PERSONAL AND SOCIO-CONTEXTUAL FACTORS AS PREDICTORS OF ACADEMIC RESILIENCE AMONG PUBLIC SECONDARY SCHOOL STUDENTS: A CASE OF TURKANA COUNTY, KENYA.

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DECLARATION

DECLARATION BY THE CANDIDATE

This thesis is my original work and has not been presented for a degree in any other university. No part of this thesis may be reproduced without prior permission of the author and/or Moi University.

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DEDICATION

This labour of resilience is dedicated to the children growing up in adverse conditions,

for your resolve not to be reduced by the challenges you encounter,

As you always look within for the strength to persist,

Your dreams will be birthed from your resilience,

May you be the rose that grew from a crack in the concrete.

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Last but not least, this work is imprinted on all those people living through the effects of adverse experiences, that resilience is a reserve that can be harnessed to survive despite the challenges one may be experiencing. To all whose hands and eyes will land on this thesis, '*It's your reaction to adversity, not adversity itself that determines how your life's story will develop*.' Dieter F. Uchtdorf.

ABSTRACT

Turkana County is ranked as the most marginalized county in Kenya in literacy levels, access to education, unemployment levels, erratic climatic conditions, infrastructure and poverty index, health facilities, food insecurity, access to water and electricity, insecurity, land productivity and historical injustices among others. Despite the challenging situation, some students in the locality continue to persist in education, surmounting challenges and moving from one level to another in education. This study therefore, sought to determine the personal and socio-contextual factors that predict academic resilience among secondary school students in Turkana County in Kenya. To achieve this, the research set out to examine the level of academic resilience of secondary school students in Turkana County and to investigate the relationship between; personal factors and academic resilience; school factors and academic resilience; parental involvement factors and academic resilience and; to compare the predictive value of personal, school and parental involvement factors on academic resilience. The study was based on the Bioecological systems theory by Urie Bronfenbrenner and adopted a mixed research methodology, with a concurrent triangulation design. The sample size consisted of 392 students and 10 teachers making a sample of 402 respondents. Questionnaires for students and interview schedules for both teachers and students were used to collect data in this study. Descriptive statistics included frequency counts, percentages, means, standard deviation and scatter plots whereas inferential statistics involved Pearson Product Moment correlation coefficient, Multiple Regression Analysis and ANOVA. Qualitative data was analysed using thematic analysis. The results of the study revealed; the students had a high level of academic resilience ($\bar{x}$=39.75); a significant positive relationship between personal factors and academic resilience (r=.712, n=378, p<.05), a significant positive relationship between school factors and academic resilience (r=0.550, n=378, P<.05); and a significant positive relationship between parental involvement factors and academic resilience (r=.285, n=378, p<.05). Further analysis revealed that among personal, school and parental involvement factors, personal factors had the highest positive predictive value on academic resilience (β= 0.571, p<.05). In addition, qualitative data revealed that personal factors of students' social competence, autonomy and sense of self, sense of meaning and purpose have a positive correlation with academic resilience. Similarly, school factors that yielded high academic resilience among students were caring and supportive school relationships and high expectations by teachers. In regard to parental involvement factors; parental involvement academically, physically, socially, emotionally, financially and parental communication of expectations yielded high academic resilience among students. The study therefore concluded that personal and socio-contextual factors were predictors of academic resilience among public secondary school students in Turkana County in Kenya. Based on these findings, the study recommended that parents should be involved in children's lives in all aspects and set high expectations of their school going children. Similarly, schools should foster an enhancing social environment, and communicate high expectation to students. Additionally, there is need to support students to develop and increase social competence, autonomy and sense of self, meaning and purpose in their lives, and nurture positive relationships so as to enhance academic resilience.

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ABBREVIATIONS AND ACRONYMS

CHKS	-Carlifornia Healthy Kids Survey
KCPE	-Kenya Certificate of Primary Education
KCSE	-Kenya Certificate of Secondary Education
KICD	-Kenya Institute of Curriculum Development
KNBS	-Kenya National Bureau of Statistics
KNEC	- Kenya National Examinations council
MOE	- Ministry of Education
MOEST	-Ministry of Education Science and Technology
NAEP	- National Assessment of Educational Progress
NELS	- National Educational Longitudinal Study
RYDP	-Resilience & Youth Development Module
SDG	-Sustainable Development Goals
SES	-Socio-economic status
SPSS	- Statistical Package for Social Sciences
UNESCO	-United Nation Educational Scientific and Cultural Organization

1.0 CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Overview

The Government of Kenya jointly with the Ministry of Education has continued to promote and deliver education services in schools in Kenya as a gateway to equity and equality among its citizenry. However, the challenges that students in Kenya go through to earn an education differ because students from marginalized counties compete for the same education benefits as those in the least marginalized counties, with some succeeding and thriving. The success comes despite the challenges they come across in terms of access to education, unemployment levels, erratic climatic conditions, infrastructure and poverty index, health facilities, food insecurity, access to water and electricity, insecurity, land productivity and historical injustices among others, that they are exposed to.

This chapter contains a description of the overview, background to the study, statement of the problem, the purpose of the study, research objectives, research questions, and justification of the study, significance of the study and assumptions of the study, scope of the study, limitations of the study, theoretical framework, conceptual framework, operational definitions of key terms and a summary of the chapter.

1.2 Background to the study

The science of resilience in Psychology and interrelated fields emerged from clinical research on risk for psychopathology in the 1970s, growing over decades to include theoretical perspectives, methodology, and knowledge (Masten et al., 2021). The word resilience has its origin in the Latin verb ‘resilier’ which means ‘to rebound’ (Masten,

2014). Many researchers of the construct of resilience have defined resilience according to their conceptualization of the dynamics of the construct. Different definitions follow a pattern that is comprehensively abridged by Kaye-Kauderer et al. (2021) that the ability to bounce back from adversity is referred to as resilience. It is also appropriate to also affirm Ungar's (2021) acclamation that resilience by its very own nature suggests a relationship between nested and co-occurring systems that assists one or more of these systems in performing better than expected when they are disrupted and from a human system, resilience factors suggest a network of multisystem factors which was also envisioned in this study as personal, school and parental involvement factors.

In the understanding of resilience, Ruiz-Román et al. (2020) emphasize a paradigm shift since in contemporary times there has been a shift in the notion of resilience from something unique to an individual to a network of agents and elements working together to create a synergy. They dissect the growth of resilience into three approaches; the first is a perspective on resilience that focuses on the character of certain children who have been able to overcome adversity. The second emphasizes both the recognition of personal qualities and attributes as well as the understanding of how and where these resilient characteristics were acquired. Resilience is viewed as a process rather than a trait in the third approach, and as a series of behaviours rather than a qualification. It is a process in which the child is an agent, but other elements are also agents, allowing for the investigation of the individual's part in resilient acts.

If children and the environment work together to build resilience, it is found not only in the individual but also in the interactions between people and the environments they live in. These approaches advocate for a thesis that is centred on the process of becoming

resilient and not the end product (Ruiz-Román et al., 2020) which is also the main premise of this study.

For instance, students in Turkana County who succeed in education despite the high marginalization index are not themselves resilient, instead, resilience is an attribute of themselves, their parents, and their schools that provide the resources for these students to cushion themselves against risk factors. Ungar et al. (2017) affirm that resilience, therefore, cannot be viewed as a quality such as intelligence rather it is best described as patterns of interaction that occur when people interact with their surroundings to gain the experiences and resources they need to survive well under stress. This study investigated such patterns of interaction emanating from the characteristics of the child, the school, and the parents.

Krause and Sharples (2020) concur that there is a growing recognition that how children adapt to traumatic events and stressful conditions is influenced by a myriad of aspects ranging from the sociocultural context which include the resources within families and communities at a given point in time to the children's skills, experiences, and capacities. Ruiz-Román et al. (2020) remark that the literature on resilience demonstrates that it has evolved from an approach that views it as an individual trait to one that views it as a series of activities activated from various spheres and that it has increasingly become a highly important concept in social hardship, research, and intervention. Assumptions made by individuals conclude a negative outcome among persons exposed to risk factors a generalization that this study sought to bring to a scientific conclusion. Herbers et al. (2014) and Rutter (2013) underpin that some people have a reasonably excellent outcome despite having gone through a lot of stress or adversity and that their outcome is better than other people who have gone through similar experiences. Some children lack neither basic

resources nor the opportunities and experience that nurture the development of adaptive systems and these affect their resilience levels (Masten, 2001). The obscurity of the nature of resilience necessitated research.

