
Total	254	100
Age		
11-15	157	61.81
16-20	80	31.49
21-above	17	6.7
Total	254	100
Religion		
Christian	210	82.67
Islam	32	12.59
Other	12	4.74
Total	254	100

Source; Field data

From Table 4.1 above, it can categorically be seen that the male respondents were 58.66 % where as the female respondents formed 41.33 % of the sampled population revealing that gender parity has almost been achieved in as far as enrollment in education is concerned. This situation can further be justified by the general high ranking of this area in Kenya in as far as socio-economic status is concerned. In as far as age is concerned, the majority of the respondents were in the age group of between 11-15, this formed a total of 61.81% where as those in the age bracket of between 16-20 were few at 31.49%, finally, those who were 21 years old and above were the least at 6.7%. This can be explained by the fact that normal progression in the Kenyan education system stipulates that between the ages of 13 and 18, students should be in the secondary schools, and from these statistics, it is easy to deduce that quite a majority of the students in secondary schools in this area of study make normal progress.

As pertains to religious affiliations, Christians formed the majority at 82.67%, followed by Muslims at 12.59% then other religions at 4.74%. Given that the division under study is predominantly Christian, it's worth noting that other religious orientations are slowly percolating into the interiors of this division given its cosmopolitan nature. Religion was looked at since it tends to have an effect on its adherents' psychosocial factors. The religious teachings tend to shape peoples' perceptions of life and their general outlook to life.

Description of the Independent Variable

The independent variable in this study was Psycho-social factors. This was conceptualized into contingency constructing, environment, peer meditated instruction, and teachers comment. A 4 point likert scale, ranging from strongly disagree to strongly agree was used to collect data from the students.

Table 4.2 Level demonstrating psycho social factors

Indicators of psycho-social factors	Mean	Interpretation
Motivation		
You always believe you will get the best that life can offer	3.43	Often
You are an Optimist	3.01	Often
You have high academic Discipline	2.85	Often
You are committed to School	2.79	Often
You always try to remain in school though out school times	2.65	Often
You always strive to give your best in your academic work	2.48	Often
Total	2.86	Often
Social control		
Your family is closely involved in your school activities	3.73	Always
Your family members are always concerned with your welfare at school	3.60	Always
Your family members are very enthusiastic about education	2.99	Often
Your family have positive attitude towards education	2.91	Often
You feel safe while at school	2.85	Often
You have no problem with your school personnel	1.77	Rarely
You have good relationship with most of those who work in your school	1.70	Rarely
Your school climate is secure and free from danger	1.59	Rarely
Total	2.64	Often
Self regulation		
You rarely get involved in indiscipline cases	3.31	Often
You always express your feelings with ease	3.06	Often
You always think before acting	2.79	Often
You always do not regret the consequences of your action	2.75	Often
You carry yourself in an orderly way	2.69	Often
You have no problems managing your feelings	2.50	Sometimes
Total	2.85	Often
Overall mean	2.78	Often

As indicated in the table 4.2 here above, the overall portrayal of the level of Psycho has been rated as satisfactory with an overall mean of 2.51. Within the aspect of contingency construction, the item with the highest rating was teachers' approval of the fact that they reward small attempts made by learners with a mean of 3.43 interpreted as often, that teachers encourage small improvements made by the learners and that they reward upon completion of a task both were ranked often with means of 3.01 and 2.85 respectively, That teachers reinforce appropriate behavior immediately was ranked fair whereas the fact that teachers allow more time for the learner to do their work was rated as low with a mean of 1.29.

With regards to Environment as an aspect, the overall rating was often with a mean of 2.133. However, within the individual items within this aspect, that home environment plays an important role in behavior modification and Moving learners to a more stimulating environment act as a positive reinforcement were both rated very high with means of 3.73 and 3.60 respectively. Four items were rated as fair including; The school environment promote creativity and stimulate learning (2.21), Parents serve as role models (1.97), Excess work at home, illiteracy of parents act as positive reinforces (1.85) and Teachers use positive reinforcement to improve classroom performance (1.77), Four items ranked low including; the change of environmental arrangements for pupils to enhance good learning behavior (1.65), The inclusion program for students with mental retardation reinforce desirable behaviors (1.59)., Parents can foster children's competence by being sensitive to infant behavior (1.50), Adequate learning/teaching resources are available in the classroom (1.46). the aspect of peer mediated instruction was rated as high with a mean of 3.05, its individual items were rated thus; Teachers encourage collaboration as a way of socialization ranked very high with a mean of 3.31, Character traits are learnt through imitation high with a mean of 3.06, whereas Peer tutoring instruction is appropriate for mild mentally retarded learners was rated often with a mean of 2.79. As pertains to the last aspect; teachers' comments, it was generally rated fair with a mean of 2.26. The first four individual items therein were rated as often with the highest mean of 2.86 and the least having a mean of 2.51. That teachers reward behavior rated fair with a mean of 2.21, while removing the reinforce gradually while the target behavior is achieved rated low with a mean of 1.59 and finally, ignoring behavior disorders ranked lowest with a mean of 1.27.

Description of the Dependent Variable

Range of Mean

The dependent variable in this study was Academic achievement. This was conceptualized into performance in the National Examinations at form four level between the year 2008-2013. The inclusive responses for the eight schools selected in Nyamaiya Zone , Nyamira County, Kenya were presented . The results were analyzed in using means as shown in the decision rule guide in table 4.3 below;

Interpretation

,	
0-11	Very low
12-21	Low
22-31	High
32-41	Very High

Table 4.3: Level of Academic Achievement of students from 2008 to 2013

Total No. of Pupils	2008	2009	2010	2011	2012	2013
Students in Grade A	30	28	9	14	26	25
Students in Grade B	34	27	38	39	37	34
Students in Grade C	20	18	29	30	21	25
Students in Grade D	4	4	11	7	5	3
Students in Grade E	-	No.	6	1		-
percentage Mean	17.6	15.4	18.6	18.2	17.8	17.4
Average Mean	1.76	1.54	1.86	1.82	1.78	1.74
	Over	all Mean	=17.5			

Source (field data 2014)

The schools, had an overall mean of 17.6 in the year 2008, which is ranked low, in 2009, the schools had a mean of 15.4, which still ranks low, the schools further sunk lower in 2010, with a mean of 18.6, 2011 saw the schools getting a mean of 18.2 which is generally low, in the year 2012, the schools got a mean of 17.8 which is ranked low, where as in the year 2013, the schools got a mean of 17.4, which is still ranked low. If this poor trend is to be stopped or reversed, the possible factors that lead to this situation should be investigated and established. This study was timely so as to establish the reasons for this low academic performance.

Relationship between Psychosocial factors and academic achievement

The first objective in this study was to establish whether there is a significant relationship between motivation and academic achievement, the second objective aimed at finding out the relationship between social control and academic achievement and finally, the fourth objective sought to establish the relationship between self regulation and academic achievement. To meet this, a null hypothesis was stated that there is no significant relationship between all these aspects of psychosocial factors and academic achievement. This hypothesis was tested using Pearson's Linear Correlation method aided by SPSS as indicated in table 4.4;

Table 4.4: Relationship between psychosocial factors and academic achievement n = 254

Pearson's Linear Correlation method at 0.05 level of significance

Variables Correlated	R-value	Sig.	Interpretation	Decision on Ho
Motivation Vs				
Academic achievement	.360	.000	Significant correlation	Rejected
Social control Vs academic achievement	.604	.000	Significant correlation	Rejected
Self regulation Vs academic achievement	.799	.000	Significant correlation	Rejected
Overall Psycho social factors				
VS	.717	.000	Significant	Rejected
Academic performance			correlation	

Source: Primary Data, 2014

Results in Table 4.4 indicate a positive and significant relationship between students' motivation and academic achievement (r- value=360 and $sig=0.000 \square 0.05$). The kind

of relationship established here implies that the higher the levels of students' motivation, the higher will be the level of students' academic achievement

Social control versus academic achievement, these two aspects are positive and significantly correlated (r- value=604 and sig=0.000<0.05). This implies that improvement in social control levels would significantly make academic achievement of students in examinations much better and vice-versa in the secondary schools in Nyamaiya Zone, Nyamira County. Therefore the stated null hypothesis was rejected and its alternate accepted leading to a conclusion that improving social control makes the students to do better in examination.

In an interview session, a respondent advised that Educational policies provide another perspective for understanding the likely counter- intuitive findings. Further, the respondent added that students' PSFs only demonstrate positive influences on high school academic performance if they have built a rigorous knowledge base in primary school. In other words, low-able students have a less likelihood to achieve better in high schools regardless of motivation and social control they perceived. Therefore, policy makers should recognize that PSF effects come into play in increasing students' academic achievement in high school only after they have gained sufficient achievement in primary schools

As pertains to self regulation versus academic achievement; still there is a positive and significant relationship between self regulation and academic achievement (r-value=799 and sig=0.000<0.05). This implies that improvement in the level of self regulation would significantly lead to a much better academic performance of the learners and vice-versa in the secondary schools in Nyamaiya zone Nyamira County. Therefore the stated null hypothesis was rejected and a conclusion made that improving self regulation among the learners makes the learners more likely to achieve better grades in schools.

Overall, there is still a positive and significant correlation between Psycho social factors and academic achievement (r- value=.717 and sig=0.000 \square 0.05). This could still imply that improvement in the level of psychosocial factors would significantly positively impact on the academic performance of the learners and vice-versa in the secondary schools under study in Nyamaiya zone, Nyamira County. Therefore the stated null hypothesis was rejected and its alternate accepted.

In an interview, one respondent argued that students' performance on PSFs can serve as references for educators to design further educational interventions, although it is worth noting that statistically significance testing results based on a large group do not translate into predictions for individuals. The respondent further argued that Classroom teachers and educational policy-makers should be able to provide the evidence of clinical utility in terms of students' psychosocial profiles alone with their academic achievement performance. Furthermore, teachers may find better educational doses to remedy the weaknesses of psychosocial characteristics to prevent an at-risk individual from being a failing student or an underachiever. Educational policy-makers may find how psychosocial factors help individual students learn in school and become life-long, autonomous learners in society.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

Chapter four presented, analyzed and interpreted data obtained from the field. Based on the findings on the previous chapter, this chapter is then focused on the discussion of the findings of the study. Moreover, the conclusion and recommendations are drawn and given respectively.

