

**ACADEMIC RESILIENCE AND MOTIVATION AS CORRELATES OF  
ACADEMIC ENGAGEMENT AMONG FORM THREE  
STUDENTS IN MERU COUNTY, KENYA**

**PURITY GATWIRI MURIUKI**

**E55/CE/25124/2018**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT  
FOR THE AWARD OF MASTER OF EDUCATION (EDUCATIONAL  
PSYCHOLOGY) IN THE SCHOOL OF EDUCATION OF  
KENYATTA UNIVERSITY**

**MARCH, 2024**

## **DECLARATION**

I declare that this project is my original work and has not been presented in any other university/ institution for consideration of any certification. This project has been complemented by referenced sources duly acknowledged. Where text, data (including spoken words), graphics, pictures or tables have been borrowed from other sources including the internet, these are specifically accredited and references cited using APA system and in accordance with anti-plagiarism regulations.

**Signature:**.....

**Date:**.....

Purity Gatwiri Muriuki

E55/CE/25124/2018

Educational Psychology

This project has been submitted for appraisal with my approval as university supervisor.

**Signature:**.....

**Date:**.....

Dr. Susan Ngunu

Department of Educational Psychology

Kenyatta University

## **DEDICATION**

I dedicate this work to my son Liam Mutuma for the prayers, love, patience and understanding during the period I was working on the project.

## **ACKNOWLEDGEMENT**

Thanks to Almighty God for his favour and helping me to the completion of this research work successfully. Praises and glory to My God. I am grateful to my devoted and able supervisor Dr. Susan Ngunu for guidance and intelligent support given throughout the study. I appreciate the support of the faculty members for their contributions and the support that helped me in refining and completing this project.

To the head of institutions that allowed me to collect data, the teachers who helped in issuing the questionnaires and the students who voluntarily agreed to fill the questionnaires, I am so grateful.

I appreciate my dad Alphaxard Muriuki, mum Juliet Muriuki, my brother James Mutegi and my son Liam Mutuma for the outstanding prayers and support. The study would not be possible without you.

To my classmates, I applaud the way you encouraged and supported me. I highly appreciate any other person who in one way or another supported me during the time I was working on this project.

May God bless you.

## TABLE OF CONTENT

CONTENT	PAGE
DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
TABLE OF CONTENT.....	v
LIST OF TABLES.....	x
LIST OF FIGURES.....	xiii
ABBREVIATIONS.....	xiv
ABSTRACT.....	xv
<b>CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE</b>	
<b>STUDY.....</b>	<b>1</b>
1.1 Introduction.....	1
1.2 Background to the Study.....	1
1.3 Statement of the Problem.....	5
1.4 Purpose of the Study.....	6
1.5 Objectives of the Study.....	6
1.6 Research Hypotheses.....	7
1.7 Significance of the Study.....	8
1.8 Limitations and Delimitations of the Study.....	8
1.8.1 Limitations of the Study.....	8
1.8.2 Delimitations of the Study.....	9
1.9 Assumptions of the Study.....	9

1.10 Theoretical and Conceptual Framework.....	9
1.10.1 Theoretical Framework.....	9
1.10.2 Conceptual Framework.....	13
1.11 Operational Definitions of Terms.....	14
<b>CHAPTER TWO: REVIEW OF RELATED LITERATURE.....</b>	<b>15</b>
2.1 Introduction.....	15
2.2 Relationship between Academic Resilience and Students’ Academic Engagement.....	15
2.3 Relationship between Academic Motivation and Students’ Academic Engagement.....	20
2.4 Gender Differences in Academic Resilience and Motivation.....	26
2.4.1 Gender Differences in Academic Resilience.....	26
2.4.2 Gender Differences in Academic Motivation.....	29
2.5 Academic Resilience and Motivation as Predictors of Student’s Academic Engagement.....	35
2.6 Summary of Review of Related Literature.....	36
<b>CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY.....</b>	<b>38</b>
3.1 Introduction.....	38
3.2 Research Design.....	38
3.3 Research Variables.....	38
3.4 Research Methodology.....	39
3.5 Location of the Study.....	39

3.6 Target Population.....	39
3.7 Sampling Techniques and Sample Size.....	40
3.7.1 Sampling Techniques.....	40
3.7.2 Sample Size.....	40
3.8 Research Instrument.....	41
3.8.1 Academic Resilience Scale.....	41
3.8.2 Academic Motivation Scale.....	42
3.8.3 School Engagement Measure.....	42
3.9 Piloting Study.....	43
3.9.1 Validity of the Study Instrument.....	43
3.9.2 Reliability of the Study Instrument.....	43
3.10 Data Collection Techniques.....	44
3.11 Data Analysis.....	44
3.12 Logistical and Ethical Considerations.....	45
3.12.1 Logistical Considerations.....	45
3.12.2 Ethical Considerations.....	46
<b>CHAPTER FOUR: PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION.....</b>	<b>47</b>
4.1 Introduction.....	47
4.2 General and Demographic Information.....	47
4.2.1 Questionnaire Return Rate.....	47
4.2.2 Respondents' Background Information.....	48

4.3 Relationship between Academic Resilience and Students' Academic Engagement.....	50
4.3.1 Descriptive Statistics of Academic Resilience.....	50
4.3.2 Descriptive statistics of Academic Engagement.....	53
4.3.3 Hypothesis Testing.....	58
4.3.4 Discussion of the Results.....	59
4.4 Relationship between Academic Motivation and Students' Academic Engagement.....	61
4.4.1 Descriptive Statistics for Academic Motivation.....	61
4.4.2 Hypothesis Testing.....	64
4.4.3 Discussion of the Results.....	67
4.5 Gender Differences in Students' Academic Resilience and Motivation.....	70
4.5.1 Descriptive Statistics of Academic Resilience by Gender.....	70
4.5.2 Descriptive Statistics of Academic Motivation by Gender.....	71
4.5.3 Hypothesis Testing.....	72
4.5.4 Discussion of the Results.....	73
4.6 Extent to which Academic Resilience and Academic Motivation Predict Academic Engagement.....	77
4.6.1 Test for Assumptions.....	77
4.6.2 Hypothesis Testing.....	79
4.6.3 Discussion of the Findings.....	81

<b>CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND</b>	
<b>RECOMMENDATIONS.....</b>	<b>85</b>
5.1 Introduction.....	85
5.2 Summary of the Findings.....	85
5.3 Conclusion.....	87
5.4 Recommendations.....	88
5.4.1 Policy Recommendations.....	89
5.4.2 Recommendations for Further Research.....	89
<b>REFERENCES.....</b>	<b>91</b>
Appendix A: Consent Form.....	103
Appendix B: Questionnaire for the Students.....	104
Appendix C : Research Permit.....	110
Appendix D : Research Authorization Letter.....	111
Appendix E: Sample Size Determination Table.....	112
Appendix F: Map of Imenti North Sub-County.....	113

## LIST OF TABLES

Table 3. 1 Sampling Frame.....	41
Table 3. 2 Cronbach Alpha Reliability of the Study Instruments.....	44
Table 4. 1 Questionnaire Return Rate.....	47
Table 4. 2 Gender of the Respondents.....	47
Table 4. 3 Age of the Respondents.....	49
Table 4. 4 Cross tabulation of Age and Gender.....	49
Table 4. 5 Descriptive Statistics of Academic Resilience.....	50
Table 4. 6 Descriptive Statistics of Academic Resilience by Gender.....	51
Table 4. 7 Descriptive Statistics of Academic Resilience by School Category.....	51
Table 4. 8 ANOVA for Differences in Academic Resilience.....	52
Table 4.9 Levels of Academic Resilience.....	53
Table 4. 10 Descriptive Statistics of Academic Engagement.....	53
Table 4. 11 Descriptive Statistics of Academic Engagement by Gender.....	54
Table 4. 12 Independent Sample T-test for Gender Differences in Academic Engagement.....	54
Table 4. 13 Descriptive Statistics of Academic Engagement by School Type.....	55
Table 4. 14 ANOVA for Differences in Academic Engagement by School Type.....	55

Table 4. 15 Descriptive Statistics of the Types of Academic Engagement.....	56
Table 4. 16 Level of Academic Resilience and Academic Engagement.....	57
Table 4. 17 Independent Samples T-test for Differences in Academic Engagement and Academic Resilience.....	57
Table 4. 18 Pearson Correlation Test on Academic Resilience and Academic Engagement.....	58
Table 4. 19 Correlation between Academic Resilience and Engagement Sub- Scales.....	59
Table 4. 20 Descriptive Statistics of Academic Motivation.....	62
Table 4. 21 Descriptive Statistics of Academic Motivation by Gender.....	62
Table 4. 22 Descriptive Statistics of Academic Motivation by School Category.....	63
Table 4. 23 ANOVA for Differences in Academic Motivation by School Category.....	63
Table 4. 24 Descriptive Statistics of Academic Motivation Sub-Scale Scores.....	64
Table 4. 25 Pearson Correlation Test on Academic Motivation and Academic Engagement.....	65
Table 4. 26 Correlations between the Domains of Academic Motivation and Academic Engagement.....	65
Table 4.27 Regression Coefficients for Prediction of academic Engagement from Academic Resilience and Academic Motivation.....	66
Table 4. 28 Descriptive Statistics of Academic Resilience by Gender.....	70

Table 4. 29 Descriptive Statistics of Academic Motivation by Gender.....	71
Table 4. 30 Descriptive Statistics of Academic Motivation Sub-Scales by Gender..	71
Table 4. 31 Independent Samples T-test for Gender Differences in Academic Resilience.....	72
Table 4. 32 Independent Samples T-test Gender Differences in Academic Motivation Sub-Scales.....	72
Table 4. 33 Assumptions of Multi-Collinearity and Singularity.....	77
Table 4. 34 Model Summary <sup>b</sup> .....	80
Table 4. 35 ANOVA for the Prediction of Academic Engagement.....	81
Table 4. 36 Regression Coefficients.....	81

## LIST OF FIGURES

Figure 1. 1 Relationship between Academic Resilience, Academic Motivation and Academic Engagement.....	13
Figure 4.1 Normality Test Results.....	78
Figure 4.2 Heteroscedasticity and Homoscedasticity Scatterplot.....	79

## **ABBREVIATIONS**

**EFL** English as Foreign Language

**K.C.P.E** Kenya Certificate of Primary Examination

**K.C.S. E** Kenya Certificate of Secondary Education

**NACOSTI** National Council for Science, Technology and Innovation

**SPSS** Statistical Package for Social Sciences

**USA** United States of America

## ABSTRACT

Academic engagement refers to the energy which the student employs within his/her learning community. It emphasizes on the good characteristics of students that are associated with academic performance, retention in school, and completion. Strikes, property damage, absenteeism, and school dropouts in Meru County may be signs of lack of academic engagement. The study's objectives focussed on establishing the correlation between academic resilience, motivation and academic engagement and determining the degree to which academic motivation and resilience predict academic engagement. It also sought to determine whether there were any differences in gender based on academic resilience and motivation. The study's theoretical basis was formed by self-determination (Deci & Ryan 1985) and ecological systems (Bronfenbrenner, 1979) theories. It employed a predictive correlational study design. A sample constituting of 341 students (boys = 180 and girls = 161) from the population of form three students attending public schools in Imenti North Sub-County, Meru County, was chosen. The sampling techniques employed to select the schools include stratified and purposive. The participants from the sampled schools were selected proportionately and randomly. An adapted questionnaire which composed of academic resilience scale, academic motivation scale and student engagement measure was utilised to collect data. Piloting was carried out to confirm whether the research instruments adapted were valid and reliable. Statistical Package for Social Sciences (SPSS) was used in analysing data. Pearson product moment correlation, t-test for independent samples and multiple regression analysis techniques were applied to test the null hypotheses. Academic resilience, motivation, and engagement had a strong positive relationship. There was no significant gender difference in academic resilience. Both intrinsic and extrinsic motivation varied significantly across genders. The difference in amotivation between respondents based on their gender was not significant. The main recommendation of this study was that educators, parents, guardians and other interested parties should strive to equip the students with the right skills in order to develop their academic resilience and motivation, which have been found to support students' academic engagement.

## **CHAPTER ONE**

### **INTRODUCTION AND BACKGROUND TO THE STUDY**

#### **1.1 Introduction**

This chapter starts with a description of background information regarding the study, then statement of the problem, the study's purpose, objectives and research hypotheses follow. It also includes significance and study assumptions. The final three sections present theoretical framework, conceptual framework, and operational definitions of terms.

#### **1.2 Background to the Study**

In the recent years, there is increased attention exhibited by researchers and educators on academic engagement. A meta-construct view of student engagement includes three domains which are behavioural, affective and cognitive engagement working collaboratively to represent students' enthusiastic learning styles (Fredricks & McColskey, 2012). First is behavioural engagement which entails participation in school-related activities such as class attendance, timely completion of assignments and task, responding to teachers' questions and engaging in extra-curricular activities. The second one is affective engagement which focuses on whether the learners feel they belong or enjoy and are interested in their work. Lastly is cognitive engagement which involves students' investment in academic work and involves being thoughtful, purposeful to handle multiplex issues and mastering of difficult skills.

Student academic engagement is a construct that is evolving and captures a variety of student behaviours and institutional policies about student progress and satisfaction. Some students are more engaged in their school work than others which contributes to their academic success. Previous studies suggest that academic engagement promotes

positive students' qualities that are linked to learning, retention in school and academic achievement (Alrashidi et al., 2016; Hancock & Zubrik, 2015; Krause & Armitage, 2016). Consequently, involvement in academics should be encouraged among students because it is a vital construct that leads to academic success. Mutisya et al. (2019) reported that academic engagement predicted academic achievement. This shows that academic engagement contributes to academic success. Students who succeed academically stand a chance to join institutions of higher learning in Kenya. However, some students have continued to portray characteristics of lack of academic engagement which include truancy, school dropout, strike and other disruptive behaviours (Blondal & Adalbjarnardottir, 2012). Some of these characteristics have been reported in Meru County leading to lack of completion of secondary school and some even failing to turn up for K.C.S.E (Kibiki, 2018; Muguna, 2017; Mwingirwa, 2016). According to Ndung'u (2018), school unrest and arson were reported in some schools in Imenti North Sub-County, Meru County. Studies have shown that people who are focused on their work tend to achieve higher results than those who are not, but little is known on how student academic engagement can be enhanced (Ahmed et al., 2017). Hence the need to study on the factors that may relate to academic engagement as it leads to quality learning.

Student academic engagement may be related to or affected by a variety of psychological variables which include but not limited to academic resilience and motivation. Previous research has demonstrated a substantial connection that links resilience of learners and academic motivation, to the levels of which learners get engaged towards learning tasks. Ellen et al. (2016) found that academic motivation, academic resilience and academic engagement correlated positively. When a student

is motivated and has sense of resilience, they strive to participate in school work. This enhances the quality of learning among the students.

Academic resilience is the capability of a learner to develop good school results in spite of the academic challenges (Rojas 2015). According to Martin and Marsh (2003) academic resilience has four components namely; self-belief, control, composure and persistence. An academically resilient student achieves success in spite of experiencing events that are stressful and can put them at a risk of not performing well in school. Globally, collected evidence obtained from past research studies concurred that learners who demonstrate resilience towards academics are able to engage themselves in academic work despite the setbacks experienced in school. For example, in Saudi Arabia, Ahmed et al. (2018) reported that a link exists between university students' academic involvement and resilience. Similar findings regarding the connection existing in resilience and how well learners get engaged in learning activities were reported by Luthans et al. (2016) in U.S.A.

Studies done in Africa show that the levels to which learners get engaged and their quality of being resilient in academic settings relate. For example, in a study conducted using a South African sample, Malindi and Nyika (2012) found that the resilience demonstrated by the learners positively correlated with how the learners got engaged in academics. A later investigation executed in Ethiopia by Argaw et al. (2019) affirmed that academic resilience influenced academic engagement. This shows that the resilient student is likely to be more engaged than the one who lack resilience.

Studies which have been done within the Kenyan context have established that a correlation linking academic resilience, academic achievement and academic burnout exists (Mwangi et al., 2015; Oyoo et al., 2018). Little attention if there is has been given to the relationship that is evident in resilience and engagement of learners in academics. Quality learning has for long time been associated with academic engagement, hence there is need to focus on its relationship with academic resilience. Globally and in regional level, the two have been reported to relate. The results cannot be generalized in Kenya due to social and cultural difference.

Research studies have focussed on investigating whether academic motivation and learners' levels of engagement towards academics are correlates. Academic motivation has three domains which include intrinsic, extrinsic and amotivation. Academic motivation is the student's desire and interest in learning (Noyens et al., 2018). Studies done globally suggested that academic motivation and the extent to which learners are engaged in academic related activities are significantly correlated. For instance, Funda (2017) reported that high motivational levels enhanced academic engagement. A study by Mai et al. (2015) looking at motivation and engagement of learners indicated existence of significant correlation between the variables.

A study by Huaruni et al. (2018) in constructivist mixed learning environments in Tanzanian Universities found a positive correlation linking motivation and engagement of learners towards academics. Another study carried in Ethiopia indicated that resilience influences student academic engagement (Argaw et al., 2019).

There are a few studies which focus on addressing the connection between the two variables of interest in Kenya. Significant evidence of existence of relationship between academic motivation and engagement was found (Mutisya et al., 2019). Majorly, research studies that have been conducted have concentrated on the connection between academic motivation and success. It is vital to do further research to add to the literature because there are inadequate studies looking at academic motivation to explain how it relates to learners' engagement.

Academic engagement is crucial to raising the standard of instruction, which results in academic achievement. Academic engagement has been shown to be significantly connected with both resilience and motivation towards academics. However, most of the researches regarding students' engagement have been done outside Kenya, hence the results may not be applied in the Kenyan setting due to the varied characteristics of the studied populations as well as the geographical settings from which the studies were done. Therefore, the researcher focused on studying academic resilience and motivation as correlates of academic engagement in Imenti North Sub-County, Meru County, Kenya.

### **1.3 Statement of the Problem**

Secondary schools are confronted with the challenge of enhancing practices and educational intervention that may promote students' academic engagement. Research has demonstrated that academic engagement is linked to students' academic-related activities and quality learning. However, some students have continued to portray lack of academic engagement. School strikes, absenteeism, dropouts and arson have been reported in Meru County, Kenya (Mungwirwa, 2016; Ndung'u, 2018). This has led to lack of completion of secondary school and some students even failing to turn up for

K.C.S.E. (Muguna,2017). A few of the institutions where students have shown these characteristics of lack of academic engagement are from Imenti North Sub-County. This may disadvantage the students in that they may not get a chance to join higher institutions hence face problems in seeking for employment which can lead to poor living standards. In addition, it can act as hindrance to the economic growth of the county and the nation as a whole.