While Turkana County has been ranked as the first and most marginalized county in Kenya among Kenya's forty-seven (47) counties (Commission on Revenue Allocation Working Paper [CRA], 2012), there are individuals who despite having lived in these suboptimal conditions, overcame the adverse conditions and emerged unscathed rising to be dependable individuals in the society. Being a native of the region, Dr.Ekuru Aukot describes life in the vast arid county as not being for the faint-hearted (Muiruri, 2011). According to research, the presence of protective factors is the main difference between individuals who adapt very well despite facing risks and individuals who end up in maladaptation (Lee et al., 2012). Furthermore, it has been proposed that an individual's resilience level moderates the relationship between that individual's resilience level and the risk factors to which they are exposed.

Despite the harsh conditions, Turkana County has brought forth exemplary men and women in the society; Ms. Pauline Lokuruka an academician from Turkana County, was the first Turkana girl to join the University in the 1980s and the first local deputy head teacher of Turkana Girls, Hon. Joyce Akai Emanikor studied at Kalokol Primary school and Lodwar Secondary school and is the current Turkana Women County member of the Kenya National Assembly. She is a Ph.D. candidate in Environmental Studies at Moi University and is credited with translating the Bible into Turkana Language and starting mobile schools. Further, Dr. Ekuru Aukot a specialist in International Refugee Law is also a key personality from Turkana County. Such individuals are considered to have a high

level of academic resilience, not because of their educational success, but the persistence that lies beneath such educational outcomes. These are just but a representative portion of the success stories from Turkana County.

Masten (2014) opines that adverse events stress the mental health of individuals causing some to fold under pressure. However, not all individuals will shut down under pressure. Some individuals achieve a level of normalcy relatively quicker than others. Some people use their adversity to push them into a more satisfying life than before. One of the most significant techniques within a resilience framework is the avoidance and mitigation of harm from adverse events (Masten and Barnes, 2018). This study sought to design such a framework as it identified the factors bolstering academic resilience among students in Turkana County. Therefore, it was worth investigating what factors exactly serve as the impetus. The obscurity of the nature of resilience is what makes it a subject worthy of research.

Academic resilience is one of the constructs of resilience that has emerged as a result of the study of resilience. This type of resilience is defined as a student's continued engagement and academic success in progressing from one academic level to the next despite the presence of a risk factor. (Lal et al., 2014). It is an ignorable facet in education as it is considered an educational asset. According to Martin (2013), academic resilience is concerned with a student's ability to overcome chronic or acute difficulties in life that is considered a serious threat to their educational growth.

The past few years in the Kenyan Education arena have been characterized by a massive shift from the past. Parents, teachers, students, and the government have been shifting the

blame on each other, as to who should explain the explicit increase in irresilient behaviours among learners in schools. Ungar et al. (2014) contend that students suffer in all dimensions, ranging from examination pressure, forming and ending romantic relationships, the transition between grade levels, and as such, academic resilience is best understood as the product of interactions between shared exceptional, conceptual risk factors in and outside of the classroom. All students at one point or another will experience poor performance, challenges, or pressure, but a student who has built the skill of resilience is in an advantageous position to succeed as compared to one that has not. It was therefore of great significance to determine that which builds or impedes academic resilience. This study was a gateway to the scientifically proven factors that build academic resilience based on contextual realities.

Further, the place of academic resilience became eminent during the Covid-19 pandemic as an asset that students can use to maneuverer through the challenging world of academia. While academics around the world fought to push through education during a pandemic, resilient academics demonstrated maintained engagement throughout those difficult times (Mahat et al., 2022). Students and pupils who were academically resilient survived the turbulence. Cohrssen et al. (2022) opine that the stresses caused by the COVID-19 worldwide epidemic magnified the importance of academic resilience and emphasized the role of sharing insights into academics' experiences. Therefore, this study shed light on the resources that students, teachers, and parents could utilize to deal with the pressures in academia.

Research on academic resilience in Kenya is scarce despite its crucial role in helping students growing up in disadvantaged areas mitigate the challenges and the confirmation

by Oyoo et al.(2018) and Mwangi et al.(2015) that academic resilience is a resource that can be developed to help pupils cope with academic difficulties. Mwangi et al. (2015) carried out a similar study using a quantitative method in Kiambu County to establish the predictors of academic resilience and its relationship to academic achievement among secondary school students. The results of the study revealed that internal and external protective factors predict academic resilience, with internal factors being the strongest predictor of academic resilience.

However, the findings of the study contradict those of Liew et al. (2018) and Frisby (2020) who found that caring and supportive relationships in school from the teachers do not predict academic resilience as that of the peers. Dias and Cadime (2017) on the other hand found out that home factors are the most significant predictors of academic resilience. Wang and Gordon's (2012) study advocates for supportive home and school factors as opposed to personal factors in promoting academic resilience, a finding similar to that of Gross (2011). The contradicting findings necessitated further research.

Mwangi et al. (2015) study having been conducted in Kiambu County may not give a comprehensive picture of the elements that promote academic resilience among students in Turkana County, firstly because of the location of the study (Kiambu County) which is not a marginalized county and so does not present the kind of obstacles that students in Turkana face. For a student who has grown up in Turkana County to move from one level of education to another despite the adverse conditions posed by literacy levels, access to education, unemployment levels, erratic climatic conditions, infrastructure and poverty index, health facilities, food insecurity, access to water and electricity, insecurity, land productivity, and historical injustices there must be some academic resilience at play. The

current study purposed to fill the methodological, knowledge and contextual gaps drawn from this previous study.

The fascinating question is, what makes some of these students persistent despite the setbacks? According to Gardynik (2008), if the traits or factors that generate resilience can be identified, these traits or factors can be developed or altered in those who are not as resilient. As a result, resilience research holds a lot of promise because it allows for the development of resilience through preventive interventions and programming.

Gonzalez-Torres and Artuch (2014) concluded from empirical research that there are three significant conditions in the conceptualization of resilience: growing up in, or finding oneself in, adversity, the availability of protective factors both internal and external, and the ability to adapt positively despite the experience of adversity. Hence, Turkana County was a suitable location for the study of academic resilience. Secondly, a mixed-methods approach which the current study used would be more useful in the full understanding of academic resilience. Thirdly, apart from the internal and external factors such as the school, peers, and the community, parents play an equally important role in the microsystem and hence constituted a factor worth investigating as addressed in this study. Finally, there is a need to bring on board students from the hardship areas in the mission to achieve the Sustainable Development goals, and this may be done by understanding the factors that bolster the academic resilience of such students. To this end, this study also provided an academic resilience model that could be utilized by stakeholders to promote equity and fairness in education so all students in Kenya enjoy the benefits of education.

Additionally, while the Constitution of Kenya (2010) gives provisions on children's rights to access free and compulsory basic education, it also provides for the rights of minorities and marginalized groups to reasonable access to water, health services, and infrastructure (Kenya, 2013). Despite this pronouncement, students from Turkana County continue to lack these basic rights, but some continue to persist in education despite this setback.

From the aforementioned background to the study, academic resilience cannot be ignored. The different findings necessitated further research and a broader scope into the investigation of academic resilience. Therefore, the present study was designed to establish the Personal and Socio-contextual factors that predictor the academic resilience of secondary school students in Turkana County, Kenya.

1.3 Statement of the problem

In Kenya, there are many students from at-risk environments such as Turkana County (Commission on Revenue Allocation Working Paper, 2012) who overcame personal and environmental challenges and adversities associated with the families they grew up in, the schools they attended, and the personal attributes they possess and went on to persist in the schooling process and succeeded in getting an education, a characteristic of academic resilience.

Such students defy the stereotype that students from at-risk environments have negligible chances of succeeding in education. Even though they may not have the wherewithal to succeed, a good number of these children learn to the highest levels, while some attain high performances in non-academic arena and give hope to others in similar circumstances.

Notably, resilience is one of the 21st Century Skills listed in UNICEF's three "life skills" categories which include personal skills such as self-regulation, confidence, adaptability, and resilience; interpersonal skills such as communication, negotiation, and leadership; and cognitive skills such as decision-making, critical thinking, and problem-solving are examples of these categories (Brown, 2015). In this competitive, dynamic, and fast-moving world, resilience is a trait that is essential for survival and therefore worthy of research.

The target group which is the form fours whose developmental stage is adolescence was also key in the study. This is because adolescence is a unique stage labelled by Zinn et al. (2020) as a critical developmental period for processing early life adversity. Moreover, Eric Erickson's Theory of Psychosocial Development (Erickson, 1968), exemplifies the distinctiveness of adolescence as a stage of identity development while also considering it as having the most important developmental task among the eight stages of development.

According to Kerpelman and Pittman (2018), Erikson insisted that identity continually evolves throughout life but also recognized that it solidifies in adolescence. One key element in identity formation is support from the significant others who include teachers and peers in the school and the parents at home. Therefore, bearing in mind the fragility of this stage in development and the need for support from other agents of socialization, it was necessary to study the personal, school and parental involvement factors that will support the adolescent in mitigating the challenges in the course of identity formation, and which may as well lead to positive personal attributes which are resilience enhancing.