5.1 Discussion

This study examined the roles of psychosocial factors (PSFs) (i.e., motivation, social control, and self-regulation) in achievement gains for high school students in their national examinations.

Motivation and achievement

Past studies show that whereas some students are more likely to attribute their academic success to personal effort, other students are more likely to attribute their academic success to natural ability (Assouline et al., 2006; Siegle, Rubenstein, Pollard, & Romey, 2010). However, differences that emerged between the year 2008 and 2013 academic performance of the students were quite surprising, academic achievement gap increased as motivation increased. Specifically, given the National exams which have been calibrated to the same scale, the students performed better as motivation increased while, in contrast, a few others students performed worse as motivation increased. To that end, among female students, the Matthew effect was evidenced in a psychometric manner. One possible explanation for this variation is goal orientation, which is an important source of motivation (Bandura, 1977). Lowable students with performance goals may avoid negative judgments of their competence (Dweck, 1986). Further once they experience academic difficulty, they are likely to show helpless patterns, and, in turn, perform worse at a later time regardless of motivation (Dweck, 2000). However, although the significant interaction

effect was obtained, the incremental contribution of motivation beyond sex and prior achievement was never considered. Therefore, the interpretation of the Matthew effect on motivation should be extremely cautious in explanation of academic success.

Past studies showed that motivational variables only showed slightly related to academic achievement, although small but statistically significant contribution has been obtained (Cattell & Butcher, 1968; Hustinx et al., 2009; Kline, 1979, 1993; Shiner, 2000; Steinmayr & Spinath, 2009). For example, given two large middle school samples in a five-year longitudinal study, the significant magnitude of the motivation effects was between .02 and .06 (Hustinx et al., 2009). In another study of high school students, the significant incremental contribution of motivation variables was only account for .4% variance of academic achievement beyond prior achievement and general intelligence (Steinmayr & Spinath, 2009). Consistent with aforementioned studies, the current findings showed small, but significant incremental contribution (fractions of less 1% of the variance). Therefore, the interpretation of motivation effects should be very conservative in explanation of academic achievement. Furthermore, later academic achievement may be better interpreted in the light of prior academic success (Kline,1993), although the incremental contribution of motivation can be obtained.

Gagné and St Pére (2001) argued that motivation was not significant in predicting school achievement among the females they studied from an all-girl high school. Past studies have addressed possible explanations for their findings such as a restricted range of intrinsic motivation in the female sample, psychometric problems of the instrument, the use of a domain-unspecific measure of intrinsic motivation, or short-time study period (Hustinx et al., 2009; Steinmayr & Spinath, 2009). The findings of the Matthew effect among students in this study may provide other possible explanations for the conflicting results that motivation showed a certain degree of

predictivity in academic achievement for students. Clearly, when examining all students without considering achievement differences, the effects of motivation might be averaged to zero.

The jingle fallacy might be another way to explain various degrees of motivation effects. Jingle fallacy on measuring motivation means that motivation is measured by the same name, but different constructs in various studies (see Pedhazur & Schmelkin, 1991). For example, Gagné and St Pére (2001) measured intrinsic and extrinsic motivation in terms of Deci and Ryan's self-determination theory (Deci & Ryan, 1985), while motivation measured in this study refers to a combination of academic discipline, commitment to school, and optimism. Therefore, it is worthwhile to understand how the construct of motivation is defined and measured when examining the effects of motivational variables in different studies.

Social control and achievement

Family plays an important role in students' learning (Fan & Chen, 2001; Hill & Tyson, 2009). In school, learning is a social process that often takes place in collaboration with peers and teachers (Zins, et al., 2004). Also, safer school environment improves students' learning (Creemers, 1994; Gronna & Chin-Chance, 1999). Students' perception from both family and school, components of social control, are related to their learning. In addition to demonstrating greater motivation, the students also demonstrated greater social control. Earlier research on sex differences in social control, including family engagement and teacher-student relationships, are mixed when predicting scholastic achievement (Eamon, 2005; Hughes, Cavell, & Willson, 2001; Keith et al., 1998; Muller, 1998). For example, studies indicated that the relationship between parent involvement and academic achievement is similar across sexes. However, in certain racial/ethnic groups (e.g., Latino students), female students are more responsive to parent

involvement in education than male students, and perform better in school (Eamon, 2005). Also, Hughes et al. (2001) argued that female students have better teacher-student relationships than male students.

The results in this study supported the hypothesis that students' social control interacts with sex and current achievement to predict later achievement, although the effect is small, but significant. The students' academic achievement gap increased as levels of social control increased. Specifically, high-able female students performed better as social control increased; however, as with motivation, the low-able female students performed worse as social control increased. To that end, among female students, the Matthew effect was evidenced psychometrically once again. For male students, social control did not predict later achievement. However, similar to motivation, although the significant interaction effect was obtained, the incremental contribution of social control beyond sex and prior achievement was small, accounting for only .6% of the variance in later achievement. Therefore, the interpretation of the Matthew effect on social control should be used with extreme caution as an explanation of academic success.

In a meta-analysis study, Hill and Tyson (2009) found the average weighted correlation between general parental involvement and achievement in middle school across the 32 independent samples was small but significant (r = .18). Similarly, the relationship between social control and later academic achievement in this study also resulted in a correlation of .18, although social control in this study included constructs of general parental involvement (i.e., family attitude toward education, and family involvement), relationship with school personnel, and school safety.

In post-hoc analyses, the current results showed that high-able female students with high social control had higher later achievement than high-able male students who also had high social control. Kerr and Nicpon (2003) reported that many gifted male students feel alienated and disengaged during childhood. This might explain why more high-able male students were not more influenced by social control. In addition, as with motivation, later academic achievement may be better interpreted in the light of prior academic achievement. A rigorous knowledge base is needed to improve later academic performance, while low-able female students performed worse as social control increased.

Self Regulation and academic Performance

As pertains to self regulation versus academic achievement; still there is a positive and significant relationship between self regulation and academic achievement (rvalue=799 and $sig=0.000\square 0.05$). This implies that improvement in the level of self regulation would significantly lead to a much better academic performance of the learners and vice-versa in the secondary schools in Nyamaiya zone Nyamira County. Using Baron and Kenny's (1986) steps to establish mediation, partial mediation was established when initial achievement significantly predicted self-regulation, and when self-regulation significantly predicted later achievement. The fact that self-regulation predicts later achievement was found in earlier studies (e.g., Maughan et al., 2003). Across sexes and levels of initial achievement, self-regulation showed a medium effect size of partial mediation when predicting later academic achievement, which is consistent with earlier findings (Fredricks et al., 2004; Gumora & Arsenio, 2002; Wentzel, 1993). In contrast to earlier findings in a college sample (e.g., Robbins et al., 2006), this study did not find the curvilinear relationship between self-regulation and students' later achievement, after first controlling for initial achievement and sex. Instead, as in previous research with a middle school sample (Duckworth & Seligman, 2005; Gumora & Arsenio, 2002; Wentzel, 1993), this study found a linear relationship

between self- regulation and academic achievement.

5.2 Conclusions

Basing on the findings of the study, it is concluded that social control versus academic achievement, these two aspects are positive and significantly correlated. This implies that improvement in social control levels would significantly make academic achievement of students in examinations much better and vice-versa in the secondary schools in Nyamaiya Zone Nyamira County

As pertains to self regulation versus academic achievement; still there is a positive and significant relationship between self regulation and academic achievement. This implies that improvement in the level of self regulation would significantly lead to a much better academic performance of the learners and vice-versa in the secondary schools in Nyamaiya zone Nyamira County.

Overall, there is still a positive and significant correlation between Psycho social factors and academic achievement. This could still imply that improvement in the level of psychosocial factors would significantly positively impact on the academic performance of the learners and vice-versa in the secondary schools under study in Nyamaiya zone, Nyamira County

5.3 Recommendations

The teachers, teachers and parents need to remain a learning environment that ensures continued motivation of the students.

Students should be encouraged to continue exercising their satisfactory or even more than their currently exercised satisfactory level of selft regulation since this help them to perform better.

This study examined three broad psychosocial domains - motivation, social control, and self-regulation - which reveal the relationships between PSFs and achievement. The study recommends that Individualized Education Programs (IEP) for at-risk or gifted students, should be designed to cater for the variation in the PSF basing on the

students' varied backgrounds this will be further more useful and needed to design targeted interventions.

Areas for further Research

Examining narrow psychosocial characteristics is strongly suggested. Not Contrary to expectations, this study found that motivation and social control did significantly predict later achievement among students. While past studies showed that broad psychosocial domains are closer to observable and malleable behavior, and are better predictors of educational and work success (e.g., Paunonen & Ashton, 2001; Peterson, Casillas, & Robbins, 2006), Lounsbury et al. (2003) showed that narrow psychosocial traits can also provide significant incremental validity in predicting academic performance. In addition, examining narrow psychosocial characteristics could provide a better and more detailed understanding of sex differences in motivation and social control. For example, within motivation, Zimmerman (2008) argued that students with higher levels of sustained effort are more likely to complete academic tasks and achieve their goals. Consequently, it is hypothesized that academic discipline may play a more prominent role in predicting later academic achievement, whereas other two psychosocial characteristics, commitment to school and optimism could have smaller contributions. In addition, within social control, it is reasonable to separate family engagement from social control, since past metaanalytic studies have shown that parental involvement significantly predicts later academic success (Fan & Chen, 2001; Hill & Tyson, 2009). Therefore, unraveling the differential effects of narrow psychosocial characteristics in the prediction of academic achievement would be worthwhile in future research.