Previous studies from developed countries such as U.S.A, Saudi Arabia, Turkey and Malaysia have shown that students' resilience and motivation are significantly related to their engagement in learning activities. The results of the studies may not be generalized to Kenya due to cultural set up variations and especially with secondary level learners. These characteristics can be part of the many elements that secondary school students lack in fostering academic engagement. Consequently, fostering academic resilience and motivation is one method of promoting and facilitating students' academic engagement. Therefore, this led to the need of carrying out this study that investigated on how academic motivation and resilience correlate with learners' academic engagement in Imenti North Sub-County, Meru County Kenya.

#### **1.4 Purpose of the Study**

This study's purpose was to determine whether academic resilience and motivation of students in Imenti North Sub-County, Meru County, correlate with and also predict academic engagement. Gender differences in the two predictor variables were also determined.

#### **1.5 Objectives of the Study**

This study had four objectives which were as listed:

- i. To find out the relationship between academic resilience and academic engagement among form three students in Imenti North Sub-County, Meru County.
- ii. To determine the relationship between academic motivation and academic engagement among form three students in Imenti North Sub-County, Meru County.
- iii. To find out whether gender differences exist in academic resilience and academic motivation among form three students in Imenti North Sub-County, Meru County.
- iv. To examine the extent to which academic resilience and academic motivation predict academic engagement among form three students in Imenti North Sub-County, Meru County.

### **1.6 Research Hypotheses**

Four hypotheses were formulated in relation to the study's objectives as follows:

Ha<sub>1</sub>: There is a significant relationship between academic resilience and academic engagement.

Ha<sub>2</sub>: There is a significant relationship between academic motivation and academic engagement.

Ha<sub>3</sub>: There is significant gender differences in academic resilience and academic motivation.

Ha<sub>4</sub>: Academic engagement is significantly predicted by academic resilience and academic motivation.

## **1.7 Significance of the Study**

The study's findings may be beneficial to the secondary school learners since they may make them aware of how crucial it is for one to be resilient and motivated towards academic related tasks because the two elements are essential for boosting their engagement in the tasks. It may also enlighten the teachers on academic resilience and motivation in promoting academic engagement. The findings may also lead parents in advising and encouraging children on the need to develop resilience and be motivated in their academic activities. The policy makers and curriculum developers could benefit from the results by incorporating issues related to student engagement in secondary school curriculum which would help students understand themselves. Finally, the results are quite useful and crucial as they may add to the already available information on the connection between students' engagement, motivation, and resilience.

## **1.8 Limitations and Delimitations of the Study**

### **1.8.1 Limitations of the Study**

The study focused on only form three students who were enrolled in public secondary schools in Imenti North Sub-County, Meru County. Hence, limitations may arise in efforts to generalize the findings in other areas as students may be motivated differently and may show varying levels of academic resilience. Secondly, a questionnaire was used to collect data which may have been affected by subjectivity of the respondents. However, the respondents were encouraged to be as honest as possible. Pearson's Correlation Coefficient was used in data analysis.

### **1.8.2 Delimitations of the Study**

Form three students from Imenti North Sub-County's public secondary schools in Meru County were involved. Among the many variables related to academic engagement, the researcher only focused on academic resilience and academic motivation. In addition, predictive correlational research design was used.

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

The first assumption was that academic resilience and motivation were present and at different measurable levels among the form three learners in Imenti North Sub-County, Meru County. It was also assumed that participants were honest in responding to the various questionnaire items.

### **1.10 Theoretical and Conceptual Framework**

#### **1.10.1 Theoretical Framework**

This current study was based on a theoretical framework formed by two theories. These are ecological systems theory (Bronfenbrenner, 1979) and self-determination theory (Deci & Ryan, 1985). The theories explain academic resilience and academic motivation respectively.

#### **Ecological System Theory (Bronfenbrenner, 1979)**

This theory looks at resilience as a process that is not constant as a result of interaction with the ecosystem. The ecosystem is divided into several layers, including the microsystem, mesosystem, exosystem, macrosystem, and chronosystem.

The microsystem consists of the home set up where the student hails from, neighborhood, school and peers of which students interact with. Within this setting

the student is always active and the happenings in their lives are as result of reciprocal interaction. The interaction helps the student to develop resilience. The mesosystem involves connections between microsystem, for example, the relationship between peer and school, family and church experiences. Bronfenbrenner states that supportive connection between microsystems enhances resilience development, for example, a student with supportive family may develop a positive relationship hence enhancing academic resilience. The exosystem involves links between social settings. The exosystem is where the student's experiences in immediate context are influenced by what is experienced in another area where the student is passive, for example, provision of learning resources may interfere with development of academic resilience. The microsystem entails the societal culture in which the student lives. There are laws and rules in every culture and this also influences the student experiences, for example, early marriage is supported by some societies which might interfere with student's academic resilience. Chronosystem refers to how social systems are unique from one another, for example rules and relationships which have an impact on student's resilience.

There is a two-way interaction in which students both impact and are influenced by their experiences in life. The environment can either be supportive or not. The best outcome is achieved with supportive systems to an individual (Bronfenbrenner, 1979). Therefore, a supportive family, peer, church and the whole community is vital in development of resilience in an individual.

This theory is useful as it explains how resilience can be promoted in an individual. It looks at interdependent relationship in that students influence, and are influenced by

the system they operate in, that is the individual, family, school, peers and community. If there is support from the system, they become more resilient and vice versa. This theory is useful because it indicates that students are not in isolation but rely on environment with its multiple interacting systems to help them face the challenges. Using ecological systems approach, Mwangi et al. (2015) indicated that learners' resilience is significantly related to their academic achievement. Academic engagement improves the quality of learning which leads to academic success consequently, it is good to ensure that resilience is enhanced in efforts to foster students' engagement.

### **Self Determination Theory (Deci & Ryan, 1985)**

This theory looks at motivation which focuses on the forces that influence student's action. According to Deci and Ryan (1985), there are several distinct types of motivation which include intrinsic, extrinsic motivation and amotivation. Intrinsically motivated individuals refer to people engaging in activities because they are interested in them. Self-determined students make effort to engage themselves in academic tasks. Extrinsic motivation is divided into three domains. First is external regulation where a student is involved in academic activities in order to be rewarded by teachers and peers. The second domain is interjected regulation where a student may participate in a certain activity so as to please the parents or teacher. Identified regulation is the last domain of extrinsic motivation where students participate in an academic activity or behavior because they value it, thus embracing the behavior as theirs, for example, a student who is determined to complete an assignment because they know its importance. A student who has extrinsic motivation might engage in a particular academic activity since they understand its benefit. Amotivation is another

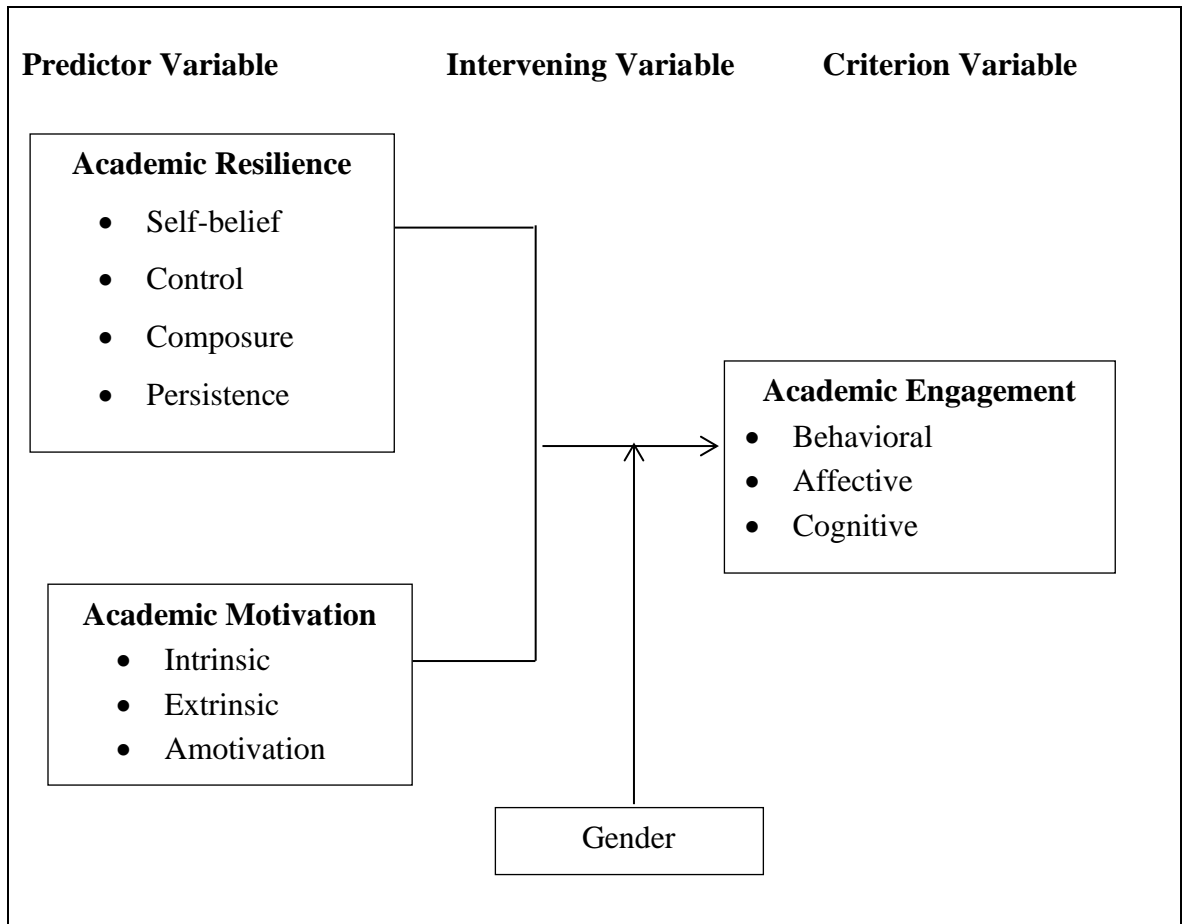
type of motivation which is the most non-self-determined. It is where people lack motivation at all (Deci & Ryan, 1985). If the student is motivated for a particular behavior in which they do not feel competent, they will not make any effort in regard to participation in learning activities.

The theory aids in understanding the source of academic motivation among the students so it is helpful in this research for it seeks to explain the interrelations that exist and link students' motivation to their engagement. In addition, the theory is quite useful in explaining why some learners are highly motivated than others. Mutisya et al. (2019) used the theory in a study that sought to determine whether academically motivated learners are engaged in learning tasks and reported positive significant interrelation between the two variables. If the learners are motivated, they make effort to engage in academic activities.

### 1.10.2 Conceptual Framework

**Figure 1.1**

*Relationship between Academic Resilience, Academic Motivation and Academic Engagement.*



Note.  Anticipated direction of relationship

Source: Researcher, 2019.

The framework illustrates the correlation between variables in the study and relates to study's objectives. The diagram shows the predictor variables which include academic motivation and academic resilience. The two variables relate with academic engagement which has three constructs: behavioral, affective and cognitive. Gender is the intervening variable.

### **1.11 Operational Definitions of Terms**

**Academic motivation:** The total scores obtained by respondents on the items in the academic motivation scale.

**Academic resilience:** The sum of scores of responses in items on the academic resilience scale.

**Academic engagement:** The total scores obtained in the items on school engagement scale which comprised of the three constructs of academic engagement.

**Behavioral engagement:** Student's level of participation in school related activities which was measured as domain of academic engagement.

**Affective engagement:** Learner's feelings of belonging to their schools and the level of enjoyment and interest experienced in learning. It was measured as domain of academic engagement.

**Cognitive engagement:** The measure of investment that a student puts in school work, which involves being thoughtful, purposeful to handle complex issues and mastering of difficult skills. It was gauged as a category of academic engagement.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

This chapter reviews studies on the relationship between academic resilience, motivation and academic engagement as well as the gender differences in predictor variables. The last section briefly summarizes the reviewed literature and highlights the research gaps which were found to exist in the past studies and worth to be addressed by the current study.

#### **2.2 Relationship between Academic Resilience and Students' Academic Engagement**

Several past research studies done in different parts of the world among learners of varying levels of education have linked learners' resilience to their engagement in studies. Most of these research works have reported that a positive correlation links the two variables.

An investigation by Umar et al. (2018) examined the interrelationship that links academic resilience to student engagement. The participants were master's students from private universities in Bahrain, Saudi Arabia. The sample size was 350 students. Questionnaires were utilized as the data gathering tool. The results showed that academic resilience positively correlated with students' academic engagement. However, the results were achieved from masters students who are of higher academic level than the population of the current study which involved secondary school students. The current study was done to find out whether the correlation will be the same.

Luthans et al. (2016) carried out an investigation that related undergraduate business students' engagement and resilience. The study's population was students from two Midwestern Universities in U.S.A. The sample size was 323 students and cross-sectional research design was utilized. A strong connection between academic engagement and resilience in the classroom was reported. The study used cross-sectional research design whereas the current study used predictive correlational research design.

Romano et al. (2021) examined the connection that exists between academic resilience and engagement. The sample size was 205 students, with the target population being high school students in Italy. Data collection involved using a questionnaire. The findings showed a connection between engagement and resilience. It was necessary to conduct the current study since the sample was taken from Italy, which has a distinct cultural environment than the sample in the current study.

Using students from 18 countries of Europe, Martin and Donlevy (2022) investigated the function of engagement in academic resilience among immigrant students. The findings suggested that academic engagement of the learners was positively related with their academic resilience. Since the results on the relationship between academic resilience and academic engagement were positive, it was necessary to carry out the current study in order to compare the results.

Kim and Lee (2021) looked into the connection between academic resilience and emotional engagement. The intended audience was elementary and middle school pupils in Korea. The findings revealed no connection between emotional academic engagement and academic resilience. Unlike this study that only correlated academic

resilience to the emotional engagement which is a construct of academic engagement, the current study examined the correlation between academic resilience and academic engagement.

In U.S.A, a study by McCain (2021) investigated whether learners who were resilient at school got actively engaged in academic activities. The study targeted male university students who were blacks. The sample size comprised of 124 students. The data were collected using the questionnaire. The findings revealed a link between student engagement and academic resilience. Since the results were based on university students whose age and educational level is not the same as that of the secondary school students, it was necessary to carry out this study to get findings that may be applied on this level of the learners. The study also targeted only male students hence necessitating the present study which puts into consideration a critical examination of learners of both genders.

Another study by Wiahastuti et al. (2022) looked at the connection between academic engagement and resilience among Indonesian undergraduate students. There were 187 students in the sample. A questionnaire was filled to get research data. The findings showed a connection linked academic engagement and resilience in the classroom. Since Kenya has a different social and cultural environment from Indonesia, it was worthy conducting a study that would yield findings to be used for comparison purposes.

Hammad and Naseem (2022) investigated the connection between academic resilience and engagement in Pakistan. The population targeted was undergraduate students. The sample size was 295 students. The study used comparative study design.

Hammad and Naseem reported that academic resilience and engagement variables were positively and significantly related. However, the study used comparative study design whereas the current study used predictive correlational study design. Also, the undergraduate students are of different academic level compared to secondary school learners that made the population of this study. For this reason, conducting the present study was deemed appropriate in order to determine if the results would be similar.

Another investigation exploring the connection between academic resilience and student engagement was conducted in Iran by Lavasani et al. (2021). The intended audience consisted of males in grades eleven and twelve. There were 22 students in the sample. Descriptive correlational strategy was employed. Analysis of the collected data revealed that academic resilience correlated positively with engagement ratings. The current study used a predictive correlational research design to find out whether a different research design would yield similar findings. Only boys were the intended audience in the reviewed study, but this present study focused on both female and male students with the aim of producing findings whose generalization across all learners irrespective of gender has no limitations.

A study by Jafar et al. (2020) looked into the correlation that existed when the learners' ratings of their academic resilience was correlated with their academic performance scores. The target population was secondary school girls from Iran. The sample size comprised of 196 students. Descriptive correlational study design and a questionnaire were employed. The results indicated that academic resilience had an impact on academic performance. However, the results were based on girls only

whereas this study targeted both boys and girls. Even if academic engagement was not looked into directly, academic resilience was shown to correlate positively with academic excellence. Hence, doing another study was worth to determine whether academic resilience would relate with academic engagement.

Argaw et al. (2019) investigated on resilience dynamics among school children of rural Ethiopia. The sample size was 3117 children from elementary school. The study targeted children from rural areas. Cross-sectional study design was used. The researchers reported that academic resilience impacted positively on academic engagement of the learners. Since the study targeted elementary students, a similar study needed to be done with secondary school students to find if the same results would be similar.

Malindi and Nyika (2012) did a study on how school engagement strengthens resilience in South Africa. The population targeted male street children. The Sample was 17 children of age 11 to 17. The data were collected using semi structured interview. Academic resilience and engagement were positively related. However, these results were based on data collected from male students, so, it was important to do a study with both male and female learners to ascertain if the results would be similar.

The correlation between academic resilience and academic engagement has been hardly researched in Kenya, hence the information on the correlation between the variables is insufficient. Studies have been carried out on the connection between academic resilience and academic success. For instance, Mwangi et al. (2015) studied

whether a connection was evident when the resilience of learners was related with their achievement scores. The researchers utilized a descriptive correlational research methodology. The intended audience consisted of Kiambu County form three learners. The sample size comprised of 390 students. The result analysis showed that academic resilience and academic achievement related. Even if the study did not examine academic engagement directly, academic resilience has been shown to predict academic achievement. Therefore, the current study sought to establish if academic resilience predicts academic engagement.

In another study, Kelly and Ileri (2022), looked at the connection between academic resilience and performance. The intended audience consisted of Trans-Nzoia County high school students. A total of 306 students made up the sample size. Correlational research strategy was used. The results indicated a connection between academic achievement and resilience in the classroom. Student engagement was not the main focus of the study, however it has been suggested that academic resilience is correlated with academic success. The current study endeavored to examine and establish whether academic resilience and engagement were related.

### **2.3 Relationship between Academic Motivation and Students' Academic Engagement**

Studies investigating the correlation between learners' motivation and academic engagement have been done in different places worldwide among learners of various levels of education. Fundar (2017) did a study on interrelation between student motivation and class engagement. The target population was high school learners in Ankara province, Turkey. A sample consisting of 500 students was picked to represent the targeted population. It was found that increased

motivational levels enhanced academic engagement. The results were based on secondary school students from Turkey where the learners are in a different social and cultural setting in comparison to the learners in a Kenyan setting. The present study aimed at yielding results that would bridge the noted gap.