This study aimed at describing the personal, school, and parental involvement factors that stirred resilient learners in a county categorized as most marginalized in Kenya to

overcome the challenges that were highly stacked against them. However, despite the place of academic resilience in promoting improved school outcomes, there is a dearth of studies on resilience in the African context (Theron et al., 2013). This study, therefore, addressed this concern in the context of Turkana County.

1.4 Purpose of the study

The purpose of this study was to determine the personal and socio-contextual factors that predict academic resilience among public secondary school students in Turkana County, Kenya. The personal factors are social competence which includes (empathy, problem-solving, cooperation, and communication) autonomy and sense of self (self-efficacy, self-awareness, locus of control) sense of meaning and purpose (goals, motivation, and aspiration); and socio-contextual factors which are school factors of caring and supportive relationships, meaningful participation and high expectations; and parental involvement academically, physically, financially, socially, emotionally and communication of their expectations to their children.

1.5 Research objectives

The study was guided by the following objectives;

1. To examine the level of academic resilience among public secondary school students of Turkana County.
2. To investigate the relationship between personal factors and academic resilience among public secondary school students of Turkana County.
3. To investigate the relationship between school factors and academic resilience among public secondary school students of Turkana County.

4. To investigate the relationship between parental involvement factors and academic resilience among public secondary school students of Turkana County.
5. To compare the predictive value of personal, school, and parental involvement factors on academic resilience among public secondary school students of Turkana County.

1.6 Research questions

The study was guided by the following questions:

1. What is the level of academic resilience among public secondary school students of Turkana County?
2. What is the relationship between personal factors and academic resilience among public secondary school students of Turkana County?
3. What is the relationship between school factors and academic resilience among public secondary school students of Turkana County?
4. What is the relationship between parental involvement factors and academic resilience among public secondary school students of Turkana County?
5. What is the comparison of the predictive values of personal, school, and parental involvement factors on academic resilience among public secondary school students of Turkana County?

1.7 Research hypotheses

The following hypotheses guided the study. Testing was at 0.05 level of significance:

H_{O1}: There is no significant relationship between personal factors and academic resilience among public secondary school students of Turkana County.

H_{O2}: There is no significant relationship between school factors and academic resilience among public secondary school students of Turkana County.

H_{O3}: There is no significant relationship between parental involvement factors and academic resilience among public secondary school students of Turkana County.

H_{O4}: There is no significant difference in the comparison of the predictive values of personal, school, parental involvement factors on academic resilience among public secondary school students of Turkana County.

1.8 Justification of the study

Demographically, it was important to study Turkana county for various enlisted reasons: this county consists of a young majority being under the age of nineteen years, who make up sixty percent of the total population (Turkana County Integrated Development Plan, [CIDP] 2018) and are exposed to many challenges emanating from the social, physical, political and economic adversities hence classified as the most marginalized county in Kenya (Commission on Revenue Allocation Working Paper, [CRA] 2012), as a result, it was important to understand the factors that promote academic resilience to secure the future of Turkana County since increased literacy may translate to improved livelihoods.

In a survey by the Kenya National Bureau of Statistics (2020) in the Inequality Trends and Diagnostic in Kenya 2020, while it was reported that inequality among the counties was declining, extensive variances existed between urban and rural setups. Again, Turkana County was reported as having experienced the highest increase in inequality in 2015- 2016 as reported since 1994. These inequalities were based on asset inequality, labour market, access to education, health care services, access to safe drinking water, improved sanitation, electricity, and gender disparities. This study envisioned that the identification

of factors promoting academic resilience may be an opening to keeping more children in school, hence reducing the inequality over time.

Moreover, a key focus in the Turkana County Vision is the development of a prosperous county population (CIDP, 2018). However, such adversities are risk factors that may harm the development of a child by predisposing them to unhealthy development and therefore impeding the county from achieving its vision. The environment in which a child develops, which includes the school and the family has an impact on the overall development of the child. It can either increase the debilitating effects of risk or protect a child from such risks. Similarly, consistent to a Save the Children (2016) report on Access to Education in Turkana County, the Turkana community's nomadic lifestyle, high adult illiteracy rates, chronic poverty, recurrent droughts, and a lack of knowledge of the value of education among parents all serve to interrupt children's education and compound household vulnerabilities. Therefore, the identification of factors that boost academic resilience would go a long way in ensuring the children from Turkana County also reap the benefits of education.

Efforts to promote the resilience of Turkana County residents have arisen from different fronts. The United Nations Development Programme (UNDP, 2017) has aided in the implementation of initiatives aimed at restoring livelihoods, assisting in the rehabilitation of communities affected by disasters, and empowering girls through education, as well as drought relief for Turkana women. This Disaster Risk Reduction Activity is aimed at assisting the government in achieving its own development goals and building resilience to reduce the impact of disasters and speed up the recovery process.

The emphasis here, though, has been on community resilience. It was necessary to look at academic resilience which is the capacity of the secondary school students to persist in the schooling process from one level to another despite threatening situations in the education process because of the personal, school, and parental involvement factors. When the resilience-building needs of the young, who make up sixty percent of the Turkana County population are met, it will build an academically resilient community. According to Martin and Marsh (2006), all students face difficulties at some point in their lives, and resilience-based interventions have the most positive academic effects.

In a similar perspective, this study contributed to advancing some of the 2030 Agenda and declarations for Sustainable Development which envisions a society in which everyone may prosper; a just, equitable, accepting, open, and socially inclusive world in which the most vulnerable people's needs are satisfied, among other things. Furthermore, these statements acknowledged African countries, Kenya included, as being among the most vulnerable and deserving of special attention. (United Nations, 2015).

Furthermore, it stated that all people in vulnerable situations should have access to lifelong learning opportunities that assist them in acquiring the knowledge and skills necessary to take advantage of opportunities and fully participate in society and that children and youth deserve a nurturing environment in which to fully realize their rights and capabilities. This study sought to fulfil these declarations by conducting a study in the most marginalized county in Kenya to find out the students' level of academic resilience, the personal, school, and parental involvement factors that may promote academic resilience as well as to compare the predictive value of the personal, school and parental involvement factors on

academic resilience. When learners are academically resilient it leads to academic success hence improving the life chances and positively impacting the livelihoods in the region.

The primary SDGs that this study sought to advance were the fourth goal, which was to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all, and the tenth goal, which was to reduce inequality within and among countries. The identification of the personal, school, and parental involvement that boost academic resilience will lead to improved educational outcomes hence substantially increasing the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs, and entrepreneurship, consequently significantly reducing the inequalities that exist between Turkana County and other counties in Kenya.

Academic resilience is a resource that may be fostered to assist students to survive in the face of academic problems, according to Oyoo et al., (2018), who explored academic resilience as a predictor of academic burnout among form four students in Homa-Bay County, Kenya. As aforementioned in this study, Turkana County has produced key notable personalities who grew and lived in Turkana County. It was, therefore, important to investigate the factors that promote this resource. Parental and school factors are also important in this study because they form the microsystem in which the child operates. In addition, these two entities also interact at the mesosystem level to influence the development of the child.

Resilience is a domain-specific construct (Masten, 2014), and as such an individual may be resilient in one domain and not in another. According to Hurley (2019), there are four

major types of resilience: psychological resilience (the ability to mentally withstand or adapt to uncertainty, challenges, and adversity); emotional resilience (how people cope emotionally with stress and adversity); and physical resilience (the body's ability to adapt to challenges, maintain stamina and strength, and recover quickly and efficiently) as well as community resilience, which refers to a group's ability to respond to and recover from adversity such as natural disasters, violent acts, economic hardship, and other communal issues.

The focus of this research was on academic resilience, a domain-specific construct of psychological resilience. While some components of resilience appear to be universal across risks and cultures, domain-specific resilience processes in the face of complex risks speak to what it means to be resilient in the face of poverty, abuse, or continuous conflict, according to Graber et al. (2015). Even if the functioning is poor everywhere, resilience can be exhibited in one domain, such as the school.

This study focussed on form four students because they are the senior-most class in secondary school and were likely to manifest resilience owing to learning pressure and the desire to succeed. This kind of pressure may require them to show academic resilience as a coping strategy. In addition, having already spent a considerable duration of time in school, they were likely to have registered a consistent level of academic resilience.

Thus, the identification and understanding of personal and socio-contextual factors that impact the children who demonstrate the ability to recover and rise above the stressors they encountered, constituted a significant step on the road to developing effective preventive

measures and intervention strategies for all the children growing up in the disadvantaged environment.