REFFERENCES

- ACT, Inc. (2007a). EXPLORE technical manual. Iowa City, IA: Author.
- ACT, Inc. (2007b). PLAN technical manual. Iowa City, IA: Author.
- ACT, Inc. (2008). The forgotten middle: Ensuring that all students are on target for college and career readiness before high school. Iowa City, IA: Author. Retrieved from http://act.org/research/policymakers/pdf/ForgottenMiddle.pdf
- ACT, Inc. (2009). Student Readiness Inventory middle school user's guide. Iowa City, IA: Author.
- ACT, Inc. (2010). Behavioral Monitoring Scales for grades 6-9. Iowa City, IA:
- Author. Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions.* Newbury Park, CA: Sage.
- Ake, C. F. (2005, April). *Rounding after multiple imputation with non-binary categorical covariates.* Paper presented at 30th annual SUGI meeting, Philadelphia, PA.
- Alexander, K. L., Entwisle, D. R., & Kabbini, N. S. (2001). The dropout process in life course perspective: Early risk factors at home and school. *Teachers College Record*, *103*(5), 760-882
- Allen J., Bassiri, D., & Noble, J. (2009). Statistical properties of accountability

 measures based on ACT's educational planning and assessment system (ACT

 Research Report 2009-1). Retrieved from

 http://act.org/research/researchers/reports/pdf/ACT_RR2009-1.pdf
- Allen, J., Robbins, S. B., & Sawyer, R. (2010). Can measuring psychological factors promote college success? *Applied Measurement in Education,* 23 (1), 1-22. doi:10.1080/08957340903423503
- Allensworth, E. M., & Easton, J. Q. (2007). What matters for staying on-track and

- graduating in Chicago public high schools? Chicago, IL: Consortium on Chicago School Research at the University of Chicago. Retrieved from http://ccsr.uchicago.edu/publications/07%20What%20Matters%20Final.pdf
- Assouline, S. G., Colangelo, N., Ihrig, D., & Forstadt, L. (2006). Attributional choices for academic success and failure by intellectually gifted students. *Gifted Child Quarterly*, *50*(4), 283-294. doi:10.1177/001698620605000402
- Atkinson, J. W. (1964). *An introduction to motivation.* New York, NY: Van Nostrand Reinhold.
- Balfanz, R., Herzog, L., & Mac Iver, D. J. (2007). Preventing student disengagement and keeping students on the graduation path in urban middle-grades: Early identification and effective interventions. *Educational Psychologist, 42*(4), 223-235. doi:10.1080/00461520701621079
 - Bandalos, D. L. & Finney, S. J. (2001). Item parceling issues in structural equation modeling. In G. A. Marcoulides & R. E. Schumacker (Eds.), *New developments and techniques in Structural equation modeling* (pp. 269-296). Mahwah, NJ: Lawrence Erlbaum Associates.
 - Bandalos, D. L. (2002). The effects of item parceling on goodness-of-fit and parameter estimate bias in structural equation modeling. *Structural Equation Modeling*, *9*(1), 78-102. doi:10.1207/S15328007SEM0901_5
 - Bandura, A. (1997). *Self-Effiacy: The exercise of control.* New York, NY: W. H. Freeman and Company.
 - Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173-1182. doi:10.1037/0022-3514.51.6.1173
 - Bellanca, J. & Brandt, R. (2010). *21st Century Skills: Rethinking How Students Learn*.

 Bloomington, IN: Solution Tree Press.
 - Bobko, P., Roth, P. L., & Buster, M. A. (2007). The usefulness of unit weights in creating composite scores: A literature review, application to content validity, and meta- analysis. *Organizational Research Methods, 10*(4), 689-709. doi:10.1177/1094428106294734
 - Bobko, P., Schemmer, F. M. (1980). Note on standardized regression estimators. *Psychological Bulletin, 88*(1), 233-236. doi:10.1037/0033-2909.88.1.233

- Borkowski, J. G., & Peck, V. A. (1986). Causes and consequences of metamemory in gifted children. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp. 182-200). Cambridge, England: Cambridge University Press.
- Brady, B. A., Tucker, C. M., Harris, Y. R., & Tribble, I. (1992). Association of academic achievement with behavior among Black students and White students. *The Journal of Educational Research, 86*(1), 43-51. Retrieved from http://www.jstor.org/stable/27540512
- Carver, C. S. (2004). Self-regulation of action and affect. In R. F. Baumeister & K. D.
 - Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 13-39). New York, NY: Guilford Press.
- Casillas, A., Allen, J., Kuo. Y. L., Pappas, S., Hanson, M. A., & Robbins, S. (in press).

Development and validation of the Student Readiness Inventory — Middle School

(ACT Research Report). Iowa City, IA: ACT.

- Casillas, A., Robbins, S., Allen, J., Kuo. Y. L., Hanson, M. A., & Schmeiser, C. (under review). Predicting early academic failure in high school from prior academic achievement, psychosocial characteristics, and behavior. *Journal of Educational Psychology*.
- Cattell, R. B., & Butcher, H. J. (1968). *The prediction of achievement and creativity*. New York, NY: Bobbs Merrill.
- Ceci, S. J. & Papierno, P. B. (2005). The rhetoric and reality of gap closing: When the

"have-nots" gain the "haves" gain even more. *American Psychologist, 60*(2), 149-

160. doi:10.1037/0003-066X.60.2.149

- Clouder, C., Dahlin, B., Diekstra, R., Berrocal, P. F., Heys, B., Lantieri, L., & Paschen, H. (2008). *Social and Emotional Education: An International Analysis.* Fundación Marcelino Botín Report. Retrieved from http://educacion.fundacionmbotin.org/index.php?a=educacion_responsable_a nalisis_i nternacional
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Cohn, E. S., & Modecki, K. L. (2007). Gender differences in predicting delinquent behavior: Do individual differences matter? *Social Behavior and Personality*, *35*(3), 359-374. doi:10.2224/sbp.2007.35.3.359
- Cole, P. M., Martin, S. E., & Dennis, T. A. (2004). Emotion regulation as a scientific construct: Methodological challenges and directions for child development research. *Child Development*, *75*(2), 317-333. Retrieved from http://www.jstor.org/stable/3696638

- Corno, L., Cronbach, L. J., Kupermintz, H., Lohman, D. F., Mandinach, E. B., Porteus, A. W., & Talbert, J. (2002). *Remaking the concept of aptitude: Extending the legacy of Richard E. Snow.* Hillsdale, NJ: Erlbaum.
- Covington, M. V. (2000). Goal theory, motivation, and school achievement: An integrative review. *Annual Review of Psychology*, *51*, 171-200. doi:10.1146/annurev.psych.51.1.171
- Creemers, B. P. (1994). The effective classroom. London: Cassell.
- Cronbach, L. J., & Snow, R. E. (1977). *Aptitudes and instructional methods: A handbook for research on interactions.* New York, NY: Irvington.
- Crone, L. J., Lang, M. H., Franklin, B. J., & Halbrook, A. M. (1994). Composite versus component scores: Consistency of school effectiveness classification. *Applied Measurement in Education*, 7(4), 303-321. doi:10.1207/s15324818ame0704 3
- Csikszentmihalyi, M., Rathunde, K., & Whalen, S. (1993). *Talented teenagers: The roots of success and failure.* New York, NY: Cambridge University Press.
- Dawson, J. F., & Richter, A. W. (2006). Probing three-way interactions in moderated multiple regression: Development and application of a slope difference test. *Journal of Applied Psychology*, *91*(4), 917-926. doi:10.1016/S0021-9010(06)61901-8
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.
- Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: the self-determination perspective. *Educational Psychologies*, *26*(3&4), 325-346. doi:10.1207/s15326985ep2603&4 6
- Dickman, S. J. (1990). Functional and dysfuncational impulsivity: Personality and cognitive correlates. *Journal of Personality and Social Psychology*, *58*(1), 95-102. doi:10.1016/j.paid.2007.06.002
- DiPerna, J. C., Volpe, R. J., & Elliott, S. N. (2002). A model of academic enablers and elementary reading/language arts achievement. *School Psychology Review*, *31*(3), 298-312.
- DiPerna, J. C., Volpe, R. J., & Elliott, S. N. (2005). A model of academic enablers and mathematics achievement in the elementary grades. *Journal of School Psychology*, 43(5), 379-392.doi:10.1016/j.jsp.2005.09.002
- Dotterer, A. M., Hoffman, L., Crouter, A. C., & McHale, S. M. (2008). A longitudinal examination of the bidirectional links between academic achievement and parent- adolescent conflict. *Journal of Family Issues, 29*(6), 762-779. doi:10.1177/0192513X07309454
- Duckworth, A. L. (2009). (Over and) Beyond High-Stakes Testing. *American Psychologist*, *64*(4), 279-280. doi: 10.1037/a0014923

- Duckworth, A. L., & Seligman, M. (2005). Self-discipline outdoes IQ in predicting academic performance of adolescents. *Psychological Science*, *16*(12), 939-944. doi:10.1111/j.1467-9280.2005.01641.x
- Dusenbury, L., Zadrazil, J., Mart, A., & Weissberg, R. (2011). State learning standards to advanced social and emotional learning: The CASEL state scan of social and emotional learning standards, preschool through high school. Retrieved from http://casel.org/wp-content/uploads/2011/04/Forum-Brief-on-the-State-Scan- FINAL.pdf
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta- analysis of school-based universal interventions. *Child Development*, 82(1), 405-432
- Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, 41(10), 1040-1048. doi:10.1037/0003-066X.41.10.1040
- Dweck, C. S. (2000). *Self-theories: Their role in motivation, personality, and development.* Philadelphia, PA: Psychology Press.
- Dweck, C. S. (2008). Can personality be changed? The role of beliefs in personality and change. *Current Directions in Psychological Science*, *17*(6), 391-394. doi:10.1111/j.1467-8721.2008.00612.x
- Dymnicki, A. B. (2004). *The impact of school-based social and emotional development programs on academic performance.* Unpublished master thesis, University of Illinois at Chicago.
- Eamon, M. K. (2005). Social-demographic, school, neighborhood, and parenting influences on the academic achievement of Latino young adolescents. *Journal of Youth and Adolescence, 34*(2), 163–174. doi:10.1007/s10964-005-3214-x
- Eisenberg, N., & Spinrad, T. L. (2004). Emotion-related regulation: Sharpening the definition. *Child Development, 75*(2), 334-339. Retrieved from http://www.jstor.org/stable/3696639
- Eisenberg, N., Smith, C. L., Sadovsky, A., & Spinrad, T. L. (2004). Effortful control: Relations with emotion regulation, adjustment and socialization in childhood. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 259–282). New York, NY: Guilford Press.
- Elliot, A. J. (1997). Integrating the "classic" and "contemporary" approaches to achievement motivation: A hierarchical model of approach and avoidance achievement motivation. In M. L. Maehr, M. & P. R. Pintrich (Eds.), *Advances in Motivation and Achievement* (Vol. 10, pp. 143-179). Greenwich, CT: JAI Press.
- Ericsson, K. A., Krampe, R. T., & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100(3), 363-