Mai et al. (2015) looked at the connection between student motivation and engagement and their impact on satisfaction with academic accomplishment. Target population was Malaysian secondary school students. The sample size was 460 students. The study used descriptive research design. It was established that students' motivation and their corresponding levels of engagement related positively. While the current study explored the connection linking students' motivation and engagement, the previous study looked at the interrelationship between motivation and engagement and as well as how the two variables affect academic accomplishment satisfaction. The current study used predictive correlational research design, whereas the previous study made use of descriptive research design.

The connections that linked academic motivation, engagement, burnout, and academic accomplishment were studied (Servet & Osman, 2021). Eastern Turkish university students were the intended respondents. There were 86 students in the sample. The findings showed a substantial positive link between engagement and academic drive. It was worthy to do an investigation among secondary students in order to do a comparison of the results because the results of the previous study were based on university students, whose age and educational level is different.

In Spain, a study was done by Marta et al. (2022) to examine the factors that promote or hinder students' engagement in academics. The study had targeted secondary

school students. The sample size was 603 students. The results suggested that academic motivation had an impact on students' academic engagement. The target population was secondary school students from Spain where students are in a cultural setting which is different from that of population of current study. Hence there was a need for carrying out the study in Kenya to find out if the results would be similar.

Aboozar and Moitafet (2020) examined the connection between academic engagement and motivation in Iran. Correlational research strategy was employed in the study. Students in high school were the intended respondents. There were 300 students in the sample. The quality of engagement had a positive impact on learners' motivation. Since the study's locale was Iran; a setting with a different cultural background from Kenya, it seemed essential to do this investigation to see if the findings would be comparable.

In China, Wang (2022) investigated on how motivation affects engagement in the classroom. EFL students were the target respondents. 490 students made up the sample size. The findings reported a significant connection between academic engagement and motivation. The current study addressed secondary school students taking multiple disciplines, whereas the previous study solely targeted EFL students.

Wu (2019) investigated how students' motivation related to their engagement in U.S.A. The target population was college students. The study used structural equation modeling in analyzing data. A positive connection was found to exist between academic motivation and engagement. The study used structural equation model to analyze the data whereas this study used SPSS for data analyses. Because the study

used post-secondary level learners who are at different educational level from that of secondary students, the current study that targeted secondary school students was necessary for results comparison.

In Iran, Lavasan et al. (2017) correlated the extent to which secondary and junior students were motivated towards learning English with their academic engagement. The sample size comprised of 423 students. Questionnaires were utilized in data collection. The results indicated that academic motivation had an impact on English academic engagement. However, the study had a focus on how learners are motivated and engaged towards learning one particular subject while this study majored on academic engagement across varied learning areas. Furthermore, the intended population was secondary and junior students while the population of current study was only secondary school students.

Bayoumy and Alsayed (2021) investigated the relationship that was revealed after learners' scores in motivation and engagement ratings were correlated. Undergraduates in Saudi Arabia were targeted and the sampled group was made up of 425 students. The study utilized comparative correlational research design. The results indicated that the two variables had positive correlation. The study used comparative correlation design while predictive correlation research design was applied in the present study to examine whether a different research design would yield similar findings.

Guo (2018) looked into autonomous motivation with an interest of determining whether the variable correlates with academic engagement of adolescents in Canada. The sample size comprised of 418 learners. A questionnaire was used to collect data.

It was found out that autonomous motivation had an impact on academic engagement. Since this study was done among Canadian learners, the obtained findings may not be relied upon in explaining the correlation among the variables in the Kenyan setting. Therefore, the present study was done among Kenyan students to get results to be applied among learners in a Kenyan setting. In addition, autonomous motivation was reported to correlate with engagement, hence the need to carry out research in order to determine if academic motivation would have a connection with learner's engagement.

A study by Ridwan et al. (2016) looked at the interrelationship between secondary school students' autonomous motivation and academic engagement. There were a total of 4000 participants who constituted the sample. Data were gathered using a questionnaire. Multi-level modeling was used to analyze data. A positive connection was found to exist between academic engagement and autonomous motivation. The current study looked at the concept of motivation in general and related it to learners' engagement, whereas the previous study dwelt on one aspect of motivation, that is autonomous motivation and how it relates to academic engagement.

In Indonesia, Mustamiah and Widanti (2018) did a study with the aim of examining whether motivation and academic engagement were correlates. The secondary school age group was the target respondents. A total of 226 students made up the sample size. The findings indicated a noteworthy connection between motivation and academic engagement. Since the Indonesian social and cultural demands in regard to education differ from the Kenyan demands, generalizing the

findings had a limitation. Therefore, a similar study was executed in a Kenyan context to yield findings that may be generalized across Kenyan students.

Bakar et al. (2022) conducted research on how academic motivation affects academic success in Malaysia. Students at universities participated in the study. There were 144 students in the sample. Academic achievement and motivation had a positive correlation that was significant. Although the undergraduates' engagement was not directly explored in the study, academic motivation was linked to academic success. Therefore, the present study was done in order to produce findings that may be applied to explain the correlation between the variables among secondary level learners.

In Tanzania, Huaruni et al. (2018) did a research on the interrelationship between motivation and engagement. The study was done in constructivist based blended learning environment. The target population was students from three universities. Self-report survey helped to gather research data. Non interactive research design was used. The findings revealed that a positive connection existed between motivation and engagement. Since the study's target population was university students who are in different academic level from that of the current study's population, carrying out another research was necessary to obtain results to address secondary level of education. The study used non-interactive research design whereas predictive correlational design was used in the current study.

Anierobi and Unachukwu (2020) did a study on achievement motivation as a correlate of academic engagement among postgraduates in Nigeria. The sample size was 280

students. The researchers applied correlational research design and participants filled questionnaires. A positive and moderate relationship between achievement motivation and academic engagement was realized. However, the study focused on achievement motivation as a correlate of academic engagement while the predictor variable in the current study was academic motivation. This made it necessary to do this study to find out whether academic motivation relates with academic engagement.

In Kenya, the study by Mutisya (2020) investigated on how academically motivated students rated themselves on academic engagement and the correlation between the two variables. The target population comprised of secondary school students in Machakos County. Predictive correlational design was employed and a self-report questionnaire was utilized in gathering data. A significant positive correlation was reported after correlating the two variables. The current study targeted a similar population in Meru County to find out if the results would be similar.

## **2.4 Gender Differences in Academic Resilience and Motivation**

### **2.4.1 Gender Differences in Academic Resilience**

There are several studies that have been conducted exploring whether the resilience that learners demonstrate in academic related activities depends on gender. Using the international students in Sunivershes of Punjab and Chandigarh, India, Preeti (2019) did a study that sought to answer the question whether gender differences were evident in academic resilience. Descriptive survey research design was applied. A total of 500 participants constituted the sample. The results indicated a significant gender difference regarding academic resilience in favor of girls. The study used

descriptive survey design while the current study employed predictive correlational research design in attempt to test whether the findings would be similar.

A study was carried by Subzar and Rajib (2019) on academic resilience analysis with respect to gender. The sample consisted of 275 high school students in India. The descriptive correlational survey design was applied. Questionnaires were used in collecting data. No significant difference was found in respect to gender. Since there was no significant gender difference found, there was necessity to conduct a study in Kenya to determine whether the gender differences exist in academic resilience.

Bebera et al. (2022) investigated gender differences in resilience in India. The study was done among college students. The sample size was 137 students. The data were collected using a questionnaire. The outcomes showed existence of differences which were in favour of female students. However, they were based on college students who are older than the population of the current study hence limiting generalizability of the findings and calling for a study that may be focusing at secondary level learners. The sample size was small hence it was necessary to carry out a study on a bigger sample in order to establish any gender difference in academic resilience.

In Indonesia, a study was conducted on how academic resilience varies by gender (Latife & Amirullah, 2020). The researchers involved 103 university students who were pursuing various courses. The results showed no discernible gender variations in academic resilience. Since the targeted population included university students, whose

intellectual level is greater than that of secondary school students, this study was done to bridge the noted gap.

Rusandi et al. (2022) investigated how the resilience of learners varied based on their gender. This investigation was done in Indonesia during Covid-19 pandemic. The intended population was university students and 131 students were sampled. It was reported that males were more resilient than the female students. Since the results were based on undergraduates whose age and educational level is higher in relation to the targeted study group, another study was deemed suitable.

During Covid-19 period, Ghosh and Mondal (2022) did a study on resilience and emotional state in India. The target population was college students. The sample size comprised of 320 students. The results showed no gender difference in academic resilience. However, the study was done in India which has a different cultural setting from Kenya. Hence it was worthy to carry out this study to compare the results.

In Nigeria, Olasheni (2020) did a study on the roles of parental involvement and gender on academic resilience among 347 adolescents. The results revealed that girls scored high in academic resilience than boys. However, the sample was taken from Nigeria while in the present study it was drawn from Kenya which has different social and cultural setting.

Bizuneh (2021) did a study on how academic resilience varies depending on gender among learners in Ethiopia. The study was done among deaf and hearing adolescents. The sample size was made up of 160 adolescents. The study instruments used were

questionnaire and interview. The results indicated a significant gender difference in academic resilience with deaf female adolescents scoring the lowest. However, the study targeted both deaf and hearing adolescents while this study was done among hearing students only. Also, the previous study utilized a questionnaire and interview, whereas the current study used only a questionnaire to collect data.

The gender disparities in academic resilience were examined in a different study by Mwangi and Ileri (2017). Secondary school students were involved. The design was descriptive correlational. A total of 390 students drawn from Kiambu County, Kenya, made up the sample. The findings showed that academic resilience differed significantly by gender, favoring female students. In order to compare the outcomes, this study was conducted in Meru County as opposed to Kiambu County.

A study on the gender differences in academic resilience was conducted by Kelly and Ileri (2022). Students in Trans-Nzoia County's secondary schools were the intended respondents. The sample size was made up of 306 students. A big gender gap was revealed between female and male students. Given that the research was conducted in Trans-Nzoia County, it seemed worthwhile to do a comparable study in Meru County, Kenya.

#### **2.4.2 Gender Differences in Academic Motivation**

Several researchers have carried studies to explain how academic motivation varies based on the gender of the learners. Most of the researchers have agreed that gender is an important variable when studying the levels of motivation among learners of different levels of education. Hanke et al. (2019) studied gender differences in students' motivation. The study targeted secondary school students from eight

western and non-western culturally diverse groups which came from Hong Kong, Philippine, Singapore, Australia, Netherland and Qatar. Performance mastery, social and extrinsic motivation was reported by over 10,000 students as small to moderately large gender differences. The results in extrinsic motivation were less straight forward. This dimension of academic motivation was the concern of this study which was conducted to test for existence of gender differences in motivation.

Sivrikaya et al. (2019) studied how students' motivation correlates with their academic achievement using 120 undergraduates in Turkey. A questionnaire which had items on the three dimensions of academic motivation was administered. The results indicated no significant gender difference. Since this study was done among university students from Turkey, the results cannot be generalized to Kenya due to cultural differences.

Pretty and Geetha (2019) investigated on achievement motivation of adolescent students in India who were in their undergraduate level. The sample included 80 (males = 40 and females = 40) students. A significant difference in gender was found in favor of girls. Since a significant gender difference was found in achievement motivation, the need to do a study on academic motivation to test if there would be gender differences arose.

Maz et al. (2020) investigated gender differences in academic motivation. The target population was university students. The sample size comprised of 162 students from two public universities in Pakistan selected through stratified random sampling. The tool used to collect data was a questionnaire. The outcomes indicated that there exists

a significance gender difference in extrinsic motivation in favour of male students. However, the study had a deeper focus on extrinsic motivation while this study focused on the three domains of motivation.

In Turkey Turhan (2020) did a meta-analysis study on gender differences in academic motivation from 2004 to 2019. The researcher sampled 3017 students and analysis revealed that significant gender differences on the three domains of academic motivation were evident. The significance was at low level. Since the study was done in Turkey which has different cultural set-up from Kenya, it was worthy to do the present study using a Kenyan sample to see if the results would be similar.

Gender variations in academic motivation in India were examined in a study by Kumari and Sangwan (2021). The intended population was elementary students. The sample size was 400 elementary school students. A questionnaire helped in collecting data. The results reported significant gender differences in motivation in favour of male students. Since the study was done among elementary students who are younger than the secondary students, it was worthy to carry out this study to compare the results. In addition, India has a different cultural and social setting as compared to Kenya hence the results couldn't be generalized.

A study by Wangid et al. (2021) researched on how motivation varied depending on the gender of teacher students in Indonesia. A number of 758 students made up the sample size. Final analysis revealed that gender brought about variations in academic motivation. The differences were more evident in female students. Since the population of the study was university students whose age is different as compared to

that of the targeted group in this study, the present study was done to avail data for results comparison.

In Pakistan Khan et al. (2022) studied how gender influenced academic motivation. The sample comprised of 160 students who completed questionnaires. The female students were reported to be more motivated than male students. The study was done in Pakistan which has a different cultural set-up compared to Kenya so the results couldn't be generalized to Kenyan learners. This made it worthy to do a study that could address the gap.

Ozdamar (2021) investigated gender differences in academic motivation. The study was done among university students in Turkey. The sample size was 376 students. The results highlighted differences in academic motivation based on whether the learner was male or female. However, the findings were limited to university students whose academic level and age differ from that of the participants who formed the population of the current study.

A study by Abdelrahman (2020) was done to explore whether gender affected the levels of motivation among undergraduates in United Arab Emirates. The sample was constituted of 200 students. Descriptive correlational design was used. The results realized that female respondents were more extrinsically motivated than male respondents. Since the results reported on only extrinsic motivation it was worthy to do this study which covers all the domains of motivation namely extrinsic motivation, intrinsic motivation and amotivation.

Naveen and Yousaf (2018) explored how levels of academic motivation among learners in Pakistan varied based on their gender. The targeted group was college students and the sample size was 918 students. The findings reported existence of gender differences which were significant in extrinsic and intrinsic motivation in favour of female students. The male students had high score in amotivation. Because Pakistan is a country whose educational standards and demands differ from those of Kenya, the results could not be generalized to Kenya. It was worthy carrying out this study to find out if the results would be similar.

Another study was done in Europe by Malinauskas and Pozeriene (2020) on gender differences in academic motivation. The study was done among university students. The sample size comprised of 386 students. Cross-sectional design was applied and respondents filled questionnaires. The results reported that no significant gender difference existed. Since the results were based on university students whose level of education is higher than that of the current study's population, it was worthy to carry out this study to yield findings that may be generalized across secondary level learners. The current study used predictive correlational research design to determine if results obtained would vary depending on research design.

Yawa et al. (2021) investigated on gender differences an academic motivation in Nigeria. University students were targeted and 378 students were sampled to participate. Survey research design was used. The gender differences in academic motivation that were realised were not significant. Since survey research design has some limitations, the current study used predictive correctional research design to ensure the limitations were addressed.

Onyekwere et al. (2018) correlated motivation with academic performance. A descriptive research design was employed. Primary school pupils in Nigeria were targeted. The sample comprised of 200 students. The results showed a positive significant gender difference in motivation. Intrinsically girls were more motivated than boys and extrinsically girls were less motivated than boys. Because the study was done on primary school pupils, it was worthy carrying out a study among secondary school students to get findings that could be generalized to this level. The descriptive design applied in this study has limitations in generalizing findings and mostly relies on already existing data. In order to counter these associated challenges of research design, the present study used predictive correlational design.

Another study done in Nigeria by Marumo et al. (2019) investigated gender differences in academic motivation. The intended population was secondary school students. The sample size was 200 high school students. The study used survey research design. A significant difference in academic motivation between males and females was found to exist. However, the reviewed study used surveys whereas this study used predictive correlational research design.

In Kenya, a study by Gachigi (2018) showed that the differences in gender in relation to academic motivation were not significant. It was done among secondary school learners in Nairobi City County. A group of 500 learners was sampled. Predictive correlational research design was used. Nairobi being an urban area, it has different cultural set up from Meru County where the current study was done.

## **2.5 Academic Resilience and Motivation as Predictors of Student's Academic Engagement**

A few studies have addressed how academic engagement is predicted by academic resilience and motivation. Ellen et al. (2016) conducted a study aiming to examine the connection in academic motivation, resilience and academic engagement in U.S.A. The study's population was elementary school children. The sample size comprised of 880 students. The findings showed that academic motivation, resilience and academic engagement correlated positively. Because the study was done among primary school children and they are younger than the current study's population, it was worthy to do a similar study among Kenyan learners.

Another study by Okoro (2020) explored the function of resilience and motivation in predicting learners' engagement in Nigeria. The target population was university students. The results indicated that academic resilience did not predict academic engagement. A positive connection between achievement motivation and academic engagement was reported. Even if the study did not investigate on academic motivation directly, achievement motivation was shown to predict academic engagement therefore, the current study aimed at finding out the magnitude to which academic motivation would predict students' engagement.

Using high school learners of Ogun state In Nigeria, Oke et al. (2016) conducted an investigation to obtain the values indicating the magnitude to which academic motivation and academic resilience predicted learners' confidence in their academic endeavors. The sample size was made of 2160 high school students. The results indicated that academic resilience and motivation predicted student academic

confidence. Academic motivation and academic resilience have been reported to predict academic confidence, therefore there was need to conduct a study to find out if they would predict academic engagement.

In Kenya, Mutisya et al. (2019) looked into prediction of learners' engagement by students' perceived teacher support and academic motivation. Students from Kenya in Machakos County made up the population. There were 580 students in the sample size. The findings showed that the two variables predicted academic engagement. However, one of the predictor factors covered was excluded in the current analysis. The current study's predictive variables include academic resilience and motivation.

## **2.6 Summary of Review of Related Literature**

The literature reviewed indicates that resilience and motivation towards academics are related to academic engagement. Several studies have been done across the regions with most having been done outside Kenya. The results could not be generalized in Kenyan settings due to socio-economic and cultural differences.

The studies reviewed on relationships between academic resilience and students' academic engagement reported the two variables correlated positively. The studies were conducted among university students, elementary students and street children with a few targeting secondary school students. This called for a need to study the same variables in a population of secondary level learners to enable the researcher bridge the noted research gap. In addition, literature investigating the linkages connecting the two variables being studied has been observed to be scarce in Kenya. Therefore, this study served as an important tool for adding more knowledge in the area with regard to the Kenyan setting.

Studies on the connection evident in academic motivation and engagement revealed that a connection exists between the two variables. However, most of them have been done in developed countries. For this reason, there was a need to do a study in a different environment to compare the results.

Significant gender differences have been found in both academic resilience and motivation. Some studies have reported significant gender differences in academic resilience which favored girls while in others no significant difference was found. In several studies girls have emerged to be more motivated than males, while, in some studies both males and females seem to be motivated differently in different domains that is, extrinsically boys were more motivated than girls and intrinsically girls were more motivated than their male counterparts. Some studies reported that gender differences were not significant. The varying revelations on gender differences made it necessary to carry out this study to ascertain whether gender differences were evident in academic resilience and academic motivation in the population of study.