Given the above, therefore, because of the complexities of resilience processes, interventions aimed at promoting academic resilience must have a thorough understanding of an individual's resources, whether psychological, social, or material, as well as the context in order to effectively facilitate meaningful change. Liu et al. (2020) emphasize the prominence of access to contexts such as family, school, and community, particularly for adolescents who have experienced significant hardship. As a result, finding ways to empower and promote protective elements in the family, school, and person to better support adolescents facing hardship is crucial. Seemingly, in Kenya, no known research has been conducted on academic resilience in Turkana County or any other marginalized county.

1.9 Significance of the study

The findings of this study may benefit the Government of Kenya mutually with the Ministry of Education concerning the information they needed to have about the resources that can be mobilized to promote successful outcomes in challenging environments. The evidence from this research may then have a policy impact on promoting educational outcomes in marginalized areas through academic resilience building. The policymakers may benefit from a resilience model based on contextual realities. In addition, the findings can provide a justified platform for lobbying for donors and community-based organizations to link the government to donors who would assist in mitigating the effects of adverse conditions such as hunger, lack of water, and cultural interferences.

The findings of this study may also deliver feedback to the Ministry of Education in Kenya on the actual causes of irresilient behaviours among learners and perhaps be a factual basis for solving the problems in schools knowledgeably and may eventually warrant putting in place resilience-building programs in schools. It may therefore inform evidence-based decision-making for policy and practice. Besides, the education officials may gain a better understanding and make decisions to enhance academic success through resilience building.

The Kenya Institute of Curriculum Development too may benefit in developing, reviewing, and approving programs that meet the resilience-building necessities of the learners. The findings from this study may be collected, documented, and catalogued in the KICD data bank as curriculum support information that may be disseminated to educational institutions, learners, and other relevant organizations to leverage the personal, school, and parental involvement factors that boost academic resilience.

The school principals may also gain insight into building and promoting school protective factors thus assisting in transforming the learning environment into institutions where all students succeed despite their circumstances. This may make secondary school a favourable journey while preparing the learners for the subsequent educational levels and eventually produce successful and well-adjusted citizens. Furthermore, resilience-building at this level may produce resilient university students and eventually graduates who can serve the nation effectively and cope with challenges in life.

The study may also provide insight for teachers, students, and parents into how specific personal, school, and parental involvement factors mitigate adverse effects and barriers to

academic resilience. The teachers may use the findings of this study to lobby for policies that emphasize the significance of parents' roles in their children's development and academic success. Parents may gain insight into the need for playing a supportive collaborative role in providing a conducive environment that boosts their children's academic resilience. Students may also benefit as they will be more aware of the characteristics that may position them for higher chances for academic success consequently moulding focused youths who are not intimidated by academic challenges and who can use their internal resources to succeed. In this regard, it may be a strategy to be applied to reduce the student unrest witnessed in the education sector often across the country.

The findings of this research may also provide insight to counsellors on the resources that could be harnessed to protect individuals against devastating experiences, to uphold stability in their lives during demanding periods, and also protect individuals from the development of mental health issues thereby improving counselling practices. In addition, the findings may be used in the development of professional workbooks used by counsellors in their practice.

Finally, the results may also be of benefit to the literature on academic resilience by exploring the personal, school, and parental involvement factors while adding to the research on academic resilience in Kenya. It may also add to the literature on the academic resilience of students in at-risk environments thereby providing insights into promoting equity in education in Kenya.

1.10 Assumptions of the study

The study was based on the following assumptions for the sake of generalization;

i) Since the schools sampled were public and the students received a relatively similar amount of funding from the Government of Kenya, the study assumed that funding had no effect on academic resilience.

ii) Because all students received fairly the same community support as most were natives of Turkana County, the study assumed that community support had no effect on academic resilience.

iii) Since all public schools in Kenya operate under the same government policies and directives, the study assumed that the government policies had no effect on academic resilience.

1.11 Scope of the study

The scope of this study was based on the location of the study, parameters of the study, the methodology, and the theoretical perspective. On the location of the study, the research was carried out in the 52 public secondary schools in Turkana County, Kenya. The study cut across national, extra-county, county, sub-county schools both day and boarding. Moreover, the study focused on form four public secondary school students in Turkana County, these were the seniors in the school, and being at the edge of completion of secondary school, is a manifestation of academic resilience and also implied they may have registered a consistent level of academic resilience. The study population consisted of teachers and students, both male and female.

Regarding the parameters of the study, this study focused on the level of academic resilience; personal factors of social competence (empathy, problem-solving, cooperation,

and communication) autonomy, and sense of self (self-efficacy, self-awareness, locus of control) sense of meaning and purpose (goals, motivation, and aspiration) as correlates of academic resilience; school factors of caring and supportive relationships, meaningful participation and high expectations; and parental involvement academically, physically, socially, financially, emotionally and communication of expectations to children; as correlates of academic resilience. The study also compared the predictive values of these factors on academic resilience.

The methodological scope of the study was based on the mixed methods approach whose ontological anchoring is that reality can be one or many. Further, the data collection methods incorporated were questionnaires for students and interviews for teachers and students since the epistemological stance of this research was that knowledge can be measured and also interpreted or explained.

Concerning the theoretical framework, the study used all the layers of the Urie Bronfenbrenner's Bioecological system theory; the biosystem, the microsystem, mesosystem, exosystem, macrosystem, and the chronosystem as they significantly related and interrelated with the variables in the study to explain an individual's development of resilience.

1.12 Limitations of the study

The study was only carried out in public secondary schools in the marginalized county of Turkana, the results of the study may not be generalized to secondary schools in areas not categorized as marginalized. Out of the forty-seven counties of Kenya, Turkana County was ranked number one(1) in terms of the marginalized counties of Kenya (Commission

on Revenue Allocation Working Paper, 2012) with a skewed 21.87 % marginalization index compared to the second ranked county Marsabit whose index was 8.87% and therefore a huge variance that generally extends to the other forty-five counties. The criteria used to ascertain the marginalization were; the level of education, infrastructure, and poverty index, health facilities, access to water, insecurity and historical injustices among others.

The findings of this study may not be generalized to students and pupils in other education levels such as primary schools, colleges or universities including private secondary schools. This is because this study focussed on public secondary school student. In addition the sampled students were form fours whose average age is 18. These students developmental stage is adolescence, a period described by Zinn et al. (2020) as a critical developmental period for processing early life adversity. Again, Best and Ban (2021) define an adolescent as a person who is no longer a child but is not yet an adult, whose physical and mental development accelerates, interest in various aspects of life grows, desire for innovation grows, character develops, spiritual world is enriched, and conflicts escalate. Therefore, this distinct stage cannot be generalized to other developmental stages.

Finally, whereas there are many other types of resilience such as emotional, physical and community resilience, the study focused only on academic resilience. This implied therefore that findings of this study may not be generalized in the context of other types of resilience except for academic resilience.

1.13 Theoretical framework of the study

The study was anchored on Bronfenbrenner's ecological-transactional model of development (Bronfenbrenner, 1979) renamed Bioecological Systems Theory in 1986 (Bronfenbrenner, 2005) to emphasize that a child's biology and external factors influenced their development. Bronfenbrenner opines that individual development processes such as resilience can be explained in terms of the relationship between individuals and their interactions in their environment.

Figure 1 below demonstrates the six layers of the Bioecological Systems Theory; biosystem, microsystem, mesosystem, exosystem, macrosystem, and chronosystem which were all applied in this study. This theory views the child as growing up in a microsystem that includes the school, parents, and the neighbourhood or childcare environments and builds an analysis of the relationship between the individual and their parents, siblings, or school environment. Relationships between people occur in two ways- from the child and towards the child and are therefore bi-directional. For example, parents influence the child and the parents are also influenced by the child.

The biosystem is the center of all levels and reflects the characteristics of the child. This system was linked to the objective on the personal factors of social competence (empathy, problem-solving, cooperation, and communication) autonomy, sense of self (self-efficacy, self-awareness, locus of control) sense of meaning, and purpose (goals, motivation, and aspiration) and academic resilience. This level was linked to the second objective of the study on the relationship between personal factors and academic resilience. Each child's traits end up influencing how others in the system respond to them.

The microsystem is the child's immediate environment, which includes their immediate family, school, and neighbourhood. In this study, the microsystems of interest were the family as this is where the parents were found and the school where the teachers and peers interact with the child. This level was linked to the third and fourth objectives on school and parental involvement factors and academic resilience. At this level, the bidirectional influences were the strongest and impacted most on the child. The student is not a passive recipient of the environment but an active participant who construes meaning from their environment.

The mesosystem, on the other hand, comprises the linkages between the family, neighbourhood, and school containing the developing person, it is a system of microsystems intertwined. For instance, if a child's parents/guardians take an active role in a child's school, such as going to academic meetings and participating in a child's co-curricular activities, this will aid the holistic development of a child. For example, parental involvement academically physically, socially, financially, and communication of expectations supports the educational outcomes. In this study, this level was linked to the relationship between school and parental involvement factors, which were connected to the third and fourth objectives of the study respectively.