- Fairchild, A. J., MacKinnon, D. P., Taborga, M. P., & Taylor, A. B. (2009). R² effect-size measures for mediation analysis. *Behavior Research Methods*, 41(2), 486-498. doi:10.3758/BRM.41.2.486
- Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: Ameta-analysis. *Educational Psychology Review*, *13*(1), 1–22. doi:10.1023/A:1009048817385
- Finn, J. D., & Rock, D. A. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology, 82*(2), 221–234. doi:10.1037/0021-9010.82.2.221
- Finn, J. D., & Voelkl, K. E. (1993). School characteristics related to student engagement. *Journal of Negro Education, 62*(3), 249-268. Retrieved from http://www.jstor.org/stable/2295464
- Finn, J. D., Pannozzo, G. M., & Achilles, C. M. (2003). The "why's" of class size: Student behavior in small classes. *Review of Educational Research, 73*(3), 321-368. doi:10.3102/00346543073003321
- Fisher, R. J., & Katz, J. E. (2000). Social-desirability bias and the validity of self-reported values. *Psychology & Marketing*, 17(2), 105-120. doi:10.1002/(SICI)1520-6793(200002)
- Fleischman, H. L., Hopstock, P. J., Pelczar, M. P., & Shelley, B. E. (2010). Highlights From PISA 2009: Performance of U.S. 15-Year-Old Students in Reading, Mathematics, and Science Literacy in an International Context (NCES 2011-004). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.
- Frank, R. H., & Cook, P. J. (1995). The winner-take-all-society: How more and more Americans compete for ever fewer and bigger prizes, encouraging economic waste, income inequality, and an impoverished cultural life. New York, NY: Free Press.
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, *74*(1), 59-109. doi:10.3102/00346543074001059
- Friedrich, R. J. (1982). In defense of multiplicative terms in multiple regression equations. *American Journal of Political Science*, *26*(4), 797-833. Retrieved from http://www.jstor.org/stable/2110973
- Fuchs, D., Fuchs, L. S., & Stecker, P. M. (2010). The "blurring" of special education in a new continuum of general education placements and services. *Exceptional Children*, 76(3), 301-323.
- Gagné, F., & St Pére, F. (2001). When IQ is controlled, does motivation still predict achievement? *Intelligence*, *30*(1), 71–100. doi:10.1016/S0160-

2896(01)00068-X

- Gerbing, D. W., Ahadi, S. A., & Patton, J. H. (1987). Toward a conceptualization of impulsivity: Components across the behavioral and self-report domains. *Multivariate Behavioral Research*, *22*(3), 357–379. doi:10.1207/s15327906mbr2203 6
- Glaser, B. G. (1963). Retreading research materials: The use of secondary analysis by the independent researcher. *American Behavioral Scientist*, 6(10), 11-14.
- Glovinsky-Fahsholtz, D. (1992). The effect of free or reduced-price lunches on the self- esteem of middle school students. *Adolescence*, 27(107), 633-638.
- Goldstein, S. E., Young, A., & Boyd, C. (2008). Relational aggression at School: Associations with school safety and social climate. *Journal of Youth and Adolescence*, 37(6), 641-654. doi:10.1007/s10964-007-9192-4
- Gottfredson, L. S. (1997). Why g matters: The complexity of everyday life. *Intelligence,* 24(1), 79-132. doi:10.1016/S0160-2896(97)90014-3
- Gottfredson, L. S. (2002). Where and why g matters: Not a mystery. *Human Performance*, *15*(1&2), 25–46. doi:10.1207/S15327043HUP1501&02_03
- Gottfredson, L. S. (in press). Intelligence and social inequality: Why the biological link?
 - In T. Chamorro-Premuzic, A. Furhnam, & S. von Stumm (Eds.), *Handbook of Individual Differences. Wiley-Blackwell.* Retrieved from http://www.udel.edu/educ/gottfredson/reprints/2010inequality.pdf
- Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review Psychology, 60,* 549-576. doi: 10.1146/annurev.psych.58.110405.085530
- Graham, J. W., & Schafer, J. L. (1999). On the performance of multiple imputation for multivariate data with small sample size. In R. Hoyle (Ed.), *Statistical strategies for small sample research* (pp. 1-29). Thousand Oaks, CA: Sage.
- Grigorenko, E. L., Jarvin, L., Diffley III, Goodyear, J., Shanahan, E. J., & Sternberg, R. J. (2009). Are SSATs and GPA enough? A theory-based approach to predicting academic success in secondary school. *Journal of Educational Psychology*, 101(4),964-981. doi:10.1037/a0015906
- Gronna, S. S., & Chin-Chance, S. A. (1999). Effects of school safety and school characteristics on grade 8 achievement: A multilevel analysis. Paper presented at the Annual Meeting of the American Educational Research Association, April 19-23, Montreal, Canada. (Check APA Style) Retrieved from http://www.eric.ed.gov/PDFS/ED430292.pdf
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review.

- Review of General Psychology, 2(3), 271-299. doi:10.1037/1089-2680.2.3.271
- Gumora, G., & Arsenio, W. F. (2002). Emotionality, emotion regulation, and school performance in middle school children. *Journal of School Psychology*, *40*(5), 395-413. doi:10.1016/S0022-4405(02)00108-5
- Hair, P., & Hampson, S. E. (2006). The role of impulsivity in predicting maladaptive behaviour among female students. *Personality and Individual Differences, 40(*5), 943-952. doi:10.1016/j.paid.2005.10.002
- Heckman, J. J. & Rubinstein, Y. (2001). The Importance of Noncognitive Skills: Lessons from the GED Testing Program. *The American Economic Review*, 91(2), 145-149. doi:10.1257/aer.91.2.145
- Hill, N. E. & Tyson, D. F. (2009). Parental involvement in middle school: A meta- analytic assessment of the strategies that promote achievement. *Developmental Psychology*, *45*(3), 740-763. doi:10.1037/a0015362
 - Hirschi, T. (1969). *Cause of delinquency*. Berkeley and Los Angeles, CA: University of California Press.
 - Horn, J., & Masunaga, H. (2006). A merging theory of expertise and intelligence. In K.

A. Ericsson, N. Charness, P. J. Feltovich, & R. R. Hoffman (Eds.), *The Cambridge Handbook of Expertise and Expert Performance* (pp. 587-612). New York, NY: Cambridge University Press.

- Hoy, W. K., Sweetland, S. R., & Smith, P. A. (2002). Toward an organizational model of achievement in high schools: The significance of collective efficacy. *Educational Administration Quarterly*, *38*(1), 77-93. doi:10.1177/0013161X02381004
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1-55. doi:10.1080/10705519909540118
- Huebner, T. A. (2010). Differentiated instruction. Educational Leadership, 67(5),
- 79-81. Hughes, J. N., Cavell, T. A., & Willson, V. (2001). Further support for the
- developmental significance of the quality of the teacher-student relationship. *Journal of School Psychology, 39*(4), 289-301. doi:10.1016/S0022-4405(01)00074-7
- Hunseley, J. & Meyer, G. J. (2003). The incremental validity of psychological testing and assessment: Conceptual, methodological, and statistical issues. *Psychological Assessment*, *15*(4), 446-455. doi:10.1037/1040-3590.15.4.446
- Hustinx, P. W. J., Kuyper, H., van der Werf, M. P. C., & Dijkstra, P. (2009).

Achievement achievement motivation revisited: New longitudinal data to demonstrate

its predictive power. *Educational Psychology*, *29*(5), 561-582. doi:10.1080/01443410903132128

- Isakson, K., & Jarvis, P. (1999). The adjustment of adolescents during the transition into high school: A short-term longitudinal study. *Journal of Youth and Adolescence*, 28(1), 1-26. doi:10.1023/A:1021616407189
- Judge, T., Klinger, R., & Simon, L. (2010). Time is on my side: Time, general mental ability, human capital, and extrinsic career success. *Journal of Applied Psychology*, 95(1), 92-107. doi:10.1037/a0017594
- Keith, T. Z., Keith, P. B., Quirk, K. J., Sperduto, J., Santillo, S., & Killings, S. (1998).
 Longitudinal effects of parent involvement on high school grades: Similarities and differences across gender and ethnic groups. *Journal of School Psychology*, 36(3), 335-363. doi:10.1016/S0022-4405(98)00008-9
- Kerr, B. A., & Nicpon, M. F. (2003). Gender and giftedness. In N. Colangelo & G. A. Davis (Eds.), *Handbook of gifted education* (3rd ed., pp.493-505). Boston, MA: Allyn & Bacon.
- Kline, P. (1979). Psychometrics and psychology. New York, NY: Academic
- Press. Kline, P. (1993). Personality: The psychometric view. New York, NY:
- Routledge. Konstantopoulos, S. (2008). Do small classes reduce the
- achievement gap between low and high achievers? Evidence from Project STAR. *Elementary School Journal*, *108*(4), 275-291. doi:10.1086/528972
- Kosecoff, J. B., & Klein, S. P. (1974, April). *Instructional sensitivity statistics appropriate for objectives-based test items.* Paper presented at the Annual Conference of the National Council on Measurement in Education, Chicago, IL.
- Kyllonen, P. C. (2005). The case for noncognitive assessments. *R & D Connections* (pp. 1-7). Retrieved from:

http://www.ets.org/Media/Research/pdf/RD_Connections3.pdf.