Studies exploring how academic resilience and academic motivation predicted learners' engagement were also scarce. This prompted the present study whose aim was to contribute more information to this area of knowledge.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Introduction**

The chapter covers the study's location, study variables, and research design. It also highlights the target population, sampling methods, and sample size. In addition, a research questionnaire, pilot study, data collection strategy, data analysis, logical and ethical issues are discussed.

#### **3.2 Research Design**

Predictive correlational research design was employed in this study. The design is suitable for measuring two or more variables as well as determining how the variables relate to one another (Stangor, 2011). The appropriateness of the design was informed by the researcher's goal which was intended to critically examine academic resilience and academic motivation as predicting variables of students' engagement in academics. No manipulation of the variables or research subjects was done. The research design also allowed the researcher to examine how variations in predictor variables are related to the academic engagement.

#### **3.3 Research Variables**

In this study, academic resilience which had four components that is self-belief, control, composure and persistent and academic motivation which involved intrinsic, extrinsic and amotivation were the predictor variables. The criterion variable was academic engagement which had three constructs namely; behavioural, affective and cognitive engagement. Measurement of the three variables was done on interval scale. The intervening variable, being gender, was measured on a nominal scale and it was either male or female.

### **3.4 Research Methodology**

Quantitative data was collected using questionnaires. It is suitable in establishing general laws of relationship about behaviour (Mcleod, 2017).

### **3.5 Location of the Study**

This study was carried out in Imenti North Sub-County, Meru County. The location was chosen because some schools were reported to have shown characteristics of lack of academic engagement (Mungwirwa, 2016; Ndung'u, 2018). In addition, Imenti North Sub-County has the four school categories namely; national, extra county, county and sub-county schools. Meru town is within the locale hence the sample comprised of students experiencing different social-economic status. Studies have reported that there is school unrest, truancy and arson in Imenti North Sub-County, Meru County (Kibiki, 2018; Muguna, 2017). Presence of these characteristics could signify lack of academic engagement. It was hypothesized that academic engagement was due to low academic resilience and motivation. Therefore, Imenti North Sub-County, Meru County was deemed an ideal place for staging the study.

### **3.6 Target Population**

The population of the study was Form three class of the year 2020 in Imenti North Sub-County, Meru County. These students were assumed to have been in secondary school for about three years and thus expected to have established definite and measurable levels of academic engagement. A student who attains results that are satisfactory in their learning is the one who has attended school for not less than three years (Ileri, 2015).

### **3.7 Sampling Techniques and Sample Size**

#### **3.7.1 Sampling Techniques**

Stratified, purposive and proportionate random sampling techniques were employed. Using information from the Imenti North Sub-County Education Office, stratified sampling was utilized to group schools into different categories ranging from national to sub-county schools. Categorizing schools made it easier to collect a representative sample of all population groupings (Stangor, 2011). One national school and two schools from each category were chosen using a random sampling method. Seven schools in total took part in the study. To have a representative sample to account for the variations in the proportion of boys and girls, the participants were chosen using proportionate random selection. The target population consisted of 2992 students (1618 boys and 1374 girls).

#### **3.7.2 Sample Size**

I The sample size comprised of 341 students which was calculated using the guidelines given in the table developed by Krejcie and Morgan (1970) for calculating minimum sample size for a known population. (See appendix E).

**Table 3.1***Sampling Frame*

Type of school	Population			Schools	Sample size		
	Schools	Students			Students	Boys	Girls
		Boys	Girls				
National School	1	344		1	44		
Extra county	3	215	393	2	38	51	
County	8	276	274	2	43	45	
Sub-county	29	783	707	2	55	65	
<b>Sub total</b>		<b>1618</b>	<b>1374</b>	<b>7(17%)</b>	<b>180</b>	<b>161</b>	
<b>Total</b>	<b>41</b>	<b>2992 (100%)</b>			341 (Appr.11%)		
	<b>100%</b>						

*Note.* Source: Imenti North Sub-County Education Office; Appr-

Approximately

The information in Table 3.1 shows that the representative proportions for schools and participants were 17% and 11%, respectively. Gorard (2001) recommends that a sample size of 10% to 20% is adequate to yield data that when analysed accurately represents and displays the characteristics of the whole population

### 3.8 Research Instrument

Data were gathered using a questionnaire. It was appropriate because it is simple to use, saves time, and gathers a lot of data (Stangor, 2011). There were four sections in the modified questionnaire: A, B, C, and D. The demographic data for the participants were in Part A, while the questions in Sections B, C, and D related to academic resilience, academic motivation, and a measure of student engagement respectively.

#### 3.8.1 Academic Resilience Scale

The researcher adapted the academic resilience measure developed by Martin and Marsh (2006). It had six items and was graded using Likert scales ratings that ranged from 1 for *strongly disagree* to 5 for *strongly agree*. The total number of

points given for each item was added up to determine the final score. The highest score which was 30 indicated a highly resilient learner, while the lowest, 6, indicated a lower level of academic resilience.

### **3.8.2 Academic Motivation Scale**

This scale was authored by Vallerand et al. (1992) and assesses all domains of motivation. The 28 items on the adapted measure were ranked on a likert scale running from one to seven, with 1 being a *strong disagreement* and 7 representing a *strong agreement*. Extrinsic motivation was categorized in three groups each measured by the items in brackets. They include extrinsic motivation external regulation (1, 8, 15 and 22), introjected (7, 14, 21 and 28) and identified (3, 10, 17 and 24). Similarly intrinsic motivation had three groups namely intrinsic motivation towards accomplishment (6, 13, 20 and 27), to experience stimulation (4, 11, 18 and 25) and to know (3, 9, 16 and 23). Amotivation was measured by items 5, 12, 19 and 26. The lowest and highest scores of each domain was 4 and 28 respectively. The means of scores were calculated, there after they were applied in the formula.

$$2\{(know+acc+stm/3)\}+iden-\{(intro+reg/2)+2amo\}= \text{Academic motivation}$$

### **3.8.3 School Engagement Measure**

Fredricks et al. (2005) generated this scale. It assesses the behavioural, emotive, and cognitive aspects of student engagement in school. It consists of 18 items on a five-point Likert scale, with 1 being *strongly disagree* and 5 being *strongly agree*. The values of scores to be obtained in this scale runs from the lowest being 18 to the highest being 90. Low scores indicated low levels while high scores indicated high levels of academic engagement. Three subscales were created from the items on the adapted scale. This means that the items measuring behavioural engagement had a

score range of 5 to 25 the items measuring affective engagement had a score range of 6 to 30 and the items measuring cognitive engagement had a score range of 8 to 40. The sum of the three subscale values was used to construct the academic engagement score.

### **3.9 Piloting Study**

Piloting was done on 34 students who were selected randomly from two schools that were chosen using purposive sampling. Connelly (2008) suggests that the best to be used for piloting should be 10% of the estimated sample. The results helped in establishing that the adapted instruments were valid and reliable. This helped in making corrections in the questionnaire before actual research. Piloting also helped in pretesting of the research instruments to ensure clarity of instructions as well as appropriateness of the duration required to respond to the items in the research tool.

#### **3.9.1 Validity of the Study Instrument**

Through pilot testing, the adopted tool was examined for validity. The researcher, the supervisors and research specialists of educational psychology department collaborated closely to ensure content validity. To establish validity, relevant literature review was done then it was assessed by experts that is supervisors as suggested by Taherdoos (2016).

#### **3.9.2 Reliability of the Study Instrument**

Cronbach's alpha was calculated to determine the levels of internal consistency. The computed and authors Cronbach alpha coefficient indicators are displayed in Table 3.2.

**Table 3.2**

*Cronbach Alpha Reliability of the Study Instruments*

Variable Measured	Pilot Study	Authors	Number of items
Academic Resilience	.81	.89	6
Academic Motivation	.86	.83	28
Academic Engagement	.75	.81	18

**Source: Researcher (2020)**

Table 3.2 shows the results of reliability of instrument computed during piloting study. The reliability coefficient for academic resilience was 0.81. Academic motivation and academic engagement had a coefficient of 0.86 and 0.75 consecutively. The instrument was reliable because the reliability coefficients of at least 0.7 were obtained as recommended by Frankel and Wallen (2000).

### **3.10 Data Collection Techniques**

The selected schools were visited in order to do introduction and familiarize with the schools as well as seeking for permission to collect data from the principals. The researcher and the class teachers distributed the questionnaire at the scheduled time. The researcher explained the rating scale and provided directions on how to complete the questionnaire. The researcher and the class teachers gave the students 30 minutes to fill in their responses to the items in the questionnaire. The completed questionnaires were gathered the same day.

### **3.11 Data Analysis**

The Statistical Package for Social Sciences (SPSS) version 22.0 was utilized in analyzing the acquired data once it was coded and entered into the computer. After entering data into the computer, cleaning out was done to check for improper entries and ensure all outliers that could affect results have been removed. Descriptive and

inferential statistics were utilized in analyzing data. The specific null hypothesis to be tested and statistical tests that were applied are as follows:

**H<sub>01</sub>:** Academic resilience and academic engagement have no significant relationship.

Test: Pearson's product moment correlation coefficient analysis.

**H<sub>02</sub>:** Academic motivation and academic engagement have no significant relationship.

Test: Pearson's product moment correlation coefficient analysis.

**H<sub>03</sub>:** There are no significant gender differences in academic resilience and academic motivation. Test: T-test for independent samples.

**H<sub>04</sub>:** Academic resilience and academic motivation do not significantly predict academic engagement. Test: Multiple Regression Analysis.

### **3.12 Logistical and Ethical Considerations**

#### **3.12.1 Logistical Considerations**

The Graduate School of Kenyatta University provided the researcher with an introduction letter approving the research exercise. For acquiring the research permission, the National Council for Science, Technology, and Innovation (NACOSTI) was contacted and the institution gave approval for the research to be done. Imenti North Sub-County Education Officer and the Director of Education for Meru County were informed of the researcher's plan to gather data within their respective areas of authority. In order to schedule meetings, the principals of the chosen schools were called. The researcher presented herself to the principals during the visits and asked for their permission to do research at their schools. The day and timing of the research exercise were also agreed upon.

### **3.12.2 Ethical Considerations**

The researcher made sure the participants were aware of the purpose and intentions of the study and its value in educational practice. The respondents were informed of performance on voluntary basis, and those who wished to do so were asked to sign a participation consent form (appendix A) and instructed not to write their names. The researcher assured the respondents on confidentiality in handling the data during the whole research exercise.

## CHAPTER FOUR

### PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION

#### 4.1 Introduction

This chapter presents the findings obtained in this study, interpretation of the findings and discussions. The chapter has five sections namely; general and demographic information, two sections relating academic resilience and motivation to students' engagement, a section addressing gender differences in students' academic resilience and motivation while the last part focuses on the prediction of academic engagement by academic resilience and motivation.

#### 4.2 General and Demographic Information

This subsection gives the response rate and background data that characterizes the participants who got involved in generating the study's data. The background information includes characteristics of respondents such as their age and gender.

##### 4.2.1 Questionnaire Return Rate

For this study, the researcher issued 341 questionnaires as shown in Table 4.1

**Table 4.1**

*Questionnaire Return Rate*

Type of school	Questionnaires Administered			Return Rate	
	Schools	Students		Students	
		Boys	Girls	Boys	Girls
National School	1	44	-	43(97.7%)	-
Extra county	2	38	51	37(97.4%)	51(100%)
County schools	2	43	45	41(95.3%)	45(100%)
Sub-county	2	55	65	52(94.5%)	63(97%)
Subtotal		180	161	173(96.1%)	159(98.8%)
Total	7	341		332(97.4%)	

Note.  $N=332$

In Table 4.1, results indicate that the national schools with boys being the only respondents had a return rate of 97.7%. The extra county schools had a response rate of 97.4% for the boys and 100% for the girls. The county schools had a response rate of 95.3% for the boys and 100% for the girls issued with questionnaires. For the Sub County Schools, the boys issued with questionnaires had a response rate of 94.5% while the girls' response rate was 97%. Overall, the response rate of the boys was 96.1% with that of girls standing at 98.8%. When combined, the average rate of response was 97.4%. Mugenda and Mugenda (2003) indicated that when the rate of responding reaches 70% and over, such gathered data is good and adequate for performing data analysis and generating a report. Therefore, a value of 97.4% was adequate and well suited for analysis and reporting.

#### **4.2.2 Respondents' Background Information**

The researcher segregated the overall response rate by gender to examine and establish the overall representation of either gender. The outcome of the segregation was as displayed in Table 4.2.

**Table 4.2**

*Gender of the Respondents*

	Frequency	Percent
Male	173	52.1
Female	159	47.9
Total	332	100.0

Note. N=332

In Table 4.2, the results given show that the boys had a representation of 52.1% while the girls had a representation of 47.9%. Male students were more than female students

The researcher went further to examine the response according to age. Table 4.3 presents the generated results.

**Table 4.3**

*Age of the Respondents*

Age	Frequency	Percent
15.00	4	1.2
16.00	42	12.7
17.00	167	50.3
18.00	102	30.7
19.00	15	4.5
20.00	1	0.3
25.00	1	0.3
Total	332	100.0

Note. N=332

As shown in Table 4.3, majority of the respondents from these findings were aged 17 followed closely by those who were 18 years old.

A cross tabulation was done between the age and sex. Table 4.4 gives the outcomes of the cross tabulation.

**Table 4.4**

*Cross tabulation of Age and Gender*

	Age	Gender		Total
		Male	Female	
	15.00	1 (0.3%)	3 (0.9%)	4 (1.2%)
	16.00	16 (4.8%)	26 (7.9%)	42 (12.7%)
	17.00	70 (21.1%)	97 (29.2%)	167 (50.3%)
	18.00	75 (22.6%)	27 (8.1%)	102 (30.7%)
	19.00	9 (2.7%)	6 (1.8%)	15 (4.5%)
	20.00	1 (.3%)	0	1 (0.3%)
	25.00	1 (.3%)	0	1 (0.3%)
	Total	173	159	332

Note. N=332

As per the values presented in Table 4.4, the highest number of girls and boys were aged 17 and 18 years respectively. The least number of boys were aged 20 and 25 years while that of girls were aged 15 years.

### 4.3 Relationship between Academic Resilience and Students' Academic Engagement

The study's first objective which was stated aimed to find out whether academic resilience and students' academic engagement were correlated. To measure the objective, the researcher carried out the following analysis.

#### 4.3.1 Descriptive Statistics of Academic Resilience

Academic resilience scores of respondents were examined to determine the lowest score, highest score, range, mean and standard deviation. Efforts were also made to establish the skewness and kurtosis. The findings were as given in Table 4.5.

**Table 4.5**

*Descriptive Statistics of Academic Resilience*

	<i>N</i>	Range	Min	Max	Mean	<i>SD</i>	<i>Sk</i>	<i>Kur</i>
Academic resilience	332	24.00	6.00	30.00	22.44	4.67	-.77	.71

Note. *N*=332 Min=Minimum; Max=Maximum; *SD*= standard Deviation; *Sk*=Skewness; *Kur*=Kurtosis

The statistics presented in Table 4.5 reveal that the recorded lowest score was 6 with the highest score being 30. The mean for the generated data stood at 22.44 (*SD*=4.67). The skewness coefficient was -.77 and kurtosis coefficient stood at .71 indicating that the data were near normal distribution.

The descriptive statistics of academic resilience were also obtained by gender in attempt to test for existence of gender differences in academic resilience. Table 4.6 presents the results.

**Table 4.6***Descriptive Statistics of Academic Resilience by Gender*

Gender	<i>N</i>	Range	Min	Max	Mean	<i>SD</i>
Male	173	21.00	9.00	30.00	22.86	4.29
Female	159	24.00	6.00	30.00	21.98	5.04
Total	332	24.00	6.00	30.00	22.44	4.68

Note. *N*=332; Min=Minimum; Max=Maximum; *SD*= standard Deviation.

The results in figure 4.6 suggest that male respondents scored a mean of 22.86 (*SD*=4.29) which was better than that of female respondents who scored 21.98 (*SD*=5.04) in academic resilience.

The researcher went further to obtain descriptive of resilience towards academics as per the category a school lies in order to determine if the category of the school contributes to the differences which were being observed in academic resilience scores. The generated values were as shown in Table 4.7.

**Table 4.7***Descriptive Statistics of Academic Resilience by Category of the School*

School Category	<i>N</i>	Range	Min	Max	Mean	<i>SD</i>
National school	43	17.00	13.00	30.00	22.65	3.99
Extra county school	88	24.00	6.00	30.00	22.56	4.75
County school	86	24.00	6.00	30.00	22.19	5.26
Sub-county school	115	18.00	12.00	30.00	22.15	4.43
Total	332	24.00	6.00	30.00	22.44	4.68

Note. *N*=332; Min=Minimum; Max=Maximum; *SD*= standard Deviation.

The statistics given in Table 4.7 reveal that the national school category scored a mean of 22.65 (*SD* = 3.99) which was higher than the means recorded in all the other categories. This was followed by the Extra County schools which scored a mean of 22.56 (*SD* = 4.75). The county category of schools obtained the third highest mean

score of 22.19 ( $SD = 5.26$ ). The least mean value of 22.15 ( $SD = 4.43$ ) was obtained by Sub County schools. This implies that students in national schools are more resilient than other school categories.

The ANOVA test was run to see if the mean scores obtained had significant differences. Table 4.8 provides the findings.

**Table 4.8**

*ANOVA for Differences in Academic Resilience*

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	16.32	3	5.44	.25	.86
Within Groups	7225.35	328	22.03		
Total	7241.67	331			

Note.  $N=332$

According to the findings of Table 4.8, the variations in academic resilience that were evident in the means obtained were not statistically significant,  $F(3, 328) = .25, p > .05$ .

This suggests that though levels of academic resilience vary across school categories, the categories of the schools do not account for variation that has statistical significance. The levels of academic resilience were further categorized as either low or high and their frequencies were obtained. The generated statistics are shown in Table 4.9.

**Table 4.9***Levels of Academic Resilience*

		Frequency	Percent
Academic resilience	Low	147	44.3
	High	185	55.7
	Total	332	100.0

Note.  $N=332$

The percentage of students with low academic resilience was 44.3%, whereas that of students with high academic resilience was 55.7%. According to the findings, academic resilience was reported to be high among most students.

**4.3.2 Descriptive statistics of Academic Engagement**

The minimum score, the highest score, the range, the mean, the standard deviation, the skewness, and the kurtosis were all determined using the descriptive statistics of academic engagement. Table 4.10 presents the findings.