The exosystem is not directly related to the active participation of the individual in the environment, but rather to the events that occur in one or more environments that have an effect on the individual causing various effects in the development process (Soyer, 2019). These include among others the economic system, the education system, and the government agencies. The child may not be directly involved at this level, but they do feel the positive or negative forces involved with the interaction with their system.

Bronfenbrenner views the instability and unpredictability of family life created mostly by the economy as the most pernicious force to a child's development. In this study, this level was linked to objectives three and four on school and parental involvement.

The macrosystem is the layer that holds inside it the social and cultural values, customs, and beliefs that permeate the other layers. For example, a culture that does not regard education will influence parental involvement in education and communication of expectations concerning education to their children. In addition, the nomadic lifestyle of the Turkana people may impede education, and these may affect an individual in terms of their sense of meaning and purpose consequently influencing their goals, motivation, and aspiration and having an impact on academic resilience. This level is linked to the three objectives on personal, school, parental involvement, and academic resilience.

The chronosystem was also significant to this study. Figure 1 illustrates that this layer entails changes over time, historical events, biological and physiological changes. Gonzalez (2020), names four establishing principles in this layer; process, person, context, and time. The process principle encompasses the proximal processes that function as the primary mechanism of an individual's development; the family and the school. On the other hand, the person principle indicates the role of the individual and their characteristics in social interactions and their individual development, this may be determined by their biological and physiological changes. In this study, this referred to the personal factors. This level was key to this study as it was interpreted in terms of the developmental stage that these students were in that is adolescence. The time principle explains the level of education they were at (form four) regarding the academic system in Kenya (8-4-4).

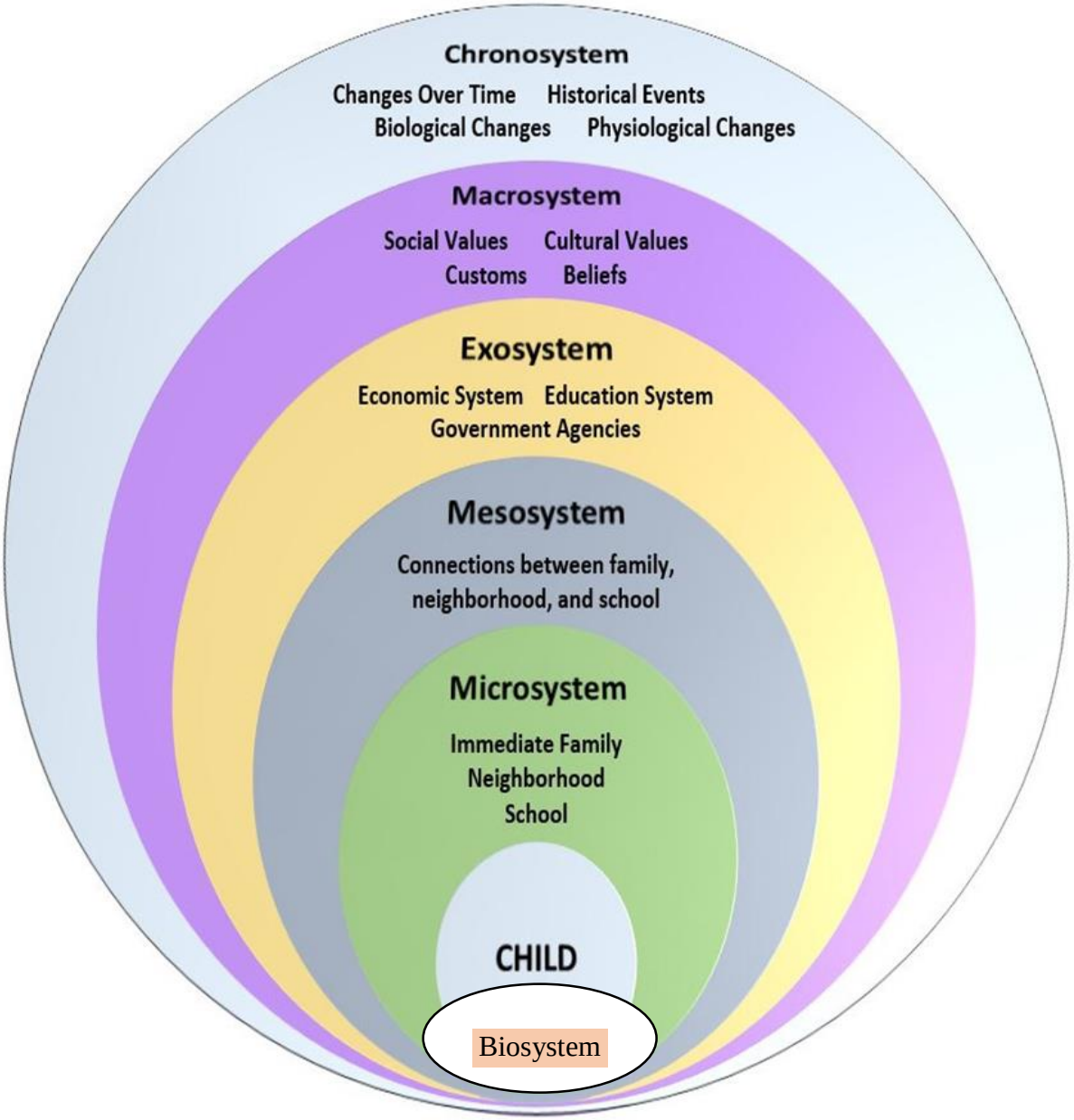
The context principle encompasses the context of an individual's development. In this study, this referred to Turkana County, a context characterized by the highest marginalization index among the counties in Kenya. The time principle regards these developments as occurring on a measurable chronological scale. This system was important to this study as it referred to the class levels of the target population of this study who are from fours.

Thus, secondary school students influence life situations as well as being influenced by them and these determine the level of their academic resilience. Students become more resilient when they grow up in a supportive and nurturing family unit and are exposed to positive adult role models at school. According to Bronfenbrenner, schools and teachers play an important secondary role, but they cannot provide the complexity of interaction that primary adults can (Bronfenbrenner, 2005).

In summary, Bronfenbrenner's ecological theory (Bronfenbrenner, 1979) made a significant contribution to developmental science by emphasizing the significance of context in the development of individuals. A child will directly interact with microsystems such as the family, a group of friends, or a team, and indirectly with many other systems such as a parent's workplace (an exosystem) or large, distal macrosystems that impact a child or her microsystems indirectly, such as the state government. As a result, this theory corresponds to the variables under investigation because a human individual is entrenched in other systems, such as a family and, later, a school, which are integrated into higher-order systems. Figure 1 below illustrates Bronfenbrenner's Bioecological Model of Development.

Figure 1

Bronfenbrenner's Bioecological Model of development



*Source***.** Adopted from Walker and Pattison (2016).

Bronfenbrenner’s reasons that development is probably optimized by strong supportive links between microsystems. He continues to assert that family and environmental support, or the lack thereof, were significant determinants in shaping an individual's ability. The density in this theory as relating to the current study was in the interaction of the school and parental involvement and their influence on the personal factors and consequently the learner’s level of academic resilience.

1.13.1 Perspectives of the Bioecological Systems Theory

According to Masten and Barnes (2018), a person's growth is a result of a plethora of interactions across systems, driven by processes within and between persons and their settings at all levels, from the lowest to the highest. Consequently, development is probabilistic, dynamic, nonlinear, and designed by processes integrating many systems.

In recent years, an individual-centered approach to understanding resilience has given way to a more dynamic understanding of resilience as the quality of interactions between systems and the resources they require to function well (Ungar et al., 2019). The notable alignment of resilience factors observed in human systems, ranging from individuals to communities, suggested the possibility of networked, multisystem protective factors working in concert (Masten et al., 2021). Therefore, this theory provided a model for comprehending the relationship between personal, school, parental involvement factors, and student's level of academic resilience.

Graber et al. (2015) define resilience as a complex interaction of multiple processes spanning from the individual to the structural level. In this view, resilience is theorized as a process rooted in multiple layers; the biosystem, microsystem, mesosystem, exosystem,

macrosystem, and chronosystem. In this theory too, resilience is considered a dynamic product of these ecosystems. Masten (2014) concurs that the lives of children are embedded in families and schools, as well as communities and cultures.

According to Ruiz-Román et al. (2020), resilience is the outcome of a complex network of protective variables and synergies between them, rather than an individual's capacity. These synergies function as knots within the network, producing resilient weavers. As a result, to design an intervention framework that tries to generate resilience among at-risk children, it was crucial to consider the synergies and actions that can be developed from within these six systems.