- Kyllonen, P. C., Walters, A. M., & Kaufman, J. C. (2005). Noncognitive constructs and their assessment in graduate education: A Review. *Educational Assessment, 10*(3), 152-184. doi:10.1207/s15326977ea1003_2
- Lantieri, L. (2008). Social and emotional learning as a basis of a new vision of education in the United States. In C. Clouder, B. Dahlin, R. Diekstra, P. F.

- Berrocal, B. Heys, L. Lantieri, & H. Paschen (Eds.), *Social and Emotional Education: An International Analysis* (pp. 189-224). Fundación Marcelino Botín Report. Retrieved from http://educacion.fundacionmbotin.org/ficheros descarga/pdf/EN/USA.pdf
- Lawrence-Brown, D. (2004). Differentiated instruction: Inclusive strategies for standards-based learning that benefit the whole class. *American Secondary Education, 32*(3), 34-62. doi
- Le, H., Casillas, A., Robbins, S. B., & Langley, R. (2005). Motivational and skills, social, and self-management predictors of college outcomes: Constructing the Student Readiness Inventory. *Educational and Psychological Measurement*, 65(3), 482-508. doi:10.1177/0013164404272493
- Lee, J., & Shute, V. J. (2010). Personal and social-contextual factors in K-12 academic performance: AN integrative perspective on student learning. *Educational Psychologist*, *45*(3), 185-202. doi:10.1080/00461520.2010.493471
- Little, T. D., Cunningham, W. A., & Shahar, G. (2002). To parcel or nor to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, *9*(2), 151-173. doi:10.1207/S15328007SEM0902_1
- Linn, R. L. (2006). *Educational Accountability Systems.* (CSE Technical Report 687).

 Los Angeles: Center for the Study of Evaluation. Retrieved from http://www.cse.ucla.edu/products/reports/R687.pdf
- Lleras, C. (2008). Do skills and behaviors in high school matter? The contribution of noncognitive factor in explaining differences in educational attainment and earrings. *Social Science Research*, 37(3), 888-902. doi:10.1016/j.ssresearch.2008.03.004
- Lohman, D. F. (2009). Identifying academically talented students: Some general principles, two specific procedures. In L. V. Shavinina (Ed.), *International handbook on giftedness* (part two) (pp. 971-998). New York, NY: Springer.
- Lohman, D. F., & Hagen, E. P. (2002). *CogAT, Form 6: A short guide for teachers, Version 1.1.* Itasca, IL: The Riverside Publishing Company.
- Lounsbury, J. W., Sundstrom, E., Loveland, J. L., & Gibson, L. W., (2003). Broad versus narrow personality traits in predicting academic performance of adolescents.

 Learning and Individual Differences, 14(1), 67-77.

 doi:10.1016/j.lindif.2003.08.001
- Lounsbury, J. W., Welsh, D. P., Gibson, L. W., & Sundstrom, E. (2005). Broad and narrow personality traits in relation to cognitive ability in adolescents. *Personality and Individual Differences*, *38*(5), 1009-1019. doi:10.1016/j.paid.2004.06.022
- Lubbers, M. J., Van Der Werf, M. P. C., Kuyper, H., & Hendriks, A. A. J. (2010). Does homework behavior mediate the relation between personality and academic performance? *Learning and Individual Differences*, 20(3), 203-

- 208. doi:10.1016/j.lindif.2010.01.005
- MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*. Mahwah, NJ: Taylor & Francis.
- Mardia, K. V. (1974). Applications of some measures of multivariate skewness and kurtosis in testing normality and robustness studies. *Sankhyā: The Indian Journal of Statistics, Series B, 36*(2), 115-128. Retrieved from http://www.jstor.org/stable/25051892
- Martin, A. J. (2009). Motivation and engagement across the academic life span. *Educational and Psychological Measurement, 69*(5), 794-824. doi:10.1177/0013164409332214
- Maslow, A. H. (1954). Motivation and personality. New York, NY: Harper & Row.
- Masten, A. S., Roisman, G. I., Long, J. D., Burt, K. B., Obradovic´, J., Riley, J. R., et al. (2005). Developmental cascades: Linking academic achievement and externalizing and internalizing symptoms over 20 years. *Developmental Psychology*, 41(5), 733—749. doi:10.1037/0012-1649.41.5.733
- Maughan, B., Rowe, R., Loeber, R., & Stouthamer-Loeber, M. (2003). Reading problems and depressed mood. *Journal of Abnormal Child Psychology*, *31*(2), 219-229. doi:10.1023/A:1022534527021
- McClelland, D. C. (1961). The achieving society. Princeton, NJ. Van Nostrand.
- McClelland, D. C., Atkinson, J., Clark, R., & Lowell, E. (1953). *The achievement motive.*
 - New York, NY: Appleton-Century-Crofts.
- McFall, R. M. (2005). Theory and utility–Key themes in evidence–based assessment: Comment on the special section. *Psychological Assessment*, 17(3), 312–323. doi:10.1037/1040-3590.17.3.312
- Meehl, P. E. (1959). Some ruminations on the validation of clinical procedures. *Canadian Journal of Psychology*, *13*(2), 102–128.
- Merrell, K. W., & Gueldner, B. A. (2010). *Social and emotional learning in the classroom: Promoting mental health and academic success.* New York, NY: Guilford Press.
- Miller, R. G. (1981). *Simultaneous statistical inference* (2nd ed.). New York, NY: Springer-Verlag.
- Mitchell, M. S. (2010). The last word: An interview with Joseph S. Renzulli on encouraging talent development. *Journal of Advanced academics*, 22(1), 157-167.
- Moilanen, K. I., Shaw D. S., & Maxwell, K. L. (2010). Developmental cascades: Externalizing, internalizing, and academic competence from middle childhood to early adolescence. *Development and Psychopathology*, *22*(2), 635–653. doi:10.1017/S0954579410000337

- Muller, C. (1998). Gender differences in parental involvement and adolescents' mathematics achievement. *Sociology of Education, 71*(4), 336-356. Retrieved from http://www.jstor.org/stable/2673174
- Murray, H. A. (1938). *Explorations in personality*. New York, NY: Oxford University Press.
- Muthén, L. K., & Muthén, B. O. (2007). *Mplus user's guide* (5th ed.). Los Angeles, CA: Muthén & Muthén.
- Neild, R. C., Balfanz, R., & Herzog, L. (2007). An early warning system. *Educational Leadership*, 65(3), 28-33. Retrieved from http://www.every1graduates.org/PDFs/Early%20Warning%20Systems.pdf
- No Child Left Behind Act of 2001, Pub. L. No. 107-110 (2002).
- Olson, K. R., & Dweck, C. S. (2008). A blueprint for social cognitive development. *Perspectives on Psychological Science, 3*(3), 193-202. doi:10.1111/j.1745-6924.2008.00074.x
- Patton, J. H., Stanford, M. S., & Barratt, E. S. (1995). Factor structure of the Barratt Impulsiveness Scale. *Journal of Clinical Psychology, 51*(6), 768-774. doi:10.1002/1097-4679(199511)51:6<768::AID-JCLP2270510607>3.0.CO;2-1
- Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology, 46*(3), 598-609. doi:10.1037/0022-3514.46.3.598
- Paunonen, S. V., & Ashton, M. C. (2001). Big Five factors and facets and the prediction of behavior. *Journal of Personality and Social Psychology*, 81(3), 524–539. doi:10.1037/0022-3514.81.3.524
- Payton, J., Weissberg, R. P., Durlak, J. A., Dymnicki, A. B., Taylor, R. D., Shellinger, K.

B., & Pachan, M. (2008). *The positive impact of social and emotional learning for*

kindergarten to eighth-grade students: Findings from three scientific reviews. Chicago, IL: Collaborative for Academic, Social and Emotional Learning. Retrieved

- from http://www.casel.org/downloads/casel-addendum.pdf
- Pedhazur, E.J., & Schmelkin, L. P. (1991). *Measurement, design and analysis: An integrated approach.* Hillsdale, NJ: Lawrence Erlbaum Associates.
- Peterson, C. H., Casillas, A., & Robbins, S. B. (2006). The Student Readiness Inventory and the Big Five: Examining social desirability and college academic performance. *Personality and Individual Differences*, *41*(4), 663-673. doi:10.1016/j.paid.2006.03.006
- Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational*

- *Psychology,* 82(1), 33-40. doi:10.1037/0022-0663.82.1.33
- Polikoff, M. S. (2010). Instructional Sensitivity as a Psychometric Property of Assessments. *Educational Measurement: Issues and Practice, 29*(4), 3-14. doi:10.1111/j.1745-3992.2010.00189.x
- Reiss, A. J. (1951). Delinquency as the failure of personal and social controls. *American Sociological Review, 16*(2), 196-207. Retrieved from http://www.jstor.org/stable/2087693
- Renzulli, J. S., & Park, S. (2000). Gifted dropouts: The who and the why. *Gifted Child Quarterly*, *44*(4), 261-271. doi:10.1177/001698620004400407
- Robbins, S. B., Allen, J., Casillas, A., Peterson, C., & Le, H. (2006). Unraveling the differential effects of motivational and skills, social, and self-management measures from traditional predictors of college outcomes. *Journal of Educational Psychology*, 98(3), 598–616. doi:10.1037/0022-0663.98.3.598
- Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, *130*(2), 261–288. doi:10.1037/0033-2909.130.2.261
- Robbins, S. B., Oh, I., Le, H., & Button, C. (2009). Intervention effects on college performance and retention as mediated by motivational, emotional, and social control factors: Integrated meta-analytic path analyses. *Journal of Applied Psychology*, *94*(5), 1163-1184. doi:10.1037/a0015738
- Roeser, R. W., Eccles, J. S., & Sameroff, A. J. (2000). School as a context of early adolescents' academic and social-emotional development: A summary of research findings. *The Elementary School Journal, 100*(5), 443-471. Retrieved from http://www.jstor.org/stable/1002279
- Romer. D. (2010). Adolescent risk taking, impulsivity, and brain development: Implications for prevention. *Developmental Psychobiology*, *52*(3), 263-276. doi:10.1002/dev.20442
- Rothman, A. J., Baldwin, A. S., & Hertel, A. W. (2004). Self-regulation and behavior change: Disentangling behavioral initiation and behavioral maintenance. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 130-148). New York, NY: Guilford Press.
- Rumberger, R. W., & Lim, S. A. (2008). Why students drop out of school: A review of 25 years of research. Santa Barbara, CA: California Dropout Research Project.