**Table 4.10***Descriptive Statistics of Academic Engagement*

	$N$	Range	Min	Max	Mean	$SD$	$Sk$	$Kur$
Academic Engagement	332	69.00	26.00	95.00	60.60	11.07	-.06	1.06

Note.  $N=332$ ; Min=Minimum; Max=Maximum;  $SD$ =Standard Deviation;  $Sk$ =Skewness;  $Kur$ = Kurtosis

Table 4.10, results indicate that the scores were spread from 26 to 95. The mean score stood at 60.60 with a standard deviation of 11.07. The skewness value was -.06 implying that most of the respondents rated themselves highly in academic engagement and kurtosis coefficient stood at 1.06 indicating that the scores were near normal distribution.

The descriptive statistics were further subjected to analysis on the basis of gender to determine if there exist mean differences in academic engagement. The outcome of this analysis was as shown in Table 4.11.

**Table 4.11**

*Descriptive Statistics of Academic Engagement by Gender*

Gender	<i>N</i>	Range	Min	Max	Mean	<i>SD</i>
Male	173	69.00	26.00	95.00	58.95	11.85
Female	159	51.00	31.00	82.00	62.40	9.88
Total	332	69.00	26.00	95.00	60.60	11.07

*Note.* *N*=332; Min=Minimum; Max=Maximum; *SD*=Standard Deviation

According to Table 4.11 findings on academic engagement, female students had the highest mean score at 62.4 (*SD*=9.88). Female students' lowest score was 31 and their highest score was 82. The average score for the male students was 58.95 (*SD*=11.85), ranging from 26 to 95. The implication was that girls were more academically engaged than boys.

T-test for independent samples was performed to test the statistical significance of the mean differences which had been obtained. Table 4.12 presents the findings.

**Table 4.12**

*Independent Samples T-test for Gender Differences in Academic Engagement*

		<i>T</i>	<i>Df</i>	Sig. (2-tailed)
Academic Engagement	Equal variances assumed	-2.87	330	.00
	Equal variances not assumed	-2.89	326.97	.00

As given in Table 4.12, the findings demonstrate that the mean discrepancies were statistically significant, with a  $t(330) = -2.87, p < .05$ . This shows that gender of the students may be counted as a contributing factor determining academic engagement among students in Meru County.

The researcher went a step further and analyzed descriptive data on academic engagement by category of school. Table 4.13 presents the findings.

**Table 4.13**

*Descriptive Statistics of Academic Engagement by School Type*

School category	<i>N</i>	Range	Min	Max	Mean	<i>SD</i>
National School	43	51.00	28.00	79.00	64.09	10.00
Extra County School	88	50.00	31.00	81.00	59.34	9.59
County School	86	59.00	32.00	91.00	59.10	11.02
Sub-County School	115	69.00	26.00	95.00	56.86	11.74
Total	332	69.00	26.00	95.00	60.60	11.07

Note. *N*=332; Min=Minimum; Max=Maximum; *SD*=Standard Deviation

The national schools recorded highest scores with a mean of 64.09. The extra county schools came in second with a mean score of 59.34. The County Schools were rated third after obtaining a mean of 59.10. The sub-county category of schools recorded the lowest mean score, 56.86. This indicates that students in national schools are more engaged academically than the other categories.

Running an ANOVA test helped to see if the variations in academic engagement mean scores were significant, and the findings are shown in Table 4.14.

**Table 4.14**

*ANOVA for Differences in Academic Engagement by School Type*

	Sum of Squares	<i>Df</i>	Mean Square	<i>F</i>	Sig.
Between Groups	2340.91	3	780.30	6.69	.00
Within Groups	38250.61	328	116.62		
Total	40591.52	331			

Note. *N*=332

According to Table 4.14, the differences that were found to exist in the means of academic engagement were statistically significant,  $F(3, 328) = 6.69, p = .00$ . This

demonstrates that school type determines the extent to which students get involved in various academic related activities.

The sub scales of academic engagement among the students were divided and classified as behavioural, affective, and cognitive domains. The descriptive statistics for the various forms of academic engagement were derived and displayed in Table 4.15.

**Table 4.15**

*Descriptive Statistics of the Types of Academic Engagement*

	<i>N</i>	Range	Min	Max	Mean	<i>SD</i>
Behavioral Engagement	332	18.00	5.00	23.00	15.32	2.64
Affective Engagement	332	24.00	6.00	30.00	18.91	4.58
Cognitive Engagement	332	32.00	8.00	40.00	26.37	6.79

Note. *N*=332

The findings indicate that the range of scores for behavioural engagement was 18, with scores being spread from 5 to 23. The average for this domain was 15.32(*SD*=2.64). The affective engagement subscale had a range of 24 points, with its scores running from 6 to 30. The students' mean score on this subscale was 18.91 (*SD* = 4.58). In terms of cognitive engagement, scores ran from 8 to 40 (interval = 32). In this subscale, the mean score was 26.37 (*SD* = 6.79). The findings indicate that the subscale measuring cognitive engagement obtained the highest mean score, whereas the subscale measuring behavioural engagement had the least mean score. Cognitively the students were better engaged compared to other academic engagement domains (affective and behavioral).

The mean score for academic engagement were obtained against the levels of resilience. Table 4.16 gives the outcomes of the analysis.

**Table 4.16***Level of Academic Resilience and Academic Engagement*

Resilience Levels	<i>N</i>	Academic Engagement Mean	Std. Deviation
Low	147	57.15	10.87
High	185	63.35	10.47
Total	332	60.60	11.07

Note. *N*=332

According to Table 4.16, students with strong academic resilience achieved the highest mean score on academic engagement 63.35 (*SD*=10.47). The average academic engagement score for those with low academic resilience was 57.15 (*SD*=10.87). The students with high academic resilience scored the highest mean in academic engagement and vice versa.

Independent samples T-test was done to test whether the mean difference was statistically significant, and the tests' results obtained were as displayed in Table 4.17.

**Table 4.17***Independent Samples T-test for Differences in Academic Engagement and Academic Resilience*

		<i>T</i>	<i>Df</i>	Sig. (2-tailed)
Academic Engagement	Equal variances assumed	-5.26	330	.00
	Equal variances not assumed	-5.24	307.87	.00

Note. *N*=332

According to the findings in Table 4.17, the differences evident in means between the groups were statistically significant,  $t(330) = -5.26, p < .05$ . This suggests that academic resilience influences the levels to which students get engaged in academics.

### 4.3.3 Hypothesis Testing

Addressing the first goal which sought to ascertain whether form three students' academic engagement could be linked to their resilience, a null hypothesis was advanced as indicated:

**H<sub>01</sub>:** Academic resilience and academic engagement have no significant relationship.

Pearson correlation test was utilized in testing the aforementioned hypothesis. The outcome of the test was as displayed in Table 4.18.

**Table 4.18**

*Pearson Correlation Test on Academic Resilience and Academic Engagement*

		Academic Engagement
Academic resilience	Pearson Correlation	.33**
	Sig. (2-tailed)	.00
	<i>N</i>	332

Note. *N*=332

As per the statistics given in Table 4.18, the connection that was found to exist in academic resilience and students' academic engagement in form three students was moderate, positive and significant ( $r(330) = .33, p = .00$ ). This led to rejection of the null hypothesis because the findings were contrary to the hypothesized relationship. The alternative hypothesis was upheld. The findings suggest that the more students get involved in academics the more resilient they are academically. As per the findings obtained in this test, increase in the learners' engagement in academic related tasks results to a corresponding increase in the learners levels of resilience towards academics.

The tabulated connection in Table 4.19 shows how academic resilience is linked to the subscales of academic engagement.

**Table 4.19****Table 4.9***Correlation between Academic Resilience and Engagement Sub Scales*

		Behavioural Engagement	Affective Engagement	Cognitive Engagement
Academic resilience	Pearson Correlation	.17**	.25**	.31**
	Sig. (2-tailed)	.00	.00	.00
	<i>N</i>	332	332	332

Note. *N*=332

According to Table 4.19, academic resilience and the three sub-scales of academic engagement had a significant positive correlation. Academic resilience and behavioural engagement were positively correlated ( $r = .17, p < .05$ ), academic resilience and affective engagement were positively correlated ( $r = .25, p < .05$ ), and academic resilience and cognitive engagement were also positively correlated ( $r = .31, p < .05$ ). The findings suggest that academic resilience had a significant positive relationship with academic engagement.

#### 4.3.4 Discussion of the Results

The primary goal of this study was to determine the connection that exists in form three students' academic engagement and academic resilience. In the descriptive statistics, majority of the students scored high in academic resilient and they had the highest mean in academic engagement. As per the findings obtained, academic resilience and students' academic engagement had a significant relationship. These findings concur with earlier findings reported by Umar et al. (2018) who looked into the connection that linked postgraduates' resilience to their engagement in their study. Master's degrees' students who were enrolled in private universities made up the study's participants. The researchers discovered a strong link between academic

engagement and resilience. These results indicate the importance of moulding the students to build their academic resilience. This is because academic resilience correlates with academic engagement of the students. Supporting the students to become more resilient in academics is in line with ecological systems theory. The theory postulates that the immediate environment of children influences their behaviour and development.

Luthans et al. (2016), looked into academic resilience as a correlate of academic engagement. This study produced findings that were in line with these findings. In this study, business-related courses were taken by undergraduate students. The researchers found a link between academic resilience and engagement further highlighting the necessity to concentrate on helping students develop their academic resilience in order to improve their engagement in their studies.

At the continental level, various similar studies have been done. In Ethiopia, Argaw et al. (2019) investigated resilience dynamics among school children from rural elementary schools. The results were similar to those of the current which indicated that academic resilience related with academic engagement. Given that the environment has been identified as a factor that determines how well learners develop resilience in academics, it is important to do a critical evaluation of the roles that the different levels of the ecological system play in determining the students' resilience. A positive influence on academic resilience will lead to enhanced academic engagement of the students.

In South Africa, Malindi and Nyika (2012) investigated on how school engagement strengthens students' academic resilience. The researchers established that academic engagement correlated positively with resilience in the classroom. Academic

engagement scores were greater for students who rated themselves as highly resilient compared to those learners who rated themselves as having low resilience in academics. This emphasizes the value of academic resilience in academic engagement and how a student's surroundings can affect their resilience in academics.

Mwangi et al. (2015) examined the connection that linked resilience to learners' achievement. According to the study, a positive significant correlation was found between academic resilience and academic achievement. Even though the investigation deviated from specifically addressing resilience and engagement in academics, it is possible that improved academic performance can be linked to students who have higher levels of both. The current study's findings fill a vacuum in the local literature on the connection between academic engagement and resilience. According to the results reported in this study as well as other related studies, students' academic resilience determine academic engagement and ultimately, their academic performance.

#### **4.4 Relationship between Academic Motivation and Students' Academic Engagement**

The study's second objective was to determine the connection between form three students' academic engagement and motivation. The subsequent analysis was used to achieve this.

##### **4.4.1 Descriptive Statistics for Academic Motivation**

The data showing ratings derived from the scales of academic motivation was subjected to analysis to find the minimum as well the maximum scores, range, mean, standard deviation, skewness, and kurtosis. The outcome of the performed analysis is as given in Table 4.20.

**Table 4.20***Descriptive Statistics of Academic Motivation*

	<i>N</i>	Range	Minimum	Maximum	Mean	<i>SD</i>	<i>Sk</i>	<i>Kur</i>
Academic Motivation	332	36.00	-18.00	18.00	3.42	9.06	-.45	-.50

Note. *N*=332; *SD*=Standard Deviation; *Sk*=Skewness; *Kur*=Kurtosis

As per the statistics given in Table 4.20, the scores ranged from -18 to 18. The mean score stood at 3.42 (*SD*=9.06). The coefficient of skewness was -.45 and kurtosis coefficient stood at -.50 indicating that the scores were near normal distribution.

The researcher further obtained the descriptive statistics for academic motivation by gender. The resulting statistics were as displayed in Table 4.21.

**Table 4.21***Descriptive Statistics of Academic Motivation by Gender*

Gender	<i>N</i>	Range	Minimum	Maximum	Mean	<i>SD</i>
Male	173	36.00	-18.00	18.00	2.53	9.59
Female	159	35.67	-18.00	17.67	4.39	8.37
Total	332	36.00	-18.00	18.00	3.42	9.06

Note. *N*=332; *SD*=Standard Deviation

Table 4.21 shows that the female students had a higher mean than the males in academic motivation. The females' mean score was 4.39 (*SD* =8.37). The scores were spread from -18 to 17.67. The male students obtained a mean score of 2.53 (*SD*=9.59). The scores were spread just as those of females, thus ranging from -18 to 18.

The descriptive statistics of academic motivation were also obtained by school category. The generated descriptive are shown in Table 4.22.

**Table 4.22***Descriptive Statistics of Academic Motivation by School Category*

School Category	<i>N</i>	Range	Minimum	Maximum	Mean	Std. Deviation
National School	43	33.33	-17.67	15.67	3.42	9.20
Extra county school	88	35.33	-17.33	18.00	3.96	9.35
County school	86	36.00	-18.00	18.00	3.05	8.47
Sub-county school	115	35.67	-18.00	17.67	3.05	9.30
Total	332	36.00	-18.00	18.00	3.42	9.06

Note. *N*=332

In Table 4.22, the schools in the extra county category recorded the highest mean score of 3.96 (*SD* = 9.35). The national schools followed after registering a mean score of 3.42 (*SD* = 9.20). The County schools' mean was 3.05 (*SD* = 8.47) and sub county schools' mean was 3.05 (*SD* = 9.30). To ascertain whether the differences that were found to exist in the means had statistical significance, the ANOVA test was done and statistics generated in the test were as indicated in Table 4.23.

**Table 4.23***ANOVA for Differences in Academic Motivation by School Category*

	Sum of Squares	<i>Df</i>	Mean Square	<i>F</i>	Sig.
Between Groups	43.37	3	14.46	.18	.91
Within Groups	27121.14	328	82.69		
Total	27164.50	331			

Note. *N*=332

The data given in Table 4.23 indicate that differences in means were evident in academic motivation among the different categories of schools. The differences were statistically significant,  $F(3, 328) = .18, p < 0.5$ . This was an indication that the various categories of schools significantly determined academic motivation. As per these findings, the learners' level of motivation may depend on the category of the school in which the learner is enrolled. In some cases, learners who are enrolled in

the sub-county of schools may not be more motivated than their counterparts who are enrolled in schools such as extra county and national schools.

The researcher also analyzed the descriptive statistics of academic motivation subscales. Intrinsic and extrinsic motivation had 12 items each and amotivation was measured by 4 items. The statistics arising from the analysis were as indicated in Table 4.24.

**Table 4.24**

*Descriptive Statistics of Academic Motivation Subscale Scores*

	<i>N</i>	Range	Minimum	Maximum	Mean	Standard. Deviation
Intrinsic motivation	332	45.00	15.00	60.00	44.40	6.18
Extrinsic motivation	332	64.00	20.00	84.00	50.82	7.66
Amotivation	332	18.00	4.00	22.00	11.16	3.52

Note. *N*=332

Extrinsic motivation attained an average score of 50.82 (*SD* =7.66) which was the highest, as shown in Table 4.24. The scores ranged from the least being 20 and the highest being 84. With a mean score of 44.40 (*SD*= 6.18), intrinsic motivation was ranked second. The lowest score that was recorded was 15, while the highest score was 60. The amotivation subscale had the least values of mean and standard deviation scores, 11.16 and 3.52 respectively. In this subscale, scores ranged from 4 to 22, with 22 being the highest.

#### **4.4.2 Hypothesis Testing**

The following hypothesis was examined among form three students to investigate whether academic motivation was correlated with academic engagement.

**H<sub>02</sub>:** Academic motivation and academic engagement have no significant relationship.

The Pearson correlation test was utilized to test the proposition. Table 4.25 shows the outcomes.

**Table 4.25**

*Pearson Correlation Test*

		Academic Engagement
Academic motivation	Pearson Correlation	.20**
	Sig. (2-tailed)	.00
	<i>N</i>	332

Note. *N*=332

As per the findings given in Table 4.25, form three students' academic engagement and their motivation to learn had a significant positive correlation,  $r(330) = .20$ ,  $p = .00$ . Due to the significance of the correlation, the null hypothesis was not supported and the alternative hypothesis was upheld.

**Table 4.26**

*Correlations between the Domains of Academic Motivation and Academic Engagement*

		Behavioural Engagement	Affective Engagement	Cognitive Engagement
Academic Motivation	Pearson Correlation	.11**	.16**	.17**
	Sig. (2-tailed)	.00	.00	.00
	<i>N</i>	332	332	332
Intrinsic motivation	Pearson Correlation	.29**	.33**	.28**
	Sig. (2-tailed)	.00	.00	.00
	<i>N</i>	332	332	332
Extrinsic motivation	Pearson Correlation	.20**	.21**	.25**
	Sig. (2-tailed)	.00	.00	.00
	<i>N</i>	332	332	332
Amotivation	Pearson Correlation	.18	.22	.16
	Sig. (2-tailed)	.06	.09	.06
	<i>N</i>	332	332	332

Note. *N*=332

The findings show a substantial positive connection between academic motivation subscales, with the exception of amotivation, and the subscales of academic engagement. Behavioural engagement ( $r = .11, p < .05$ ), affective engagement ( $r = .16, p < .05$ ), and cognitive engagement ( $r = .17, p < .05$ ). Intrinsic motivation and behavioural engagement correlated positively with intrinsic motivation ( $r = .29, p < .05$ ), and extrinsic motivation and behavioural engagement were correlated with extrinsic motivation ( $r = .20, p = .05$ ), academic motivation and affective engagement,  $r(332) = .16, p < .05$ , intrinsic motivation and affective engagement,  $r(332) = .33, p < .05$ , extrinsic motivation and affective engagement,  $r(332) = .21, p < .05$ , amotivation and affective engagement,  $r(332) = .22, p > .05$ . Academic motivation and cognitive engagement,  $r(332) = .17, p < .05$ , intrinsic motivation and cognitive engagement,  $r(332) = .28, p < .05$ , extrinsic motivation and cognitive engagement,  $r(332) = .25, p < .05$ , amotivation and cognitive engagement,  $r(332) = .16, p > .05$ . The findings imply that both internal and extrinsic motivation relate with the student's academic engagement.

**Table 4.27**

*Regression Coefficients for Prediction of Academic Engagement from Academic*

*Motivation Subscales*

Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.	
	$\beta$	Std. Error	Beta			
(Constant)	27.75	4.37		6.35	.00	
1	Intrinsic motivation	.51	.12	.28	4.20	.00
	Extrinsic motivation	.35	.09	.09	1.36	.01
	Amotivation	.13	.17	.11	2.05	.06

Note.  $N=332$

According to Table 4.27, the regression coefficients for intrinsic motivation were  $\beta = .51$ ,  $p = .00$ , extrinsic motivation was  $\beta = .35$ ,  $p = .01$ , and amotivation was  $\beta = .13$ ,  $p = .06$ . Academic engagement is not significantly predicted by amotivation.