In the ecological perspective of Howard and Johnson (2010) regarding the development of resilience, they observe:

No man (or child) is an island: we live in nested social systems that interact and influence each other in complex ways. Things that happen in the family, school, and community – all microsystem environments in which the child is physically located – can have a significant impact on resilience development (2010: 336).

Bronfenbrenner's Bioecological model, according to Henderson (2005), provides a comprehensive knowledge of the concerns and challenges that students and families face in today's society. Furthermore, strong supportive linkages between microsystems are expected to enhance development. According to this hypothesis, if the interactions in the direct microsystem break down, the child will be unable to discover other aspects of their environment, such as school, and their personal development would be shaped.

Finally, Masten (2014) confirms that human resilience is distributed throughout numerous interconnected systems. Families are rooted in organizations and communities, and communities in society and cultures. Children, too, are revolution products who are extremely adaptable because of an intrinsic adaptive ability that is partly rooted in the caregiver-child bond. The caregiver's bond with a child provides them with a deep sense of emotional security and the assurance that someone is looking out for them. This study investigated how these systems interact to boost academic resilience.

1.14 Conceptual framework

Conceptually, personal factors of social competence(empathy, problem-solving, cooperation, and communication) autonomy and sense of self (self-efficacy, self-awareness, locus of control) sense of meaning and purpose (goals, motivation, and aspiration); school factors of caring and supportive relationships, meaningful participation and high expectations, and parental involvement factors; academically, physically, socially, emotionally, financially and communicating their expectations to their children were considered related to the academic resilience of students in Turkana County.

This study envisaged that academic resilience (dependent variable) was viewed as being influenced by personal, school, and parental involvement factors (independent variables). Students with high academic resilience were expected to surmount the challenges and move from one level of education to another contrary to those with low academic resilience. The development of academic resilience was linked to the influence exerted by the biosystem, microsystem, mesosystem, exosystem, macrosystem, and chronosystem. A student’s academic resilience was fostered by the characteristics within the students, by the school, and the parent's involvement. Figure 2 depicts a conceptual framework that

summarizes the interactions between the independent and dependent variables. The conceptual framework could therefore be summarized by the representative equation;

$Ar = C + Pe + Sc + Pa + E.$

Where;

Ar= Academic Resilience

C= A constant

Pe= Personal factors

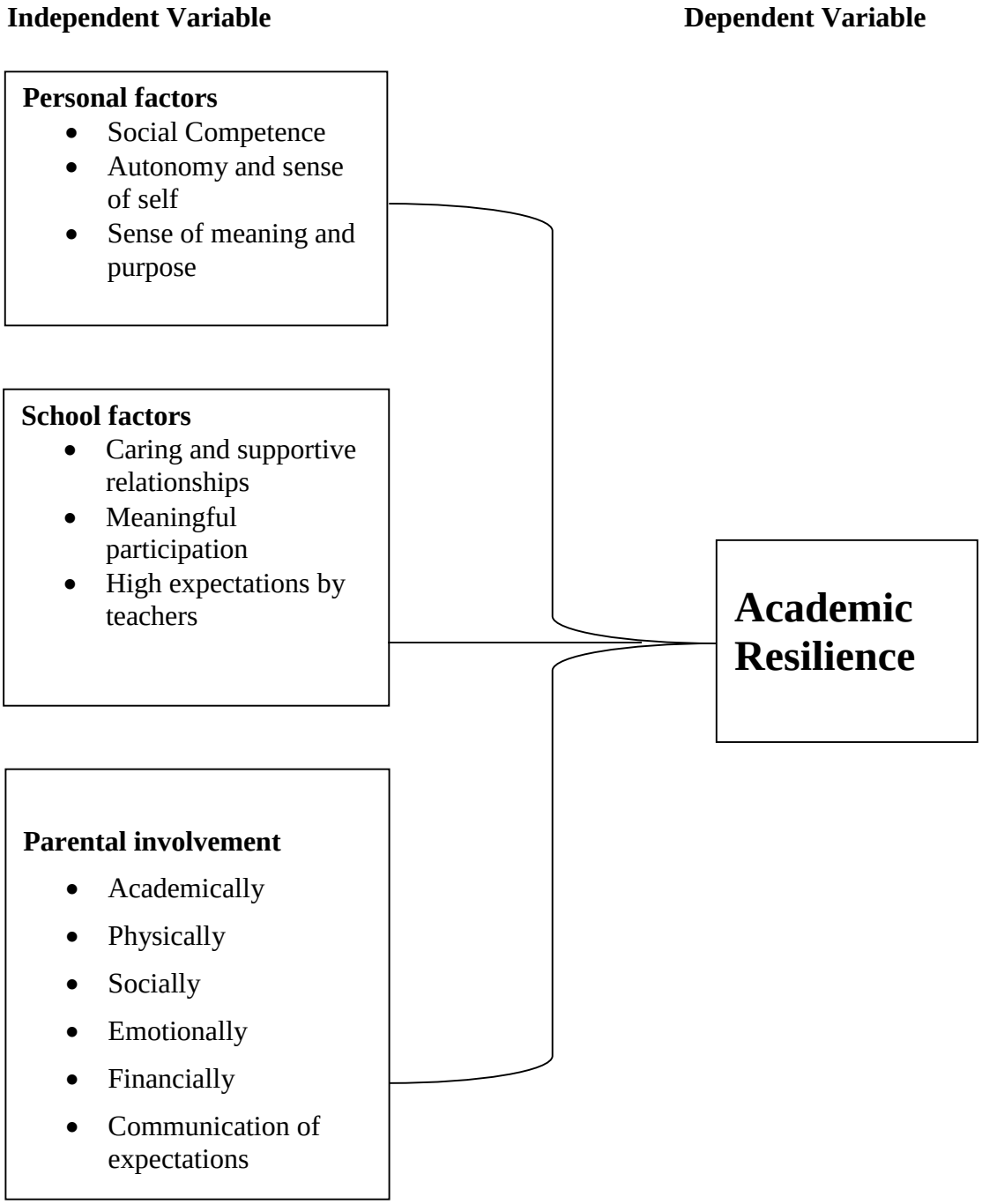
Sc= School factors

Pa= Parental involvement factors

E= Error

Figure 2

Predictors of Academic Resilience



Source. Researcher's (2019)

1.15 Operational definition of key terms

In this study, the following key terms were defined as follows:

Academic Resilience: Refers to the capacity of the secondary school students to persist in the schooling process from one level to another despite the threatening situations in the education process due to marginalization because of the personal, school, and parental involvement factors.

Personal Factors: Refers to students' social competence, autonomy, and sense of self, as well as their sense of meaning and purpose. The ability of a secondary school student to respond to others with empathy, solve problems, relate cooperatively, and communicate effectively is referred to as social competence. On the other hand, autonomy and sense of self is a secondary school student's ability to think and behave independently and exercise control of themselves and their environment through a sense of self-efficacy, self-awareness, and an internal locus of control while the sense of meaning and purpose refers to the ability of the secondary school students to remain focused on their purpose in education and life, set their goals and work towards them, and remain motivated.

Socio-contextual factors: These are factors within the school and from the parents that affect a student's academic resilience. These two factors were defined in the study as follows:

1. **School factors:** Refers to the caring and supportive relationships from teachers and peers, meaningful participation in school, and high expectations by teachers in the school. Caring and supportive relationships were defined as the helpful connections by the teachers and peers in the life of a secondary school student. Meaningful

participation refers to the involvement of the secondary school student in making contributions that influence the school/class activities while high expectations by teachers were defined as the steady communication by the teachers in the school that the student can make it.

2. **Parental involvement:** Refers to bonding and meaningful relationships with the parents that define and shape the growing up of students. These are parental involvement academically physically, socially, emotionally, financially and communication of their expectations to their children. Academic involvement refers to a parent's interest in their child's academic performance, whereas physical involvement refers to a parent attending school meetings and implementing suggestions, as well as spending time with the child at home. Furthermore, social involvement refers to parents taking an interest in their children's social lives and incorporating them into their own. Emotional involvement refers to parents encouraging, reassuring, and expressing genuine concern for their children when necessary. Finally, financial involvement refers to parents providing financial and material support to meet their children's educational needs, whereas communication of expectations refers to parents affirming their children's potential to thrive academically.

Predictor: The independent variables (personal, school, and parental involvement factors) that account for Academic resilience.

2.0 CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This section of the literature review provides a groundwork of knowledge on resilience and academic resilience, as well as identifying gaps and inconsistencies in the current research, consequently placing this study within the context of the existing research hence justifying the need for this study. This chapter contains the chapter overview, the concept of academic resilience, general studies on academic resilience, and a review of related literature concerning the personal factors; social competence (empathy, problem-solving, cooperation, and communication) autonomy, and sense of self (self-efficacy, self-awareness, locus of control) sense of meaning and purpose (goals, motivation, and aspiration) school factors; caring and supportive relationships, meaningful participation, high expectations and finally parental involvement academically, physically, socially, emotionally, financially and communication of their expectations to their children, as predictors of academic resilience.