 Retrieved from http://cdrp.ucsb.edu/dropouts/pubs_reports.htm#15
- Schafer, J. L. (1997). *Analysis of incomplete multivariate data.* London, United Kingdom:Chapman & Hall.

- Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling Psychology*, *57*(1), 1-10. doi:10.1037/a0018082
- Schmeiser, C. B. (2011). Most students failing to reach common-standards bar. *Education Week, 30*(15), 10. Retrieved from http://www.edweek.org/ew/articles/2011/01/12/15standards-2.h30.html
- Schmidt, F. L., & Hunter, J. E. (2004). General mental ability in the world of work: Occupational attainment and job performance. *Journal of Personality and Social Psychology, 86*(1), 162-173. doi:10.1037/0022-3514.86.1.162
- Schmitt, N., Keeney, J. Oswald, F. L., Pleskac, T. J., Billington, A. Q., Sinha, R., & Zorzie, M. (2009) Prediction of 4-year college student performance using cognitive and noncognitive predictors and the impact on demographic status of admitted students. *Journal of Applied Psychology*, *94*(6), 1479-1497. doi:10.1037/a0016810
- Schunk, D. H. (2005). Commentary on self-regulation in school contexts. *Learning and Instruction*, 15(2), 173-177. doi:10.1016/j.learninstruc.2005.04.013
- Sechrest, L. (1963). Incremental validity: A recommendation. *Educational and Psychological Measurement*, *23*(1), 153-158. doi:10.1177/001316446302300113
- Shapson, S. M., Wright, E. N., Eason, G., & Fitzgerald, J. (1980). An experimental study of the effects of class size. *American Educational Research Journal*, 17(2), 141-152. Retrieved from http://www.jstor.org/stable/1162479
- Shiner, R. L. (2000). Linking childhood personality with adaptation: Evidence for continuity and change across time into late adolescence. *Journal of Personality and Social Psychology*, 78(2), 310-325. doi:10.1037/0022-3514.78.2.310
- Siegle, D., Rubenstein, L. D., Pollard, E., & Romey, E. (2010). Exploring the relationship of college freshmen honors students' effort and ability attribution, interest, and implicit theory of intelligence with perceived ability. *Gifted Child Quarterly*, *54*(2), 92-101. doi:10.1177/0016986209355975
- Simon, H. A., & Chase, W. G. (1973). Skill in chess. *American Scientist, 61* (July- August), 394-403.
- Smith, E. (2008). Pitfalls and promises: The use of secondary data analysis in educational research. *British Journal of Educational Studies, 56*(3), 323-339. doi:10.1111/j.1467-8527.2008.00405.x
- Smith, G. T., Fischer, S., Cyders, M. A., Annus, A. M., Spillane, N. S., & McCarthy, D.
 - M. (2007). On the validity and utility of discriminating among impulsivity-like traits.
 - Assessment, 14(2), 155-170. doi:10.1177/1073191106295527

- Snow, R. E., Corno, L. & Jackson III, D. (1996). Individual differences in affective and conative functions. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of Educational Psychology* (pp. 243-310). New York, NY: Simon & Schuster Macmillan.
- Snyder, T. D. (2010). *Mini-Digest of Education Statistics, 2009* (NCES 2010-014). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC. Retrieved from http://nces.ed.gov/pubs2010/2010014.pdf
- Sparks, S. D. (2011). Experts zero in on nonacademic skills needed for success. *Education Week, 30*(15), 12. Retrieved from http://www.edweek.org/ew/articles/2011/01/12/15aera-2.h30.html
- Spinella, M., & Miley, W. M. (2003). Impulsivity and academic achievement in college students. *College Student Journal*, *37*(4), 545-549
- Sprague J. R., & Walker, H. M. (2005). *Safe and healthy schools: Practical prevention strategies.* New York, NY: Guilford Press.
- Stanovich, K. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, *21*(4), 360-407. Retrieved from http://www.jstor.org/stable/747612
- Steinmayr, R., & Spinath, B. (2009). The importance of motivation as a predictor of school achievement. *Learning and Individual Differences,* 19(1), 80-90. doi:10.1016/j.paid.2009.11.028
- Swift, M. S., & Spivack, G. (1969). Achievement related classroom behavior of secondary school normal and disturbed students. *Exceptional Children*, *35*(9), 677-684.
- Tomlinson, C. A. (2001). *Differentiated instruction in mixed-ability classrooms* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- VanTassel-Baska, J., & Wood, S. (2010). The integrated curriculum model. Learning and Individual Differences, 20(4), 345-357. doi:10.1016/j.lindif.2009.12.006
- Walberg, H. J., & Tsai, S. (1983). Matthew effects in education. *American Educational Research Journal*, 20(3), 359-373. Retrieved from http://www.jstor.org/stable/1162605
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92*(4), 548-573. doi:10.1037/0033-295X.92.4.548
- Weiner, I. B. (2003). Prediction and postdiction in clinical decision making. *Clinical Psychology: Science and Practice, 10*(3), 335-338. doi:10.1093/clipsy/bpg030
- Weishew, N. L., & Peng, S. S. (1993). Variables predicting students' problem

- behaviors.
 - The *Journal of Educational Research, 87*(1), 5-17. Retrieved from http://www.jstor.org/stable/27541891
- Wen, Z., Marsh, H. W., & Hau, K. T. (2010). Structural equation models of latent interactions: An appropriate standardized solution and its scale-free properties. *Structural Equation Modeling*, 17(1), 1-22. doi:10.1080/10705510903438872
- Wentzel, K. (1993). Does being good make the grade? Social behavior and academic competence in middle school. *Journal of Educational Psychology*, 85(2), 357–364. doi:10.1037/0022-0663.85.2.357
- White House (2011, January 25). Remarks by the President in State of Union Address.

Retrieved from http://www.whitehouse.gov/the-press-office/2011/01/25/remarks-president-state-union-address

- White, J. L., Moffitt, T. E., Caspi, A., Bartusch, D. J., Needles, D. J., & Stouthamer- Loeber, M. (1994). Measuring impulsivity and examining its relationship to delinquency. *Journal of Abnormal Psychology, 103*(2), 192-205. doi:10.1037/0021-843X.103.2.192
- Wiatrowski, M. D., Griswold, D. B., & Roberts, M. K. (1981). Social control theory and delinquency. *American Sociological Review, 46*(5), 525-541. Retrieved from http://www.jstor.org/stable/2094936
- Wiggins, J. S. (1988). *Personality and prediction: Principles of personality assessment*.
 - Malabar, FL: Krieger Publishing Company.
- Wolfe, R. A., & Johnson, S. D. (1995). Personality as a predictor of college performance.

Educational and Psychological Measurement, 55(2), 177-185. doi:10.1177/0013164495055002002

- Wu, K. D., & Clark, L. A. (2003). Relations between personality traits and self-reports of daily behavior. *Journal of Research in Personality*, *37*(4), 231-256. doi:10.1016/S0092-6566(02)00539-1
- Yen, C., Konold, T. R., & McDermott, P. A. (2004). Does learning behavior augment cognitive ability as an indicator of academic achievement? *Journal of School Psychology*, 42(2), 157-169. doi:10.1016/j.jsp.2003.12.001

APPENDICES

APPENDIX I

TRANSMITTAL LETTER FOR THE RESPONDENTS

Dear Respondent,

Greetings!!

I am a student at Kampala International University (KIU). I am undertaking a research study on **Psycho-Social Factors and academic achievement in secondary Schools in Nyamaia Zone, Nyamira District Kenya** as a partial fulfillment of the requirements for the degree of master in education. As I pursue to complete this academic requirement, may I request your assistance by being part of this study? Your responses will be used for research purpose only and your identity kept confidential.

Kindly provide the most appropriate information as indicated in the questionnaires and please do not leave any item un answered. Any data from you shall be for academic purposes only and will be kept with utmost confidentiality.

May I retrieve this questionnaire in 1 week after you have received it? Thank you very much in advance.

Yours faith fully

APPENDIX II

CLEARANCE FROM ETHICS COMMITTEE

Date		
Candidate's data ;Name	Reg.#	Course
Title of study		
Ethical review checklist		······································
The study reviews considered	the following	
Physical safety of human subjects		
Psychological safety		was the second
Emotional security		
Privacy		
Written request for author of stan	dardized instrument	
Coding of questionnaire/ anonymi	ty/ confidentiality	
Permission to conduct the study		
Informed consent		
Citations/ authors recognized		
Results of ethical review	**	
Approved		
Conditional (to provide the ethics	committee with correction	ns)
Disapproved / Resubmit proposal		
Ethics committee (Name and	Signature)	
Chairperson	and the state of t	
Members		

APPENDIX III

INFORMED CONSENT

I am giving my consent to be part of the research study of Mrs Victoria Kanini Kibwea

that will focus on psycho-social factors and academic achievement in secondary schools in Nyamaia zone in Nyamira District Kenya. I shall be assured of privacy, anonymity and confidentiality and that I will be given the option to refuse participation and right to withdraw my participation any time.

 $\ensuremath{\mathrm{I}}$ have been informed that the research is voluntary and that the results will be given to me if $\ensuremath{\mathrm{I}}$ ask for it.

Initials:		
Date		
	FACE SHEET;	
Code#		Date received by
respondents		

APPENDIX IV:

QUESTIONNAIRES FACE SHEET: PROFILE OF THE RESPONDENTS

Section A

Instruction
Place a tick (\checkmark) in the most appropriate box and fill in the blank spaces accordingly.
1. Initials.(Optional)
2. Age
11-15 () 16-20 () 21-25 ()
3. Gender
Male () Female ()
4. Religion
Christian () Moslem () Other ()

Questionnaire for students on the Psycho-social factors

Direction; use the rating labels below to respond to the questions.