The Model's prediction equation is:  $\hat{y} = 27.75 + 0.28 x_1 + 0.09 x_2$

Where  $x_1$  represents intrinsic motivation,  $x_2$  represents extrinsic motivation, and  $\hat{y}$  is academic engagement.

Amotivation was not taken into account in the prediction formula because it is a weak predictor of academic engagement. According to the findings, an increase in intrinsic motivation resulted in a 0.28 increase in academic engagement. Academic engagement changes by 0.09 units for every unit change in extrinsic motivation. As demonstrated by the findings, both intrinsic motivation and extrinsic motivation can effectively be used to predict academic engagement.

#### **4.4.3 Discussion of the Results**

The study's second objective determined the relationship that linked form three students' academic motivation and academic engagement. Students scored the highest mean in extrinsic motivation followed by intrinsic motivation and amotivation came last according to descriptive statistics. Academic motivation and students' academic engagement were established to have a positive correlation that was significant. These findings are comparable with those of earlier research of a similar kind, such as Fundar (2017), Mai et al. (2015), Ridwan et al. (2016), Huaruni et al. (2018), and Mutisya (2020). For instance, Fundar (2017) looked into the association between academic engagement and motivation. Turkish high school learners participated in providing data for analysis. As implied by the study's findings, students who were highly motivated were also found to be more engaged in academic activities than

those who were less motivated. According to the self-determination theory, motivation influences what a student undertakes to improve their performance scores in academics. The further implication of these findings is that motivation is a useful tool to be utilized to boost students' academic engagement which can result in positive academic achievement.

Researchers Mai et al. (2015) who looked at the connection between student motivation and engagement and their impact on academic accomplishment satisfaction reported similar results. Students from secondary schools took part in the study. Academic motivation and engagement among students were found to be significantly correlated. This further indicates the importance of academic motivation on students' academic engagement which leads to better performance. The present study's findings were in line with findings of a study done by Ridwan et al. (2016) that explored the connection linking autonomous motivation and academic engagement among high school learners in Indonesia. The researchers found a substantial positive link between academic engagement and autonomous motivation. The present study concentrated on academic motivation and the extent to which it correlates academic engagement, and a significant relationship was found between the two variables.

Similar findings were obtained by Nayir (2017) after correlating students' motivation with the way they participate in everyday class activities. The researcher established a significant gender and school type difference regarding student motivation and class engagement. Furthermore, it was established that the level at which the students get motivated determines the extent to which they get engaged in class activities on daily basis. This indicates the importance of motivating the students to help them get full engagement in class activities in order to enhance academic achievement.

Mustamiah and Wadanti (2018) also carried out another study and reported results that are supported by the current study's findings. The study focused on determining whether motivation predicts academic engagement. The study discovered that student engagement was influenced by learning motivation and that learning motivation may be utilized to forecast engagement. This emphasizes how crucial it is to inspire students to actively take part in class as well as other school-related roles for them to improve their academic performance. Consequently, in order to raise students' performance in academics in Imenti North Sub County, efforts need to be made to boost academic motivation to enhance academic engagement.

At the continental level, Huaruni et al. (2018) did a study probing to answer the question whether motivation and engagement were related and found similar results. This study involved undergraduate students from Tanzanian universities. The researchers found that the two variables had a statistically significant link. This highlights the importance of motivating students to boost their academic engagement which may yield positive academic achievement. As supported by self-determination theory, motivation can help to enhance engagement in academics. Okoro (2020) examined how resilience and motivation of the learners affected academic engagement in Nigeria. Public university undergraduate students participated in the investigation. The researchers found that a correlation that existed between academic engagement and achievement motivation was significant. The self-determination theory's claim that motivation is a force that pushes people to seek certain ends or outcomes is furthered by this evidence. The results obtained were similar to this study's results, which highlights the value of inspiring learners to increase engagement in school. Increased engagement of the learners will in turn result to improved performance of the learners in academics.

In Machakos County, Kenya, Mutisya (2020) looked into the connection between academic engagement and motivation. The results that were reported were similar with the present study's results. This shows that, no matter the situation, the value of academic motivation for academic engagement cannot be overstated. Thus, more focus and effort should be put to boost academic motivation among the students. All education stakeholders should be involved in such activities that will aid students' academic motivation to enhance learning outcomes.

#### **4.5 Gender Differences in Students' Academic Resilience and Motivation**

In efforts to find out if gender disparities were evident in students' academic resilience and motivation, the following descriptive analysis and hypothesis testing were done.

##### **4.5.1 Descriptive Statistics of Academic Resilience by Gender**

The researcher obtained the descriptive statistics of academic resilience according to the gender of the student. Table 4.27 displays the results.

**Table 4.28**

*Descriptive Statistics of Academic Resilience by Gender*

Gender	<i>N</i>	Mean	<i>SD</i>
Male	173	22.86	4.29
Female	159	21.98	5.04
Total	332	22.44	4.68

Note. *N*=332; *SD*=Standard Deviation

According to Table 4.28, male students scored an average of 22.86 (*SD* = 4.29) whereas female students scored 21.98 (*SD* = 5.04) on average. In terms of academic resilience, male students outperformed female students implying that boys were more resilient than girls.

#### 4.5.2 Descriptive Statistics of Academic Motivation by Gender

The descriptive statistics on academic motivation were also done by gender and Table 4.29 shows the outcomes.

**Table 4.29**

*Descriptive Statistics of Academic Motivation by Gender*

Gender	<i>N</i>	Mean	Std. Dev
Male	173	2.53	9.59
Female	159	4.39	8.37
Total	332	3.42	9.06

Note. *N*=332

Table 4.29 shows that female students obtained the highest mean score of 4.39 (*SD* = 8.37) while male students obtained a mean score of 2.53 (*SD*= 9.59). This indicates that girls were better academically motivated than boys.

The researcher further obtained descriptive statistics of academic motivation subscales by gender. Both extrinsic and intrinsic motivation had 12 items each amotivation had 4 items. The outcomes of the analysis are shown in Table 4.30.

**Table 4.30**

*Descriptive Statistics of Academic Motivation Sub-scales by Gender*

Gender		Intrinsic motivation	Extrinsic motivation	Amotivation
	<i>N</i>	173	173	173
Male	Mean	43.74	49.97	8
	Std. Deviation	6.56	7.62	3.28
	<i>N</i>	159	159	159
Female	Mean	45.11	51.76	11.36
	Std. Deviation	5.68	7.61	3.78

Note. *N*=332

Table 4.30 shows that female students obtained the highest mean score of 45.11 (*SD* = 5.68) while the male students had a mean of 43.74 (*SD* = 6.56) on the intrinsic motivation subscale. On the extrinsic motivation subscale, the female students obtained the highest mean score of 51.76 (*SD* = 7.61) while their counterparts had a

mean score of 49.97 ( $SD = 7.62$ ). The female scored the highest mean score of 11.36 ( $SD = 3.78$ ) while their male counterparts obtained a mean score of 8 ( $SD = 3.28$ ) on the amotivation scale. The female students obtained a higher mean score in all the subscales of academic motivation.

#### 4.5.3 Hypothesis Testing

The following hypothesis was investigated to see if there are gender differences which are evident in students' academic resilience and motivation.

**H<sub>03</sub>:** There are no significant gender differences in academic resilience and academic motivation.

Performing independent samples T-test helped to examine the differences in academic resilience. The results are shown in Table 4.31.

**Table 4.31**

*Independent Samples T-test for Gender Differences in Academic Resilience*

		<i>T</i>	<i>df</i>	Sig. (2-tailed)
Academic resilience	Equal variances assumed	1.71	330	.09
	Equal variances not assumed	1.69	311.42	.09

Note.  $N=332$

The data in Table 4.31 indicates that the gender difference in academic resilience was not statistically significant,  $t(330) = .09$ ,  $p > .05$ . This implies that there were no gender differences in students' academic resilience among form three students.

The researcher examined the following hypothesis to test for existence of gender variations in academic motivation of form three students. Independent samples T-test was conducted to test the hypothesis. Table 4.32 indicates the results of the test.

**Table 4.32***Independent Samples T-test Gender Differences in Academic Motivation Sub Scales*

		<i>T</i>	<i>df</i>	Sig. (2-tailed)
Academic Motivation	Equal variances assumed	-1.87	330	.06
	Equal variances not assumed	-1.88	329.14	.06
Intrinsic motivation	Equal variances assumed	-2.03	330	.04
	Equal variances not assumed	-2.04	328.83	.04
Extrinsic motivation	Equal variances assumed	-2.14	330	.03
	Equal variances not assumed	-2.14	327.74	.03
Amotivation	Equal variances assumed	-1.00	330	.31
	Equal variances not assumed	-.99	314.40	.32

Note. *N* =332

Table 4.32 findings demonstrate that gender differences in intrinsic and extrinsic motivation were statistically significant,  $t(330) = -2.03$ ;  $t(330) = -2.14$ . No significant gender differences were obtained in amotivation subscale,  $t(330) = -1$ ,  $p > .05$ . According to the findings, there are considerable gender differences which were evident in both extrinsic and intrinsic motivation. There were no significant gender differences in amotivation.

#### **4.5.4 Discussion of the Results**

The third objective aimed at finding out whether gender differences were evident in students' academic resilience and motivation. The following subsections explain the findings.

##### **a. Gender Differences in Academic Resilience**

The descriptive statistics indicated that boys had a higher mean than girls in academic resilient scale. It was established that the gender disparities in students' academic

resilience were not statistically significant. As per the findings, it may be inferred that gender variable had no relationship with the students' academic resilience in Imenti North Sub-County. Previous similar studies done by scholars and researchers across the globe have reported mixed and inconsistent results. This suggests that additional efforts were required to expose the gender variations in academic resilience. Preeti (2019) examined how gender affected academic resilience among overseas students in India and produced different results which contradicted the current findings. Academic resilience was found to differ significantly by gender in favor of girls. This indicates the need to strike a balance while implementing policies aimed at improving students' academic resilience to ensure that no gender is left behind because academic resilience has been proved to relate with academic engagement which is a determinant of how learners achieve in academics. In this line, highly engaged learners are likely to record higher scores in examinations with less engaged learners recording low scores in examinations. Boosting resilience among the learners would be essential because it in turn improves the academic engagement of the learners.

Subzar and Rajib (2019) whose findings concur with those of the current study revealed that gender differences were not evident in academic resilience. This emphasizes the necessity for additional research in this area to contribute more knowledge in the field. While examining the effects of participation of the parents and gender on resilience of high school learners, Olasheni (2020) revealed that significant gender differences were evident in relation to academic resilience. This study reported that females were more resilient. This further suggests the necessity for additional research to get a definitive conclusion that can aid in the generalization of the findings to guarantee that no student is left behind in attempts to improve their academic resilience.

Mwangi and Ileri (2017) examined how gender differed in terms of academic resilience using a Kenyan sample that was drawn from Kiambu county. According to the findings reported by these researchers, considerable differences in terms of gender were evident in academic resilience. The differences in favor of female students were manifested. These results conflict with the current findings. This may lead to the suggestion that academic resilience may determine students' academic progress, highlighting the need for more research on this crucial subject.

### **b. Gender Differences in Academic Motivation**

In the descriptive statistics girls scored a higher mean than boys. Significant gender differences were established in intrinsic and extrinsic motivation, while amotivation had no significant gender differences. Previous studies have reported mixed results when comparisons were made with those of the current study. For instance, Hanke et al. (2019) did an investigation seeking to address gender differences in motivation among learners in Hong Kong, the Philippines, Singapore, Australia, Netherland, and Qatar. Significant gender difference was established in extrinsic motivation in favour of girls. This indicates that there is a need to support the male students in order to enhance motivation to ensure that no gender is left behind. This study yields important information that may be relied upon when explaining how extrinsic motivation differs in men and women.

In their investigation into the connection between academic accomplishment and motivation for learning Sivrikaya et al. (2019) found no evidence of gender difference in any of the three subscales of academic motivation. These results, which differ from those obtained in the present study, emphasize the importance of the current study in advancing the body of knowledge about gender differences in academic motivation.

Pretty and Geetha (2019) conducted a study in which they looked into undergraduate students in India's teenagers' motivation for learning. The researchers found that girls were significantly more motivated to pursue academic goals than boys. The results show that in order to prevent any gender from falling behind, it is necessary to increase the motivating factors for both boys and girls hence ensuring that learners of either gender are equally motivated towards academics.

Onyekwere et al. (2018) conducted research that sought to answer the question whether motivation has notable impact on achievement of the learners in academics at the continental level. Positive gender differences in motivation which were significant were reported by the researchers. In terms of inner motivation, girls outperformed boys but in terms of extrinsic motivation, boys outperformed girls. The results obtained in the current investigation are in concurrence with a considerable number of studies on gender difference in motivation. The results of this study also point up the necessity to make efforts to ensure that no child is left behind and that both boys and girls are sufficiently motivated. In the research among secondary schools in Nairobi County, Kenya, Gachigi (2018) found no gender difference in academic motivation. According to the vast majority of studies, there are important gender disparities in academic motivation. The mixed findings by different researchers on gender differences in motivation indicate that more research is needed in this field of study.

## 4.6 Extent to which Academic Resilience and Academic Motivation Predict

### Academic Engagement

This fourth and final goal was to determine the extent to which students' resilience and motivation predict academic engagement of the students. To achieve the stated objective, the researcher conducted various tests as described below.

#### 4.6.1 Test for Assumptions

With the aid of tolerance and variance inflation factors, the assumptions of multicollinearity and singularity were examined. The findings are given in Table 4.33.

**Table 4.33**

*Assumptions of Multi-Collinearity and Singularity*

	Tolerance	VIF
Academic resilience	.93	1.07
Academic motivation	.93	1.07

Note.  $N=332$

According to Table 4.33 findings, neither academic resilience nor motivation had VIF values of more than 10, which indicates that the multi-collinearity and singularity assumptions were upheld.

The researcher generated a histogram that helped to determine how the error was distributed on the assumption of the normality test. Figure 4.1 presents the results.

**Figure 4.1**

*Normality Test Results*

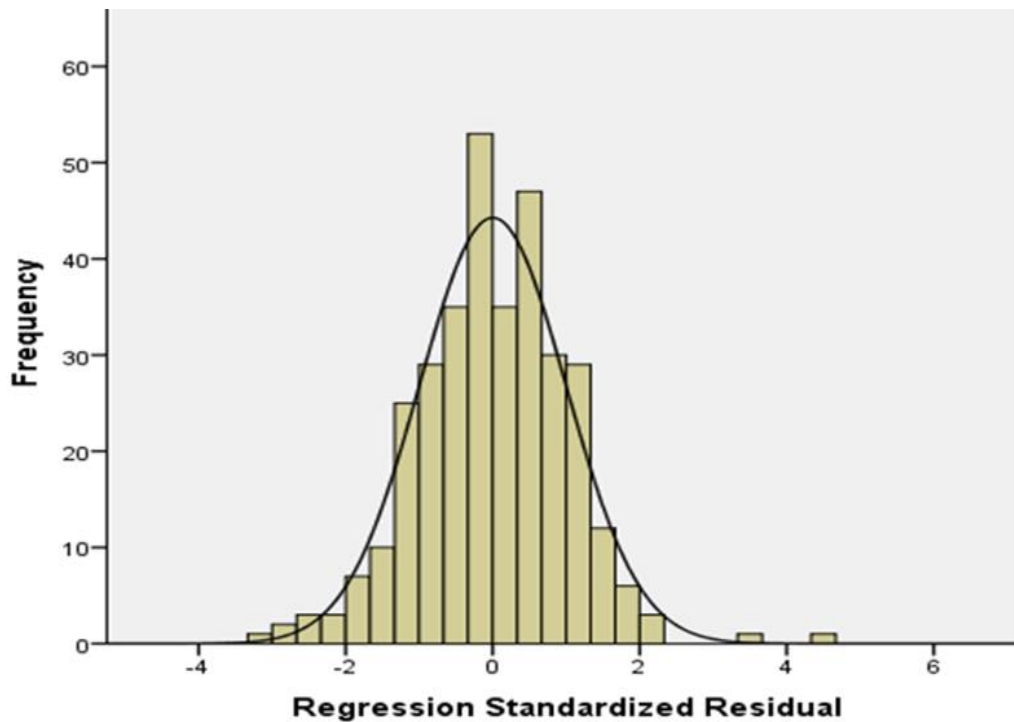
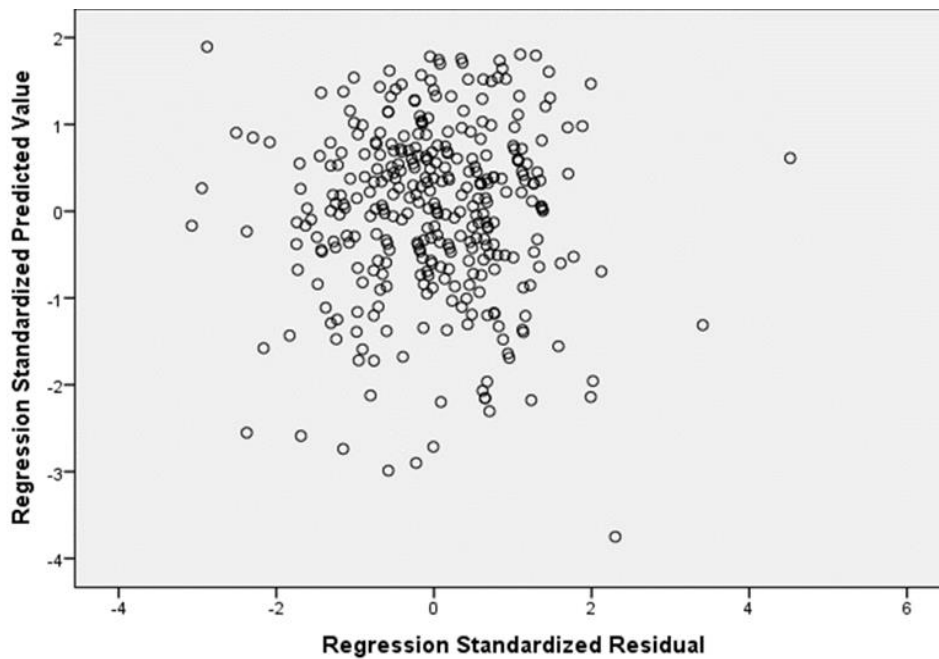


Figure 4.1 illustrates how the standardized residuals behaved and as illustrated, the residuals appeared to be almost symmetrical. The illustration demonstrates that the presumption of normality was upheld. The researcher went further to generate a scatter plot to determine if academic resilience and motivation satisfied the assumption of heteroscedasticity. The outcomes derived in the determination are displayed in Figure 4.2.