2.2 Resilience

Following decades of observations, theory, research and practice concerned with the impact of trauma and stress on the function and development of individuals and families, systematic theory and research on human resilience arose around 1970. (Masten, 2001; Masten & Cicchetti, 2016; Nichols, 2013; Walsh, 2016).

The 20th century was marked by numerous global disasters, such as the Great Depression and World War 11, which had a significant impact on families and children. These events motivated academics to learn more about how harsh conditions impairs human adaptability

and what could be done to reduce the risk or aid recovery. This finding sparked a search for particular characteristics in children who flourish in the face of hardship, spawning a discipline of resilience research (Masten, 2018). The construct of resilience has continued to arouse interest within the field of psychology and positive psychopedagogy. Resilience emanated from developmental psychology as a term to explain how children rose above adversities to become well-adjusted individuals. Rutter (1979) and Werner (2000) were notably the earliest researchers in the field of resilience. Werner's perspective was of importance to this study as it attempted to seek to increase or strengthen protective factors that build resilience.

The resilience field is embedded in the larger field of developmental science (Cutuli & Herbers, 2018). Resilience research began with a focus on the negative effects of adversity, and was predominantly theorized in terms of risks for psychopathology, dysfunction, breakdown, and other unpleasant outcomes. There has been a significant movement in resilience research from a deficiency approach to a resilience promotion model targeted at maximizing the strengths and resilience elements of at-risk students and pupils (Covonado-Hijan, 2016). This study took a resilience promoting model in seeking to find out the personal, school and parental involvement factors that promote academic resilience.

Nawaz (2017) defines resilience as a person's ability to deal successfully with failures, persevere, and overcome obstacles and adversities. Masten and Barnes (2018) define resilience as a system's ability to adapt successfully to threats to its function, survival, or future development while Twum-Antwi et al. (2020) define resilience as the ability of one or more systems from a child, family, or school to effectively withstand, overcome, and adapt to adversity, whereas according to the APA(2020), resilience is defined as the process

and result of successfully adapting to difficult or challenging life situations, notably through mental, emotional, and behavioral flexibility and adjustment to external and internal pressures. According to Sippel et al. (2015), resilience is defined as the ability to bend but not break and bounce back from adversity.

Masten (2014), a developmental psychologist, is known for her definition of resilience that has evolved to take a more systemic approach. She argues that a dynamic system's resilience can be broadly defined as its ability to successfully adapt to disturbances that jeopardize its function, viability, or development. The notion can be applied to a variety of interconnected systems, both living and nonliving, which include microorganisms, children, families, security systems, economies, forests, and the earth's climate. The study of human psychology has demonstrated that this pattern of adaptation can manifest in a variety of ways, from maintaining one's behavior in the face of stress to pressuring systems to change in ways that lead to completely new regimes of behavior to completely avoid a stressor.

However, in the face of significant adversity of any kind, a contemporary definition of resilience is an individual's capacity to navigate their way to the psychological, social, cultural, and physical assets that sustain their well-being, as well as their ability to negotiate for these resources to be provided and experienced in culturally significant ways, individually and collectively (Ungar, 2011, p. 10) as cited in Twum-Antwi et al (2020). Kong (2020) explains resilience as an inferential concept demonstrated under two conditions: severe risk exposure and evidence of positive adaptation.

These definitions all center on how various systems or components of systems work, but they also have a few things in common. First, resilience can only be found in situations where interdependent systems have experienced an unusual and stressful perturbation. Destabilization that threatens the system's ability to continue operating is the end result. Second, all resilient systems engage in some sort of process that gives them the chance to endure, resist, bounce back, adapt, or change. However, the appearance of these contextually specific processes is always a reflection of the stressors applied to a system, the resources available to safeguard the system's functionality, and the desired results that are sought (Ungar 2021). In this sense, resilience is contextually specific.

Recognizing the various levels of power each system (or component of a system) possesses and its ability to influence the individual or collective well-being of a system (or systems) as a whole, the third quality of resilience reflects this need for sensitivity to the local context (Ungar, 2016). As different components of systems compete for the resources they require to deal with internal and external stressors, this power expression is always a matter of negotiation that results in trade-offs. Only when a system functions in ways that are valued positively by its constituent parts or co-occurring systems is it considered to have resilience. In practice, this means that from the perspective of those who profit from these patterns of adaptation, a family that embraces criminal behavior as a means of coping with social marginalization or an economy that resists modernization to protect the livelihoods of a select few people may both be described as resilient (Ungar, 2016).

Resilience scholars attribute resilience among children and teens to environmental and normative elements that support the unhealthy development of a group under study, in addition to thinking of resilience as a process rather than a static entity (Masten &

Obradovic, 2006; Werner & Smith, 1982). Masten and Obradovic (2006) concur that individual behaviour in connection to the environmental situations they are exposed to is inferred, deduced, and understood as resilience. It can be deduced from an individual's behavior and day-to-day actions as a way of dealing with difficult situations. This study identified the personal, school, and parental involvement factors that predict academic resilience among secondary school students in Turkana County.

Children are capable of mitigating the consequences of risk factors in their environment and developing into competent and well-adjusted adults, according to research on resilience (Masten, 2001; Ungar et al., 2008; Werner & Smith, 1982). Rutter (2013) expanded on this concept by stating that, depending on the context, historical risks, and current conditions, variables impacting resilience can be risk or protective. He cited the example of adoption as a danger, but if the child is in an abusive household and has the opportunity to go to a loving, stable home, then adoption could be a protective factor.

As aforementioned, Turkana County has birthed persons in key positions both in academia and on social fronts in the nation and beyond. Some notable personalities are Dr. Ekuru Aukot, Hon. John Munyes who is the Cabinet Secretary in the Ministry of Petroleum and Mining, Ms. Ajuma Nasenyana an international model born and raised in Turkana among others. The fact that such persons were able to overcome the challenges in the environment they grew up in which was brought about by low literacy levels, access to education, unemployment levels, erratic climatic conditions, infrastructure and poverty index, health facilities, food insecurity, access to water and electricity, insecurity, land productivity, and historical injustices among others is an indication of resilience at play.

According to Russell (2015), resilience could be the most important virtue in human existence. Even so, it has been simply ignored or poorly comprehended. According to him, many of the interpretations of "resilience" in the literature are either extremely specific or overly general. For instance, one common interpretation of resilience is that it refers to the ability to overcome challenges and bounce back to a previous state. Russell calls our attention to the fact that resilience is not always about recovering completely or going back to how things were before adversity. Some people respond to adversity by going beyond their pre-adversity state, while others do so by adapting in different, novel ways (like a hockey player rendered paraplegic by an accident who demonstrates resilience by taking up another sport).

Russell asserts that resilience is a quality exhibited in the capacity to successfully overcome significant adversity. Adversity, or when events or circumstances conspire against a person, is thus a necessary component of resilience. Adversity is a setback, failure, unfortunate event, trauma, or disappointment that makes achieving a goal more challenging than anticipated. But the ability to adapt is the main problem. In his discussion of "capacity" for resilience, Russell brings up this idea of a positive interpretation. We are able to see beyond who and what we are as well as the constraints of the environment in which we find ourselves thanks to this ability. The ability to be resilient requires the use of our imagination so that we can envision possibilities, harbor hopes, and reinvent ourselves in the face of challenges.

In his theory of resilience, protective factors at the individual and familial levels, as well as forces outside the family, all influence resilience, according to Garmezy (1987). In terms of family, Garmezy noticed that, despite poverty or marital disagreement, children's

resilience levels were determined by the presence of a caring adult in the absence of responding parents, such as a grandparent, or parental interest in their children's well-being.

Yoon et al. (2020), based on a study of practitioners' definitions of maltreated children's resilience, contend that for abused children to "bounce back" and recover from trauma or abuse, daily activities, seeking help, and mentally moving forward are necessary. Yoon and colleagues acknowledge that because the study only included voluntarily participating practitioners from two agencies in one county in a Midwestern state, the findings cannot be generalized to the larger population of practitioners. Additionally, the majority of participants were Caucasian women, and the sample only included a small number of professions, such as therapists, clinical supervisors, and nurses. Last but not least, the study did not address how interactions with patients were impacted by the definitions provided by the practitioners. It was interesting to find out resilience in the context of marginalization.

In the research literature, psychologists have repeatedly emphasized resilience as a process. Ungar (2021) summarizes five processes associated with resilience recognized by researchers in this field: persistence, resistance, recovery, adaptation, and transformation. Persistence is a system's ploddingly regular behavior, which is only possible if outside threats are dealt with by other co-existing systems, that insulate the focal system enough to allow it to continue unchanged. While resistance appears to be the same as persistence, the focal system maintains its behavioral regime by actively defying outside threats. Most systems will demonstrate a pattern of resistance before recovering, adapting, or reshaping. Communities facing the loss of a large employer, for example, may seek government intervention to subsidize an industry that would otherwise struggle.