Response Mode	Rating	Description					
Strongly Agree	4	Agree without Doubt					
Agree	3	Agree with some Doubt					
Disagree	2	Disagree with some doubt					
Strongly disagree	1	Disagree with no doubt					
Motivation							
You have high academic	Discipline						
You always strive to give	your best in yo	ur academic work					
You are committed to Sc	:hool						
You always try to remain	in school thoug	h out school times					
You are an Optimist							
You always believe you w	will get the best	that life can offer					
Social control							
_Your family have po	sitive attitud	e towards education					
_Your family membe	rs are very e	enthusiastic about education					
_Your family is closely invo	olved in your sch	ool activities					
	-	ed with your welfare at school					
_You have no problem with	n your school pe	rsonnels					
_You have good relationsh	ip with most of t	those who work in your school					
_You feel safe while at sch	ool						
_Your school climate is secure and free from danger							
Self regulation							
_You have no problems managing your feelings							
_You always express your feelings with ease							
_You carry yourself in an o	rderly way						
_You rarely get involved in	indiscipline case	es					

_You always think before acting

Interview Guide for the class teachers

- Comment on how Motivation in terms of the degree to which students are conscientious, committed to obtain a high school diploma, and optimistic about their future regardless of difficulties and challenges relates to academic achievement in your school
- 2. Explain how Social Control referring to the degree to which students perceive their family's engagement in school life and activities, particularly in their attitude toward the value of education and involvement with school activities, as well as students' perceptions of their relationships with school staff and of school safety relates to academic achievement in your school
- 3. Does Self-regulation referring to students' tendency to regulate and express their emotions, behaviors, and thoughts in an appropriate manner have an impact on their academic achievement? Explain.

Mark-sheet for collecting Data on students' academic achievement

In the space provided below, kindly record the total number of students who scored as stipulated in grades A to D in the respective years.

Grade	2008	2009	2010	2011	2012	2013
A						
В						
С						
D						
Mean						

_You always do not regret the consequences of your action

Appendix VI
Sample size (s) required from the given population size

N S N S N S N S 10 10 100 80 280 162 800 260 2800 338 15 14 110 86 290 165 850 266 3000 341 20 19 120 92 300 169 900 269 3500 346 25 24 130 97 320 175 950 274 4000 351 30 28 140 103 340 181 1000 278 4500 354 35 32 150 108 360 186 1100 285 5000 357 40 36 160 113 380 191 1200 291 6000 361 45 40 170 118 400 196 1300 297 7000 364 50 44			T		T		Ţ		·	
15 14 110 86 290 165 850 266 3000 341 20 19 120 92 300 169 900 269 3500 346 25 24 130 97 320 175 950 274 4000 351 30 28 140 103 340 181 1000 278 4500 354 35 32 150 108 360 186 1100 285 5000 357 40 36 160 113 380 191 1200 291 6000 361 45 40 170 118 400 196 1300 297 7000 364 50 44 180 123 420 201 1400 302 8000 367 55 48 190 127 440 205 1500 306 900 368	N	s	N	s	N	s	N	S	N	S
20 19 120 92 300 169 900 269 3500 346 25 24 130 97 320 175 950 274 4000 351 30 28 140 103 340 181 1000 278 4500 354 35 32 150 108 360 186 1100 285 5000 357 40 36 160 113 380 191 1200 291 6000 361 45 40 170 118 400 196 1300 297 7000 364 50 44 180 123 420 201 1400 302 8000 367 55 48 190 127 440 205 1500 306 9000 368 60 54 200 132 460 210 1600 310 10000 375 </td <td>10</td> <td>10</td> <td>100</td> <td>80</td> <td>280</td> <td>162</td> <td>800</td> <td>260</td> <td>2800</td> <td>338</td>	10	10	100	80	280	162	800	260	2800	338
25 24 130 97 320 175 950 274 4000 351 30 28 140 103 340 181 1000 278 4500 354 35 32 150 108 360 186 1100 285 5000 357 40 36 160 113 380 191 1200 291 6000 361 45 40 170 118 400 196 1300 297 7000 364 50 44 180 123 420 201 1400 302 8000 367 55 48 190 127 440 205 1500 306 9000 368 60 54 200 132 460 210 1600 310 10000 370 65 56 210 136 480 214 1700 313 15000 37	15	14	110	86	290	165	850	266	3000	341
30 28 140 103 340 181 1000 278 4500 354 35 32 150 108 360 186 1100 285 5000 357 40 36 160 113 380 191 1200 291 6000 361 45 40 170 118 400 196 1300 297 7000 364 50 44 180 123 420 201 1400 302 8000 367 55 48 190 127 440 205 1500 306 9000 368 60 54 200 132 460 210 1600 310 10000 370 65 56 210 136 480 214 1700 313 15000 375 70 59 220 140 500 217 1800 317 20000 <td< td=""><td>20</td><td>19</td><td>120</td><td>92</td><td>300</td><td>169</td><td>900</td><td>269</td><td>3500</td><td>346</td></td<>	20	19	120	92	300	169	900	269	3500	346
35 32 150 108 360 186 1100 285 5000 357 40 36 160 113 380 191 1200 291 6000 361 45 40 170 118 400 196 1300 297 7000 364 50 44 180 123 420 201 1400 302 8000 367 55 48 190 127 440 205 1500 306 9000 368 60 54 200 132 460 210 1600 310 10000 370 65 56 210 136 480 214 1700 313 15000 375 70 59 220 140 500 217 1800 317 20000 377 75 63 230 144 550 226 1900 320 30000 <t< td=""><td>25</td><td>24</td><td>130</td><td>97</td><td>320</td><td>175</td><td>950</td><td>274</td><td>4000</td><td>351</td></t<>	25	24	130	97	320	175	950	274	4000	351
40 36 160 113 380 191 1200 291 6000 361 45 40 170 118 400 196 1300 297 7000 364 50 44 180 123 420 201 1400 302 8000 367 55 48 190 127 440 205 1500 306 9000 368 60 54 200 132 460 210 1600 310 10000 370 65 56 210 136 480 214 1700 313 15000 375 70 59 220 140 500 217 1800 317 20000 377 75 63 230 144 550 226 1900 320 30000 379 80 66 240 148 600 234 2000 322 40000 380 85 70 250 152 650 242 2200 <	30	28	140	103	340	181	1000	278	4500	354
45 40 170 118 400 196 1300 297 7000 364 50 44 180 123 420 201 1400 302 8000 367 55 48 190 127 440 205 1500 306 9000 368 60 54 200 132 460 210 1600 310 10000 370 65 56 210 136 480 214 1700 313 15000 375 70 59 220 140 500 217 1800 317 20000 377 75 63 230 144 550 226 1900 320 30000 379 80 66 240 148 600 234 2000 322 40000 380 85 70 250 152 650 242 2200 327 50000	35	32	150	108	360	186	1100	285	5000	357
50 44 180 123 420 201 1400 302 8000 367 55 48 190 127 440 205 1500 306 9000 368 60 54 200 132 460 210 1600 310 10000 370 65 56 210 136 480 214 1700 313 15000 375 70 59 220 140 500 217 1800 317 20000 377 75 63 230 144 550 226 1900 320 30000 379 80 66 240 148 600 234 2000 322 40000 380 85 70 250 152 650 242 2200 327 50000 381 90 73 260 155 700 248 2400 335 100000	40	36	160	113	380	191	1200	291	6000	361
55 48 190 127 440 205 1500 306 9000 368 60 54 200 132 460 210 1600 310 10000 370 65 56 210 136 480 214 1700 313 15000 375 70 59 220 140 500 217 1800 317 20000 377 75 63 230 144 550 226 1900 320 30000 379 80 66 240 148 600 234 2000 322 40000 380 85 70 250 152 650 242 2200 327 50000 381 90 73 260 155 700 248 2400 331 75000 382 95 76 270 159 750 254 2600 335 100000 384	45	40	170	118	400	196	1300	297	7000	364
60 54 200 132 460 210 1600 310 10000 370 65 56 210 136 480 214 1700 313 15000 375 70 59 220 140 500 217 1800 317 20000 377 75 63 230 144 550 226 1900 320 30000 379 80 66 240 148 600 234 2000 322 40000 380 85 70 250 152 650 242 2200 327 50000 381 90 73 260 155 700 248 2400 331 75000 382 95 76 270 159 750 254 2600 335 100000 384	50	44	180	123	420	201	1400	302	8000	367
65 56 210 136 480 214 1700 313 15000 375 70 59 220 140 500 217 1800 317 20000 377 75 63 230 144 550 226 1900 320 30000 379 80 66 240 148 600 234 2000 322 40000 380 85 70 250 152 650 242 2200 327 50000 381 90 73 260 155 700 248 2400 331 75000 382 95 76 270 159 750 254 2600 335 100000 384	55	48	190	127	440	205	1500	306	9000	368
70 59 220 140 500 217 1800 317 20000 377 75 63 230 144 550 226 1900 320 30000 379 80 66 240 148 600 234 2000 322 40000 380 85 70 250 152 650 242 2200 327 50000 381 90 73 260 155 700 248 2400 331 75000 382 95 76 270 159 750 254 2600 335 100000 384	60	54	200	132	460	210	1600	310	10000	370
75 63 230 144 550 226 1900 320 30000 379 80 66 240 148 600 234 2000 322 40000 380 85 70 250 152 650 242 2200 327 50000 381 90 73 260 155 700 248 2400 331 75000 382 95 76 270 159 750 254 2600 335 100000 384	65	56	210	136	480	214	1700	313	15000	375
80 66 240 148 600 234 2000 322 40000 380 85 70 250 152 650 242 2200 327 50000 381 90 73 260 155 700 248 2400 331 75000 382 95 76 270 159 750 254 2600 335 100000 384	70	59	220	140	500	217	1800	317	20000	377
85 70 250 152 650 242 2200 327 50000 381 90 73 260 155 700 248 2400 331 75000 382 95 76 270 159 750 254 2600 335 100000 384	75	63	230	144	550	226	1900	320	30000	379
90 73 260 155 700 248 2400 331 75000 382 95 76 270 159 750 254 2600 335 100000 384	80	66	240	148	600	234	2000	322	40000	380
95 76 270 159 750 254 2600 335 100000 384	85	70	250	152	650	242	2200	327	50000	381
	90	73	260	155	700	248	2400	331	75000	382
						254	2600	335	100000	384

Source: Krejcie and Morgan (1970)

RESEARCHER'S CURRICULUM VITAE

Personal Information

Name:

Victoria Kanini Kibwea

Nationality:

Kenyan

Address:

P.O box 4-40500 Nyamira

Phone:

Cell +254724673825

Email:

votwoma@gmail.com

Academic Qualifications

2012/2014 KAMPALA INTERNATIONAL UNIVERSITY

MED ADMINISTRATION AND MANAGEMENT

2009/2012 Bachelor's Degree in Education/GC

Kampala International University

1988/1989 Kenya Advanced Certificate of Education

1980/1982 Teacher training college

1974/1977 EAST AFRICA CERTIFICATE OF EDUCATION

1966/1973 Certificate of Primary Education

Work Experience

1982/2000 Teaching

2000/2014 to date: Education OFFICER.