**Figure 4.2**

*Heteroscedasticity and Homoscedasticity Scatter Plot*



In figure 4.2, the findings demonstrate that the scatter plot had non conformity. This shows that the error was evenly distributed among the predictor variables, which includes academic resilience and motivation. This shows that academic resilience and motivation as predictor variables of academic engagement met the assumption of heteroscedasticity.

#### **4.6.2 Hypothesis Testing**

The null hypothesis was as stated below:

**H<sub>04</sub>:** Academic resilience and motivation do not significantly predict academic engagement.

The hypothesis was tested using analysis of variance and the data generated in hypothesis testing was as given in Table 4.34

**Table 4.34***Model Summary<sup>b</sup>*

Model	<i>R</i>	<i>R</i> Square	Adjusted <i>R</i> Square	Std. Error of the Estimate	Durbin-Watson
1	.35 <sup>a</sup>	.12	.12	10.40	1.63

Note. a. Predictors: (Constant), Academic Motivation, Academic resilience

b. Dependent Variable: Academic engagement

The findings show that academic resilience, academic motivation, and academic engagement are correlated ( $R = .35$ ). According to the  $R$  square result, academic motivation and resilience contributed to 12% of the variance in academic engagement. This demonstrates how academic motivation and resilience can be utilized to forecast academic engagement.

To determine whether the predictive values obtained in Table 4.34 were significant, ANOVA test was conducted. The outcome of the analysis was as indicated in Table 4.35

**Table 4.35**

*ANOVA for the Prediction of Academic Engagement by Academic Resilience and Academic Motivation*

Model		Sum of Squares	<i>Df</i>	Mean Square	<i>F</i>	Sig.
1	Regression	4974.16	2	2487.08	22.97	.00 <sup>b</sup>
	Residual	35617.36	329	108.26		
	Total	40591.52	331			

Note. a. Dependent Variable: Academic Engagement

b. Predictors: (Constant), Academic motivation, Academic resilience

According to Table 4.35 findings, academic engagement was significantly predictable from academic resilience and motivation,  $F(2, 329) = 22.97$  and a  $p$ -value of .05.

Regression analysis was used to examine how well academic resilience and motivation predict academic engagement. Table 4.36 presents the coefficients obtained in the regression test.

**Table 4.36**

*Regression Coefficients*

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	$\beta$	Std. Error	Beta		
(Constant)	44.18	2.85		15.51	.00
Academic resilience	.71	.13	.30	5.61	.00
Academic Motivation	.15	.07	.12	2.22	.03

Note.  $N=332$

Academic resilience's regression value was  $\beta = .71, p = .00$ , whereas academic motivation's regression coefficient was found to be  $\beta = .15, p = .03$ .

The predictive equation therefore is:  $\hat{y} = 44.18 + 0.30 x_1 + 0.12 x_2$ . Here  $x_1$  represents academic resilience,  $x_2$  represents academic motivation, and  $\hat{y}$  is the predicted academic engagement.

According to the findings, an increase in academic engagement is correlated with an increase in academic resilience and academic motivation by one unit. Based on the predictive values given in the proposed predictive model, variation of either motivation or resilience noted a change on the learners' academic engagement. One unit variation in resilience changes engagement by 0.30 units whereas a unit increase or decrease in motivation of the learners causes academic engagement to have a variation of 0.12 units.

**4.6.3 Discussion of the Findings**

This study's fourth objective aimed at establishing the degree to which academic resilience and motivation predict academic engagement. Academic resilience and

motivation were found to be responsible for about 12% of the total variation that was evident in the learner's academic engagement, suggesting that the two variables may be utilized to effectively forecast academic engagement. These findings support those reported by scholars who have carried out studies in this area. For instance, Ellen et al. (2016) studied the connection that linked academic engagement, resilience, and motivation in U.S.A. The researcher found that academic motivation, resilience, and academic engagement correlated positively, results which are consistent with those of this study. This indicates the great contribution of academic resilience and motivation in enhancing the academic engagement. If the students get the right support to develop academic resilience and proper motivation from all education stakeholders, they will have higher chances of getting engaged academically, a factor that contributes to academic achievement.

Nayir (2017) investigated the correlation between motivation of students and the levels of their engagement in class daily activities. The researcher established a significant gender and school type difference regarding student motivation and academic engagement. Additionally, it has been demonstrated that student motivation can be used to anticipate how involved they will be in class activities. The findings highlight how crucial academic motivation is in engagement in academic work. As a result, high levels of motivation correspond to high levels of engagement of the learners in academics, which improves their performance in academics.

Ahmed et al. (2018) conducted a different research enquiry to ascertain the connection that existed in teacher support provided to students, self-efficacy, resilience, and engagement and obtained similar findings as the ones documented in this study. The researchers discovered that students' self-efficacy, academic resilience, and academic engagement correlated highly with the support received from

their professors. The findings indicate that academic resilience is crucial in development of academic engagement, even though the researcher did not evaluate whether support, self-efficacy, and academic resilience might be used to predict academic engagement.

Oke et al. (2016) studied how academic motivation and resilience influenced academic confidence of learners in Nigeria. The study involved secondary school students. It was established that both variables being studied predicted student academic confidence. These reinforce the role academic resilience and motivation play in helping students achieve better academic confidence. The current research adds to the literature of academic resilience and motivation as predictors of academic engagement.

Similar findings were discovered by Ononye et al. (2022) after studying the same variables among Nigerian undergraduates who were enrolled in public universities. The study's revelation was that among the undergraduate students, academic resilience predicted academic success. Academic accomplishment comes with sufficient levels of engaging the learners, however, the study did not show a direct correlation between the two.

How learner's perceive support given by the teachers and academic motivation affect their engagement was examined in a study that was carried out in Kenya (Mutisya et al., 2019). The researchers found that academic engagement was predicted by teacher support and academic motivation. Although the variables are slightly different from the targeted variables in the present study, teacher support greatly impacted academic resilience and hence can be linked with academic engagement. The findings of Mutisya et al. (2019) further indicate the need to aid the

students build academic resilience and ensure that they get the right motivation to boost their academic engagement, a key contributor to academic achievement. Njoki (2018) conducted another study in Nairobi County looking at how well students' Mathematics test scores could be predicted by learners' motivation and resilience. The study found that academic resilience and motivation were all important determinants of Mathematics achievement. Success in Mathematics is achieved when students are well-engaged in class activities implying that self-concept, motivation and resilience can predict students' engagement in mathematics.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary of the findings as guided by the objectives followed by study conclusion and lastly the recommendations.

#### 5.2 Summary of the Findings

This study's purpose was to determine whether academic resilience, motivation and academic engagement of learners in Imenti North Sub-County, Meru County were related. The descriptive statistics of academic resilience obtained by gender indicated mean differences in favour of the male students. When obtained by school type, the descriptive statistics revealed differences in the mean scores obtained with national schools obtaining the highest mean score, extra county schools were the second in the ranking. The schools in the categories of county sub county took the last two ranks respectively. An examination to answer the question if the mean differences by school type were statistically significant showed that the mean differences in academic resilience were not present. This shows that school category could not determine academic resilience scores.

There were disparities in the mean scores obtained for academic engagement, which favoured the female students, according to the descriptive derived in the study. The mean differences were statistically significant based on T-test results. This means that the gender scores for academic engagement had an impact on the overall academic engagement scores recorded among learners in Meru County. The schools in the national category managed to record the highest mean score when the descriptive data in students' academic engagement were broken down by school type, Extra County

category took the second position, County and sub county groups taking third and fourth positions in the ranking respectively. Academic resilience mean differences were statistically significant as per the conducted ANOVA test which aimed at examining whether the differences were significant. The Pearson correlation test found a strong and substantial connection between students' academic engagement and academic resilience. This suggests that academic resilience influences students' academic engagement in a favorable way. A pupil becomes more academically engaged as their levels of resilience in studies increases.

The study's second objective determined the correlation between academic motivation and students' engagement in Imenti North Sub-County, Meru County. The minimum score of -18 and a maximum score of 18 for academic motivation were revealed by the descriptive statistics. The mean score was recorded as 3.42 (*S.D* =9.06). The greatest mean score of 4.39 (*S.D*=8.37) was obtained by female students when the descriptive data on academic motivation was examined by gender. The average score for the male students was 2.53, and their standard deviation was 9.59. As it was indicated by the findings, academic motivation and students' engagement were significant and positive correlates as positive correlation that was significant was found to exist between the variables. Pearson correlation tests were used to test the hypothesis which had been advanced and the hypothesis was rejected because a significant relationship was not evident from the findings. This suggests that giving students the correct motivation will aid them in engaging in their academic activities hence producing higher academic achievements.

The third objective examined existence of gender disparities in academic resilience and motivation. The gender differences that were established to be evident in academic resilience were not statistically significant. This suggests that in Imenti

North Sub-County, Meru County, gender variable had no effect on the students' level of academic resilience. On the subscales of academic motivation, significant gender differences were established in intrinsic and extrinsic motivation, while amotivation had insignificant differences.

Establishing the degree to which academic resilience and motivation predict academic engagement was the study's fourth goal. Academic resilience was proved to have higher predictive weight on academic engagement. According to the findings, academic motivation and resilience accounted for around 12% of the total variation in academic engagement. Additionally, a unit change in motivation results in a 0.12 change in academic engagement, while a unit change in academic resilience results in a 0.30 difference. When intrinsic motivation varied by one unit, it caused a variation of 0.28 in academic engagement, a variation by a unit in extrinsic motivation caused a variation of 0.09 in academic engagement and a unit change in amotivation causes a change in academic engagement of 0.11.

### **5.3 Conclusion**

The first objective was to investigate the correlation between form three students' academic resilience and their engagement in academics. According to the study's findings which were obtained, academic engagement and resilience had a positive and significant connection. This suggests that in order to increase students' academic engagement, all school stakeholders must collaborate to help children develop their academic resilience.

On the connection linking students' motivation and engagement in Imenti North Sub-County, Meru County, the findings revealed that academic engagement and motivation for learning are positively and significantly related. The findings suggest

that greater support should be allocated to academic motivation in order to encourage students' academic engagement, which has a direct bearing on academic success.

The third goal was to find out the existence of gender disparities in resilience and motivation of the students. Based on the findings that were obtained in this study, the variations between genders in resilience towards academics were not significant. The study found that there are substantial gender variations in intrinsic as well as extrinsic dimensions on the subscales of academic motivation, but in amotivation, the differences had no significance. Given that gender differences are evident in some types of motivation, it follows that all parties involved in education, including parents, teachers, school administrators, and the ministry of education, must cooperate to improve academic motivation in light of gender disparity.

Establishing the degree to which academic resilience and academic motivation predict academic engagement was also studied. According to the outcomes of this study, academic resilience and motivation can be utilized to forecast academic engagement. This conclusion shows the importance of equipping the students with the right skills so that they can build on their academic resilience. This should be done hand in hand with students' academic motivation because both academic resilience and motivation predict students' engagement. This calls for a joint effort among all school stakeholders.

#### **5.4 Recommendations**

Suggestions for public policy and recommendations for additional research in regard to the aforementioned conclusions are offered.

#### **5.4.1 Policy Recommendations**

- i. The parents, teachers and administrators should collaborate to help students enhance academic resilient and motivation because they boost the levels of academic engagement.
- ii. The school administration should give instructors complete support so that the teachers can help the children build the skills they need to develop academic resilience and motivation, which will encourage academic engagement.
- iii. The parents should be made aware of the importance of advising and encouraging their children on the need to develop resilience and be motivated in their academic activities.
- iv. The policymakers and curriculum developers should incorporate issues related to academic resilience and motivation in the secondary school curriculum which would boost students' engagement.
- v. All stake holders in education which include parents, teachers, administrators and ministry of education should strive to improve academic motivation among students in light of gender disparity.

#### **5.4.2 Recommendations for Further Research**

- i. For generalization of the study's findings, more research on connection between academic resilience, academic motivation and student engagement and how the two variables predict engagement of learners in academics should be conducted in other regions of the nation.
- ii. To achieve thorough investigation of the psychological predictors of academic engagement, further research should be done employing mixed methods that

yield different types of data for each set of data to be complemented by the other.

- iii. The causes of the reported relationship among the variables were not indicated due to limitations of predictive correlational research design. Therefore, it is recommended that more studies may be done in future using a different research design that addresses the shortcomings of predictive correlational research design.

## REFERENCES

- Abdelrahman, R.M. (2020). Metacognitive awareness and academic motivation and their impact on academic achievement. *Ajman University Students. Heliyon Journal*, 6(9), 14-21.
- Ahmed, U., Umran, W. A., Pal, M. H., & Shar, S. M. M. (2017). Engaging Phd student: Investigating the role of superior support and psychological capital in mediated model. *Irarian Journal of Management Studies*, 10(2), 283-306.
- Ahmed, U., Umran, W. A., Qureshl., M. A., & Samed, A. (2018). Examining the link between teachers support, academic efficacy, academic resilience and student engagement in Bahrain. *International Journal of Advanced and Applied Science*, 5(a), 39-46.
- Ahmet, H. S. (2019). The relationship between academic motivation and academic achievement of the students. *Asian Journal of Education and Training*, 5(2), 309-315.
- Alrashidi, O., Huy, P. P., & Bing, H. N. (2016). Academic engagement: Overview of its definitions dimensions and major conceptualizations. *International Education Studies*, 9 (12), 41-52.
- Anierobi, E. I., & Unachukwu, G. C. (2020). Achievement motivation and academic optimism as correlates of academic engagement among post graduate students in Nnamdi Azikiwe University (Mau) Awka. *Social Sciences and Educational Research Review*, 1(7), 242-263.
- Argaw, A., Tamirat, M., Amare, S., Lijalem, A. & Sarah, H. (2019). Resilience dynamics after interventions made among school children of rural Ethiopia. *Eiseiver ltd*, 5(4), 5-19.

- Atik, S., Celik, T. O., & Osman, T. C. (2021). Analysis of the relationships between academic motivation, engagement, burn-out and academic achievement with structural equation modelling. *International Journal of Contemporary Education Research*, 8(2), 118-130.
- Bakar, H. M. M., & Alsayed, S. (2021). Investigating relationship of perceived learning engagement, motivation and academic performance among nursing students. A Multisite study. *Advances in Medical Education and Practice*, 12, 351-369.
- Bebera, R. R., Mohapatra, M. J., Maity, C. K., Bera, R., Panda, D., Karthik, R., & Borkataki, S. (2022). Gender difference in resilience among the students of IIT Kharagpur. *Indian Journal of Positive Psychology*, 11(2), 146-148.
- Bizuneh, S. M. (2021). Resilience in adolescence, disability and gender. *Sage Journals* 31 (5), <https://doi.org/10.1177/10541373211040664>
- Bronfenbrenner, U. (1979). *The ecology of human development: experiments by nature and design*. Harvard University Press.
- Connelly, L. M. (2008). Pilot studies. *Medsurg Nursing*. 17(6), 411-412.
- Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behaviour. Plenum press.
- Dogan, U. (2015). Student engagement, academic self-efficacy, and academic motivation as predictors of academic performance. *The Anthropologist*, 20(3), 553–561. <https://doi.org/10.1080/09720073.2015.11891759>
- Ellen, S., Jennifer, P., & Joel, S. (2016). Can student engagement serve as a motivational resource for academic coping, persistence and learning during late elementary and early middle school? *Developmental Psychology*, 52 (12), 2099-2117.

- Fatima, S., Parveen, A., & Iqbal, S. (2022). Urdu translation and validation of academic resilience scale. *Journal of Information Management and Practices*, 2(2)28-35.
- Frankel, J. & Wallen, N. (2000). *How to design and evaluate research in education* (4thed.) McGraw Hill Publishing Company.
- Fredricks, J. A., Blumenfeld, P. & Paris, A. (2005). School engagement: Potential of concept, state of the evidence. *Review of Educational Research*, 74, 59-119.
- Fredricks, J. A., & McColskey, W. (2012). *The measurement of student engagement: A comparative analysis of various methods and students self-report instruments*. handbook of research on student engagement, pp 763-782, <https://doi.org/10.1007/978-1-4614-2018-7-37>
- Funda, N. (2017). The relationship between students' motivation and class engagement levels. *Eurasian Journal of Education Research*. 71, 59-78.
- Gachgi, P. N. (2018). *Academic self-concept, motivation and resilience as Predictors of mathematics achievement among secondary school students in Nairobi County, Kenya* (Unpublished doctoral thesis). Kenyatta university, Kenya.
- Ghavam, M., & Aboozar, A. (2020). The investigation of relationship between Perceptions from classroom an academic engagement with mediator role of academic motivation. *Journal of Social Sciences and Humanities of Shiraz University*. 10(6), 22-27.
- Ghosh, R., & Mondal, P. (2022). A correlational study on resilience and emotional state of college students during covid-19 in West Bengal India. *Journal of Research in Humanities and Social Sciences*, 10(2), 52-66.

- Gorard, S. (2001). *Quantitative methods in education research: The role of numbers Made easy*. Bloomsburg Publishing.
- Guo, Y. (2018). The influence of autonomous motivation on learning engagement and life satisfaction in adolescents: The mediating role of basic psychology needs satisfaction. *Journal of Education and Learning*, 7 (4), 254-261.
- Hammad, M., & Naseem, S. (2022). A comparative study on the correlation between academic resilience and students' engagement in public and private higher education institutions. *Annals of Human and Social Sciences*, 3 (3), 64-79.
- Hancoak, K. J., & Zubrick, S. R. (2015). *Children and young people at risk of disengagement from school*. Western Australia, W.A: Commissioner for Children and Young People.
- Hanke, K., Ronnel, B. K., Dennis, M. M., Ramzi, N. N., Fraide, A.G., & David, A.W. (2019). Gender and cultural differences in school motivation. *Research Papers in Education*. <https://doi.10.1080/026715222019.1633557>
- Huaruni, M., Mustapha, A. & Changz (2018). Student motivational factors and engagement strategies in constructivist based blended learning environments. *Africa Focus*, 31(1), 13-34.  
<https://www.researchgate.net/publication/327282382>
- Ileri, A. M. (2015). *Academic identity status and achievement goal orientation as predictors of academic achievement among form three students in Embu county, Kenya* (Unpublished doctoral thesis), Kenyatta University, Kenya
- Jafar, L. Hejazi, M., Sobhi, A. (2020). Investigating the relationship between academic resilience with students' academic performance and mediating academic meaning. *Journal of School Psychology and Institutions*, 9 (3), 3-39.