PATIENT'S PERCIEVED FACTORS AFFECTING HYPERTENSION TREATMENT COMPLIANCE AT NSAMBYA HOSPITAL

A RESEARCH REPORT SUBMITTED TO THE UGANDA NURSES AND MIDWIVES EXAMINATION BOARD IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE AWARD OF A DIPLOMA

IN GENERAL NURSING

 $\mathbf{B}\mathbf{Y}$

SSEMBYAGALE FAISAL

EXAMINATION NUMBER.....

SEPTEMBER 2014



P.O. Box 20000, Kampala, Uganda. Tei: +256-41-427634

E-mail: admin@kiu.ac.ug, Website: www.kiu.ac.ug

OFFICE OF THE HEAD OF DEPARTMENT, EDUCATION, OPEN AND DISTANCE LEARNING COLLEGE OF HIGHER DEGREES AND RESEARCH (CHDR)

Date: 12th December, 2013

RE: REQUEST OF VICTORIA KANINI KIBWEA MED/29256/131/DF TO CONDUCT RESEARCH IN YOUR ORGANIZATION.

The above mentioned is a bonafide student of Kampala International University pursuing Masters in Educational Management and Administration.

She is currently conducting a research entitled " Psycho-Social Factors and Academic Achievement in Secondary Schools Nyamaiya Zone, Kenya".

Your organization has been identified as a valuable source of information pertaining to her research project. The purpose of this letter is to request you to avail her with the pertinent information she may need.

Any information shared with her from your organization shall be treated with utmost confidentiality.

Any assistance rendered to her will be highly appreciated.

Yours truly,

Dr. Ssemugenyi Fred

Head of Department,

Education, Open and Distance Learning (CHDR)

NOTED BY

Dr. Sofia Sol T. Gaite Principal-CHDR



MINISTRY OF EDUCATION

Telegram: "EDUCATION", Nyamir:

Telephone: (058) 6144224



When replying please quote

	NYED/ED/1/88/195	
Ref.No.	***************************************	• • • • • • • • •

DISTRICT EDUCATION OFFICE NYAMIRA DISTRICT P.O. BOX 4 NYAMIRA

	16 th January, 2014	
late.		

All Principals
NYAMAIYA ZONE

RE: AUTHORITY TO CONDUCT RESEARCH

The bearer of this letter Victoria Kanini Kibwea has been authorized to conduct research in your Institution as a requirement in partial fulfillment of her Masters Degree programme in schoolswithin Nyamaiya zone.

You are kindly requested to give her any or all information that will be of help.

Thank you in anticipation.

Menn.

TITUS MBATHA
DISTRICT EDUCATION OFFICER
NYAMIRA



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471, 2241349, 310571, 2219420 Fax: +254-20-318245, 318249 Email: secretary@nacosti.go.ke Website: www.nacosti.go.ke When replying please quote

9th Floor, Utalii House Uhuru Highway P.O. Box 30623-00100 NAIROBI-KENYA

Ref: No.

Date:

27th May, 2014

NACOSTI/P/14/6731/1790

Victoria Kanini Kibwea Kampala International Univerity P.O.Box 20000 KAMPALA.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "Psycho social factors and academic achievement among secondary school students in Nyamaiya Zone, Nyamira County, Kenya," I am pleased to inform you that you have been authorized to undertake research in Nyamira County for a period ending 31st December, 2014.

You are advised to report to the County Commissioner and the County Director of Education, Nyamira County before embarking on the research project.

On completion of the research, you are expected to submit two hard copies and one soft copy in pdf of the research report/thesis to our office.

SAID HUSSEIN FOR: SECRETARY/CEO

Copy to:

The County Commissioner
The County Director of Education
Nyamira County.

KAMPALA INTERNATIONAL UNIVERSITY -- 2009

Gaba Road, Kabalagala
P. O. Box 20000, Kampala - Uganda (EA)
Email: Finance@kiu.Ac.Ug
TIN N. B01-1007-8342-A

VICTORIA KANIN I K (42492) BED/MED/29256/131/DF(2YR

Ledger Account KENYAN-F

1-Jan-2001 to 31-Dec-2014

1-0d11-2001 (0 S	31-Dec-2014		·
Date Particulars			,
-2009 Dr Barclays Bank USD	Vch Type Vch No	D. Debit	Page 1
-2009 Cr Tuition Fees A/c	Receipt 04/000005/		Credit
and the cost page	Students Fees (All Incl) 4		US\$ 350.00
2010 D. D.		ουφ 550:00	
2010 Dr Barclays Bank USD	Possint DADON	US\$ 350.00	US\$ 350.00
2010 Cr Tuition Fees A/c	Receipt BARC73. Students Fees 7737		US\$ 350.00
2010 Cr Tuition Fees A/c	** *	904 900.00	-+ 000.00
2010 Dr Barclays Bank USD	- +		
2010 Dr Barclays Bank USD	_		US\$ 350.00
2010 Cr Tuition Fees A/c	Receipt 659 Students Fees (All Incl)	A 1888 C "	US\$ 350.00
	Oracellis 1 662 (MI IIICI)	US\$ 350.00	. 400.00
2011 Cr Tuition Fees A/c		US\$ 1,050.00	US\$ 1,050.00
2011 Dr. Barclays Bank USD	Students Fees (4504		+ 1,030.00
OTT Cr Tuition Fees A/c	Recapto bed29256	3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1100 250 05
1011 Dr. Barclays Bank USD	11690 (11690)	US\$ 350.00	US\$ 350.00
OH Dr Barclays Bank USD	O Rezeipt 96865		US\$ 350.00
OTT Cr Tuition Fees A/c	Receipt bed/29256/92/df		US\$ 350.00
	Students Fees (All Incl) 12116	US\$ 350.00	004 350.00
Cr Closing Balance	•	US\$ 1,050.00	the place of the control of the cont
Cr Closing Balance		059 1,050.00	US\$ 1,050.00
112 Dr Opening Balance 112 Cr. Tuition Foot A/		US\$ 1,050.00	US\$ 1,050.00
112 Cr Tuition Fees A/c			σοφ 1,030.00
C ruttot rees A/C _ Date	Students Fees (All Incl) 6454	1100.00	
Cr Retake/Extra/Missed Exams 112 Cr TEACHING PRACTION	Debit Note 4141	US\$ 350.00	
112 Dr Barclays Band S	Debit Note 4647	US\$ 50.00	
12 Dr Barclays Balk SD	Receipt 554844414	US\$ 250.00	
12 Cr Tuition Rees A/c	Receipt BED/42492/92/DF		US\$ 600.00
Cr Tunic Gas A/c	Students Fees (All Incl) 13784	US\$ 350.00	US\$ 350.00
12 Cr Graquation Fees	Journal 367	US\$ 350.00	
12 Dr. Barciays Bank USD	Debit Note 11305	US\$ 200.00	
12 Dr Equity Bank USD	Receipt bed29256 12552	ουφ 200.00	1100 55
12 Of Tuition Fees Alc	Receipt K.V		US\$ 550.00
12 Dr Orient Bank USD	Students Fees 108521	US\$ 460.00	US\$ 50.00
	Receipt 12 2281	- 44 100.00	1100 400 00
Cr Closing Ralance	and the state of t	LICO	US\$ 460.00
Cr Closing Balance		US\$ 2,010.00	US\$ 2,010.00
3 Dr Opening Balance		US\$ 2,010.00	US\$ 2,010.00
3 Or Tuising Palance		/	- 54 2,010.00
3 Cr Tuition Fees A/c	Students Fees 110260		
o Daiciays Bank HSD	Students Fees 110260 Receipt 55522313	US\$ 460.00	· Fr and da
3 Cr Tuition Fees A/c	.		US\$ 795.00
Cr RESEARCH FEE 3 Dr Barclays Bank USD		US\$ 460.00	
and a party 00D	Debit Note 9131 Receipt 65688554	US\$ 335.00	E 55
Carried Over	- 00000054 -		US\$ 460.00
	₩44,666a	US\$ 1,255.00	US\$ 1,255.00

continued ...

	NTERNATIONAL UNIVERSITY 2009 ANIN I K (42492) BED/MED/29256/131/DF(2Y	R Ledger Account :	1 Jan 200	140 24 Day 2014	
Date	Particulars	Vch Type	Vch No.	Debit	Page 2
	Brought Forward			US\$ 1,255.00	Credit US\$ 1,255.00
-	Tuition Fees A/c Barclays Bank USD	Students Fees Receipt I	112730 MED29256	US\$ 460.00	US\$ 460.00
С	Closing Balance			US\$ 1,715.00	US\$ 1,715.00
				US\$ 1,715.00	US\$ 1,715.00
-2014 Di	Opening Balance				
-2014 Ci -2014 Di	Tuition Fees A/c Barclays Bank USD	Students Fees Receipt	114451 7/4/14/LAK	US\$ 460.00	1.100 400 -
	Tuition Fees A/c	Students Fees	115809	US\$ 460.00	US\$ 460.00
-2014 Dr	Barclays Bank USD	Receipt	20585		US\$ 660.00

Cr

Closing Balance

Con Research Control of the Control

ferred to vug

US\$ 920.00

US\$ 200.00 US\$ 1,120.00 US\$ 1,120.00

US\$ 1,120.00