- Kelly, A. & Ireri, A. M. (2020). *Academic resilience and self-efficacy as predictors of academic achievement among form three students in Trans-Nzoia County Kenya* (Unpublished master's thesis), Kenyatta University, Kenya.
- Kelly, A., & Ireri, A. M. (2022). Academic Resilience and Self-Efficacy as Predictors of Academic Achievement among Form Three Students in Trans-Nzoia County Kenya. *Journal of Popular Education in Africa*, 6(6), 92-108.
- Khan, T., Ilyas, M., & Waheed, T. (2022). Examining the role of gender in academic motivation among students: Evidences from District Malakard. *Journal of Research in Humanities and Social Science*, 10(9), 298-302.
- Kibiki, S. (2018, July 11). Meru and Tharaka-Nithi in top 5 counties hit by wave of school unrest. <https://www.contyreview.co.ke.cdn.ampproject.org>.
- Kim, J. S., & Lee, Y. (2021). The reciprocal relationship between academic resilience and emotional engagement of students and the 6 effects of participating in the educational welfare priority support project in Korea: Autoregressive cross-lagged modelling. *International Journal of Educational Research*, 109(2), 3-4.
- Krause, K. I., & Armitage, L. (2016). *Australian student engagement, belonging, retention and success: A synthesis of the literature*. <https://www.haacademy.ac.uk>.
- Krejcie, R. V., & Morgan, B. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurements*, 30, 607-610.
- Kumari, A., & Sangwan S. (2021). Gender differences in academic motivation among elementary school students. *The pharma innovation Journal* 10(2), 318-321.
- Latif, S., & Amirullah, M. (2020). Students academic resilience profiles based on gender and cohort. *Journal Kajian Bembigandan Konselting*, 5(4), 175-182.

- Lavasani, M. G, Khezriazar, H. & Maleki, A. (2017). A structural model of the relationship between basic psychological needs. *Academic Motivation an English Academic Engagement Educational Psychology*, 13 (43), 35-58.
- Lavasani, M. G., Tasemzadeh, S. Azar Z. P., & Riahi, M. M. (2021). Relationship between academic resilience and academic engagement. The mediating role of emotional self-regulation. *Psychological Research Journal*, 23 (1), 35.
- Luthans, S. K., Brett, L., & Noel, P. (2016). A positive approach to management education; The relationship between academic psychology and student engagement. *Journal of Management Development* 35 (9), 1098-1118.  
<https://doi.org/10.1108/JMD.06-2015-0091>
- Mai, Y. M., Mohammed, Y., & Maria, S. (2015). Motivation and engagement as a predictor of students' science achievements satisfaction of Malaysian secondary school students. *European Journal of Social Sciences*, 2(4), 15
- Malinauskas, R. K., & Pozeriene, J. C. (2020). Academic motivation among traditional and online university students. *European Journal of Contemporary Education*, 9 (3), 584-591
- Malindi, M., & Nyika, M. (2012). The role of school engagement in strengthening resilience among male street children. *South Africa Journal of Psychology*, 42(1),10-15.
- Martin, A. J., Burns. E. C., Collie, R. J., Cutmore, M., Macleod. S., & Donlevy, V. (2022). The role of engagement in immigrant students' academic resilience. *Learning and Instruction*, 8(2), 1-9
- Martin, A.J., & Marsh, H.W. (2003). Academic resilience and the four Cs confidence, control, composure and commitment. Self-concept, enhancing and learning facilitation research centre. University of Western Sidney

- Martin, A. J., & Marsh, H. W. (2006). Academic resilience and its [https://www.psychological and educational correlates: A construct validity approach. \*Psychology in the schools\*, 43 \(3\), 267-281.https://doi.org/10.1002/pits.20149](https://www.psychological and educational correlates: A construct validity approach. <i>Psychology in the schools</i>, 43 (3), 267-281.https://doi.org/10.1002/pits.20149)
- Marumo, P., Joseph, C.H., & Anikelechi, I.G. (2019). Academic motivation of school going adolescents, gender and age difference. *African Journals*, 17 (1), 20-28.
- Maveen, M., & Yousaf, F. (2018). Exploring gender differences in academic motivation among adolescents. *General Section –Original Articles*, 16 (4), 918.
- McCain, H. C. (2021). *Academic resilience, student engagement and academic achievement among black male undergraduates at predominantly white institutions*. (Publication No. 3798) Doctoral Dissertation (Western Michigan University). <https://scholarsworks.wmich.edu/desertions/3798>.
- Mcleod, S. (2017). Research methods: qualitative versus quantitative. *Simply Psychology*. <https://www.simplypsychology.com/qualitative-quantitative.html>
- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative approaches*. African Centre for Technology Studies.
- Muguna, V. K. (2017). *Determinants of Kenya certificate of secondary education examination absenteeism among secondary school students in Imenti South Sub-County, Kenya* (Unpublished Master's Thesis). Kenyatta University.
- Mustamiah, D., & Widanti, N. S. (2018). *Learning motivation as predictor of student engagement in private junior high schools' students*. Scitepress., pp 486-493
- Mutisya, E. N., Dinga, J. N.& Kinai, T. K. (2019). Students' perception of teacher support and academic motivation as predictors of academic engagement. *International Journal of Applied Psychology*, 9(5) 128-134.

- Mutisya, E. N. (2020). *Students' perception of teacher support and motivation as predictors of academic engagement and achievement in secondary schools in Machakos County, Kenya* (Unpublished PhD thesis). Kenyatta University, Kenya.
- Mutweleli, S. M. (2014). *Academic motivation and self-regulated learning as predictors of academic achievement of students in public secondary schools in Nairobi County, Kenya* (Unpublished doctoral thesis). Kenyatta University, Kenya.
- Mwangi, C. N., & Ireri, A. M. (2017). Gender differences in academic resilience and academic achievement among secondary school students in Kiambu County, Kenya. *Psychology and Behavioural Sciences International Journal*, 5, 22-23
- Mwangi, C. N., Okacha, F. M., Kinai, T.K., & Ireri, A. M. (2015). Relationship between academic resilience and academic achievement among secondary school students in Kiambu County, Kenya. *International Journal of School and Cognitive Psychology*. <https://doi.org/10.4172/2469-983752:003>
- Mwingirwa, N. (2016). *The factors leading to high dropout rates in Kenya secondary schools: A case study of secondary schools in Igembe North, Meru County* (Unpublished master's thesis). Friends University, Kenya.
- Nayir, F. (2017). The relationship between student motivation and class engagement levels. *Eurasian Journal of Educational Research*. <https://eric.ed.gov/?id=EJ1158398>
- Naz, S., Shah, S. A., & Qayum, A. (2020). Gender differences in motivation and academic engagement: A Study of the University Students of K.P Pakistan. *Global Regional, Reviewer*, 1(1), 67-785 *Doi:10.31705/grv.2020*.
- Ndung'u, W. (2018, July 11). Meru County banned firefighters from

responding to school fire tragedies. <https://www.standardmedia.co.ke>.

- Noyen, D., Donche, V., Coerjens, L., Vandaal, T., & Van, P. (2018). The directional link between student academic motivation and social integrations during the first year of higher education. *European Journal of Psychology of Education*, 1-20. <https://doi.org/10.1007/510212-017>
- Oke, K., Ayodele, K., Aladenusi, O., & Oyinloye, C. (2016). *Journal of Research Method in Education*, 6(6) 59-64.
- Okoro, C. A. (2020). Academic engagement among Nigerian undergraduate students: Roles of academic resilience, achievement motivation, and self-efficacy. *Nigerian Journal of Psychological Research*, 16(2), 40-50.
- Olasen, J. J. (2020). Academic resilience: The roles of parental involvement and gender. *Gender & Behavioural Science*, 18(3), 16414-1642.
- Olasheni, J.T. (2020). Academic resilience: The roles of parental involvement and gender. *African Journals Online*, 18 (3), 25-30.
- Ononye, U., Ogbeta, M., Ndudi, F., Bereprebofa, D., & Maduemezia, I. (2022). Academic resilience, emotional intelligence, and academic performance among undergraduate students. *Knowledge and Performance Management*, 6(1), 1–10. [https://doi.org/10.21511/kpm.06\(1\).2022.01](https://doi.org/10.21511/kpm.06(1).2022.01)
- Onyekwere, N. A., Okoo, P. E., & Eugene, C. U. (2018). Influence of extrinsic and intrinsic motivation on students' academic performance in mathematics. *Supremum Journal of Mathematic Education*, 2(2), 52-59.
- Oyoo, S. A., Mwaura, P.M., & Kinai, T.K. (2018). Academic resilience as a predictor of academic burnout among form four students in Homa-Bay County, Kenya. *International Journal of Education and Research*, 6(3), 187-197.

- Ozidal, K. (2021) An investigation of academic motivation and career decidedness among university students *International Journal of Research in Education and Science*, 7 (I), 125-143.
- Pretty, B. (2019). Gender differences in academic resilience among international students. *Think India Journal*, 22(16), 1211-1224.
- Pretty, R., & Geetha, R.R. (2019). A study on achievement motivation of adolescent students of different academic streams. *International Journal of Current Microbiology and Applied Sciences*, 8(2), 228-233.
- Ridwan, M., Michelle, H., & Wim, V. (2016). The role of autonomous motivation for academic engagement of Indonesian secondary school students. A multi-level modelling approach. *Psychology of Asian learners*. 237-251. doi:10.1007/978-981-287-576-1015.
- Rojas, F. L. (2015). Factors affecting academic resilience in middle school students. *Gist Education and Learning Research Journal*, 1(11), 63-78.
- Romano, L., Angelini, G., Consiglto, P., & Fiorilli, G. (2021). Academic resilience and engagement in high school students: The mediating role of perceived teacher emotional support. *Eur. J. Invest Health Psychol Educ*, 11 (2), 3321-344.
- Rusandi, M. A., Liza, L.O., & Situmorang, D.D.B. (2022). Burnout and resilience during the covid-19 outbreak: Differences between male and female students. *Journal Heiyon*. [.http://CreativeCommons.org/licences/by/4.01](http://CreativeCommons.org/licences/by/4.01).  
 dos:10.1016/J.hellyon.2022.e10019
- Sabzar, A. D., & Rajib, C. (2019). Dimensional analysis of the academic resilience contract with respect to gender in secondary school students. *International Journal of Education*, 11(46229), 2347-4343.

- Sivrikaya, A. M. (2019). The relationship between academic motivation and academic achievement of students. *Asian Journal of Education and Training*, 5(2), 309-315.
- Stangor, C. (2011). *Research methods for the behavioural sciences* (4th ed) Belmont.
- Taherdoost, A. (2016). Validity and reliability of the research instrument; How to test the validation of a questionnaire/ survey in research. *International Journal of Academic Research Management*, 5(3), 28-36.
- Turha, N. S. (2020). Gender differences in academic motivation. A meta-analysis. *International Journal of Psychology and Educational Studies* 7 (20,) 211-224  
doi:1017220/Jipes.2020.02.019
- Vallerand, R., Pelleties, L., Blais, M., Briere, N., & Caroline, S. (1992). The academic motivation scale: Educational and psychology measurements, 52,(100), 10-17.
- Wang, X. (2022). Enhancing Chinese EFL students' academic engagement. the impact on fl2 enjoyment and academic motivation. *Frontiers in Psychology*. 14(13)
- Wangid, M. N., Mustadi, A., & Purbani, W. (2021). Effect of gender and department on motivation, self-efficacy and perception as teacher of pre-service teacher students. *Multicultural Education*, 7(6), 45-75. doi10.52811Zenodo.4902177
- Widhiastuti, R, Rahmaningtyas, W., Farliana, N., & Rufaida. (2022). Exploring academic resilience in states universities: A case study on new students in asaemarang City. *International Journal of Management in Education*, 16 (6), 569-587.
- Wu, Z. (2019). Academic motivation engagement and achievement among college students. *College Student Journal*, 53 (1), 99-112.

Yang, S., & Wang, W. (2022). The role of academic resilience, motivational intensity and their relationship in EFL learners' academic achievement. *Front psycho.*  
<https://doi.org/10.3389/fpsy.2020.823537>

Yawa, A.W., Balarabe, M., & Mohammed, A. 1. (2021). Influence of gender on test anxiety, academic motivation and academic achievement among university students in North-West Zone, Nigeria. *International Journal of Innovative science and Research Technology*, 6(2), 1-5.

**APPENDIX A**  
**CONSENT FORM**

Dear Respondent,

I am Purity Gatwiri Muriuki undertaking Master's degree in Educational Psychology.

I am researching to examine whether academic resilience and motivation are related to academic engagement among form three students.

Since you are a form three student, you qualify to be a participant. As a respondent, you may discontinue if you wish to as there are no conditions attached thereof.

Participating in this exercise will not expose you to any harm.

The questionnaire is attached for you to answer, kindly practice honesty while responding to the statements. The data received shall be handled confidentially. If you have chosen to participate please sign below.

Participant's Signature.....Date.....

## APPENDIX B

### QUESTIONNAIRE FOR THE STUDENTS

Dear respondent,

Your willingness to be part of this exercise is highly appreciated. The information will specifically be utilised for academic study and confidentiality will be upheld.

Please do not indicate your name or reveal your identity in any way on this paper.

#### Section A: Background information

1. Category of the school

National ( )

Extra county ( )

County ( )

Sub-county ( )

2. Sex

Male ( )

Female ( )

3. Age ( )

## Section B: Academic Resilience Scale

The following statements are about your feelings towards school, Tick appropriately to show your level of agreeing or disagreeing with the statement.

Strongly disagree [SD], Disagree [D], Not Sure [NS], Agree [A], strongly agree [SA]

S/N	Statement	SD	D	NS	A	SA
1	I believe am mentally strong as far as exams are concerned					
2	I do not allow stress related to study overwhelm me					
3	I am good at recovering from poor performance in academic work					
4	I feel I am able to handle academic pressure.					
5	I do not allow poor performance interfere with my level of confidence in studies.					
6	I am able to deal with school related shortcomings. eg poor performance, negative feedback)					

### Section C: Academic Motivation Scale – High school version

The following are reasons why you go to school. Tick appropriately to rate yourself in each statement.

Statement	TD	D	U	A	TA
1 Because I am interested in possessing a minimum of high school qualifications to enable me search a job that is rewarding highly.					
2 Because nothing pleases and satisfies me more than acquiring new knowledge.					
3 I believe that being educated will assist me in building my future career.					
4 Because nothing pleases me more than going to school					
5 To be honest it is my belief that one is wasting time by going to school.					
6 Because I find it fun being in school					
7 To prove to my feeling of competency to complete my secondary school course.					
8 I would love to get a prominent job position later.					
9 I enjoy the experience of discovering new things					
10 To help me get to the preferable job field.					
11 School used to have a lot of meaning to me but now I am doubtful about continuing with it.					
12 For pleasure since it is one of my achievements.					
13 Success increases my value and worth					
14 To live an enjoyable life latter.					
15 It is a good feeling to get knowledge about various subjects that are appealing to me.					
16 It will assist me in making the right decision					

about my career.								
17 The pleasure of engaging in interesting discussion with my teachers.								
18 I feel it is important spending my time in learning.								
19 My siblings go to school.								
20 To prove that I am intelligent.								
21 Getting better salary in future.								
22 It gives me room to continue with things that are interesting to me.								
23 It will boost my competence in the field of work.								
24 Getting a high paying job requires a certificate which at least I want to have.								
25 Reading other interesting subjects gives me a high feeling.								
26 I am unaware of any reason								
27 Allows me to satisfy the event of seeking success in studies.								
28 To prove to myself that I can be successful in my academic endeavors.								

**Section D: Academic Engagement Scale**

Tick on any of the following options as the statement applies to you; strongly agree (SA), Agree (A), Neutral (N), Disagree (D) and Strongly Disagree (SD)

**Behavioral Engagement**

S/N	Statements	SD	D	N	A	SA
1	I always pay attention in class.					
2	I pretend to work while in class.					
3	I am punctual in homework completion.					
4	I practice obedience at school.					
5	I fall in problems at school.					





**Affective Engagement**

S/N	Statements	SD	D	N	A	SA
1	I enjoy being in school.					
2	School bores me.					
3	I am excited by school work.					
4	I like attending school.					
5	I have interest of doing work at school.					
6	Being in my classroom is fun.					

**Cognitive Engagement**

S/N	Statements	SD	D	N	A	SA
1	I evaluate myself while reading.					
2	I always study when at home.					
3	I use TV shows for learning.					
4	I talk with outsiders about class work.					
5	I counter-check my school work for errors.					
6	I find the meaning of words while reading.					
7	I do extensive reading on school work.					
8	I re-read for better understanding.					

# APPENDIX C: RESEARCH PERMIT

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 436295	Date of Issue: 31/August/2022
<b>RESEARCH LICENSE</b>	
	
<b>This is to Certify that Miss. purity gatwiri muriuki of Kenyatta University, has been licensed to conduct research in Meru on the topic: ACADEMIC RESILIENCE AND MOTIVATION AS CORRELATES OF ACADEMIC ENGAGEMENT AMONG FORM THREE STUDENTS IN MERU COUNTY, KENYA for the period ending : 31/August/2023.</b>	
License No: NACOSTI/P/22/20016	
436295	
Applicant Identification Number	Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code
	
<b>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</b>	

## APPENDIX D: RESEARCH AUTHORIZATION LETTER



KENYATTA UNIVERSITY  
GRADUATE SCHOOL

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 8710901 Ext. 57530

Our Ref: E55/CE/25124/2018

DATE: 24<sup>th</sup> August, 2022

Director General,  
National Commission for Science, Technology  
and Innovation  
P.O. Box 30623-00100  
**NAIROBI**

Dear Sir/Madam,

**RE: RESEARCH AUTHORIZATION FOR PURITY GATWIRI MURIUKI – REG. NO. E55/CE/25124/2018.**

I write to introduce Purity Gatwiri Muriuki who is a Postgraduate Student of this University. The student is registered for M.Ed degree programme in the Department of Educational Psychology.

Purity intends to conduct research for a M.Ed Project Proposal entitled, “Academic Resilience and Motivation as Correlates of Academic Engagement among Form Three Students in Meru County, Kenya”.

Any assistance given will be highly appreciated.

Yours faithfully,

A handwritten signature in blue ink, appearing to be 'E. Kimani', written over a horizontal line.

**PROF. ELISHIBA KIMANI**  
**AG. DEAN, GRADUATE SCHOOL**

EM/lm

## APPENDIX E

### SAMPLE SIZE DETERMINATION TABLE

Table 3.1									
<i>Table for Determining Sample Size of a Known Population</i>									
N	S	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	265	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	9000	368
60	52	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	1000000	384

*Note: N is Population Size; S is Sample Size* *Source: Krejcie & Morgan, 1970*