Recovery, on the other hand, denotes that a system's defenses, whether internal or external, were insufficient to withstand perturbation, and the system's ability to cope was temporarily jeopardized. Furthermore, it is the return of a system to an earlier level of functioning, despite the fact that systems are changed by their experiences of insult and recovery. Finally, adaptation is the process by which a system changes in order to adjust itself to stress. A resilient system that transforms under stress must find a new behavioral regime that allows it to continue its previous functions (or perform new functions) by utilizing new strategies and resources, as per the developmental systems theory (Masten & Cicchetti, 2016).

Masten and Cicchetti (2016) developed eight principles for understanding resilience from a developmental systems perspective, which are: resilience develops and changes because all systems accounting for it are dynamic; thus, many interacting systems shape the development of resilience in a living system; living systems are self-organizing with higher-order emergent abilities that can be unexpected or difficult to predict based on knowledge from lower levels of analysis; and resilience develops and changes because all systems accounting for it are self-organizing.; So, just as a person grows and changes, human resilience does as well. The ability to adapt to difficult circumstances which is the essence of resilience depends on many interconnected systems.

The fifth principle states that a person's capacity to adapt can be designed and implemented at various levels, that resilience stretches beyond the individual organism through interactions and relationships to other systems, and that a person's adaptation to major disturbances can take a variety of forms, including returning to equilibrium through self-stabilizing or external co-regulating systems, breaking down to lower levels of function,

death, or transformation. Finally, the legacy of biological and cultural evolution through the evolution of numerous systems in the natural and built worlds, as well as individual development, shapes human resilience.

These principles led to the conclusion that a child's resilience at any given time depends on other systems, and in particular, on the resilience of other systems both inside and outside of the child. These proximal systems include the family, school, peers, community, and culture, among others. Besides that, these principles imply that resilience cannot be described by a single characteristic. Resilience is not a trait, even though many personal characteristics can influence it.

Masten (2021) further addresses how the developmental timing of adversity affects developmental stages differently, and how age and concomitant developmental changes modify the chance of different experiences as well as how experiences are interpreted. She claims that older children and adolescents have more touch with the outside world and are more aware of what is going on. Young children, for example, are easily reassured by attachment figures and safeguarded by having a limited understanding of the extent of disasters and their long-term consequences. Adolescents, on the other hand, maybe acutely aware of the importance of catastrophic damage or losses to their lives now and in the future, and hence more susceptible to disappointment or despair than an infant (Masten, 2021).

Similarly, Willms and Virji-Babul (2020) distinguish adolescence and other developmental stages by referring to adolescence as a unique developmental period characterized by novelty-seeking and adventurous behaviour coupled with increased sensitivity to social and

emotional contexts, the physiological changes triggered by puberty are dramatic, unlike those of either childhood or adulthood.

Given these developmental challenges prevalent in this stage, for an adolescent to push through education in adverse conditions such as those of Turkana County, is a manifestation of academic resilience. According to Masten and Barnes (2018), the presence of resilience can be inferred from its manifestations in adaptive behaviour or results. Likewise, the teachers were of importance in this study because the researcher believed that in the process of learning, the teachers were in more contact with the learners and could understand their background and perspectives of life that influence their academic resilience.

2.3 Concept of Academic Resilience

Over the years, resilience research has gained traction and has attracted the attention of both academics and policymakers. In the United Kingdom, there is a growing need for resilience-building programs to be included in the national curriculum (Schofield & Bates, 2016) and globally (Hart & Heaver, 2015).

According to Cassidy (2016), academic resilience began as a context-specific type of psychological resilience to provide greater assessment and prediction of specificity to resilience research. This construct denotes a higher possibility of academic accomplishment in the face of hardship. Academic resilience is important because a student with a high level of academic resilience will maintain a high level of motivational achievement and performance even when stressful events and conditions occur, putting them at risk of poor performance.

Before the emergence of the term academic resilience in the 1990s, the term invulnerability was substituted for the term resilience to denote the successful adaptation despite adversity. Martin and Marsh (2006) looked at the academic environment and the obstacles, setbacks, and pressures that come with it, arguing for a better knowledge of academic adversities and how to deal with them, and coined the term "academic resilience." Even though students face some amount of poor performance, hardship, or challenge at school, they pointed out that there hasn't been a lot of research done on academic resilience.

Sattler and Gershoff (2019) distinguish resilient and nonresilient pupils by combining two unique characteristics: first, those who perform better than peers who are facing comparable risks (low threshold resilience), and second, those who do as well as peers who are not facing risk (high-threshold resilience), these two dimensions of resilience characteristics were considered in this study as we had students doing better than their peers who faced the same risks and those who do better than those who face no risk at all as elucidated in the success stories from Turkana County, of individuals who emerged successful despite the hardship, something that some who had never faced such adverse conditions had never experienced. Furthermore, self-confidence, risk-taking, optimism, willingness to learn from mistakes, knowledge of what can be controlled and what cannot, a strong network of trusted people, and the development of solid relationships are seven characteristics of academically resilient students, according to Harrington (2013).

Assumptions made about resilience presuppose that students who were exposed to more protective factors fare much better than those exposed to risk factors. However, some students despite being exposed to adverse conditions continue to push through education from one grade to another surmounting the challenges at each level. These learners could

be referred to as academically resilient. They make use of the personal factors and socio-contextual factors to bounce back from setbacks and difficult situations and continue to push on in education.

A recent highlight by the media on the challenges faced by students in Turkana County showed students from Kerio Boys and Nakurio Girls Secondary schools walking for five kilometres every evening in such for water for use in school. The students complained of fatigue, poor concentration, and failure to pass examinations caused by this predicament (Citizen TV News, 2021). On the other hand, the teachers noted that this challenge had affected learning as a good number of students dropped out of school unable to cope. Such occurrences form the basis of this study and prompted the big query, what motivates those students who remain behind and persist in school despite challenges?

Pauline Lokidor's story, a girl born and raised in Turkana County as told by the World Vision International (2021) was an insight into the obscure nature of resilience and increased the necessity of research into resilience. Pauline who is currently in a Ph.D. research program in flooding and erosion control in informal settlements using Nature-Based Solutions at Coventry University, narrated her life in Turkana County as that of pure resilience and hard work.

Pauline described the life of a Turkana girl as training to be a wife, a path she was determined never to take. She described her upbringing as characterized by multi-tasking, fetching water 4-5kilometres away from the village at least 2-3 times a day, not to mention herding cattle while still attending school. Despite having a turbulent childhood, she termed herself as having learned hard but useful lessons, and what kept her going all the while

were; the need to prove herself daily, encouragement from her mother, the food she got in school, the desire to secure Joints Admission Board opportunity to the university hence ease her parents of financial struggles, the friends in school who shared with her some basics and eventually the child sponsorship that she got from World Vision International (World Vision International,2021). This narration pointed to the presence of factors that bolster academic resilience among students growing up in adverse conditions which this study investigated.

Developing the ability to be resilient to deal with life's challenges is an important part of children's social and emotional development. Statistics regarding the commencement of depression and attempted suicide in young people, according to McInerney and Kennedy (2014), point to dramatically rising rates around the world, raising the topic of resilience. They claim that in today's fast-changing world, many children and teenagers grow alienated as a result of their powerlessness in dealing with their difficulties. Truancy, reliance on leakages, students attacking teachers, involvement in dangerous sexual behaviour such as group sex, dropping out of school, lack of respect for one another and adults, substance abuse, violence, self-harm, or suicide were all examples of helplessness. All these characteristics were evident among pupils and students in Kenya from primary schools to university levels.

However, the definitive causal factor of such characteristics has resulted in a blame game scenario among the government, parents, teachers, students, religious institutions, and the community, all of whom are key stakeholders in education and determine educational outcomes. One case in point is in Kenya, as the second term of the 2018 academic year unfolded, schools began to experience strikes and unruly behaviour. The government as

reported by the Education Principal Secretary Dr.Belio Kipsang first defended itself by blaming the unrest on the student unpreparedness in the then approaching national examinations and a fear of the tight examination rules that would see that no exam cheating took place (Ktn News, 2018).

At the peak of the continued arrests, another address to the nation on the state of the schools in Kenya concerning unrest barely a week apart from the first address, the Education Principal Secretary, Dr. Belio Kipsang noted unequivocally that the responsibility laid solely on the teachers (Walloga, 2018). The role of the teachers in schools indeed is that of *loco parentis*. Parents, on the other hand, should take the lead in educating their children, while teachers were only providing professional services to these students. Discipline efforts could be maximized when parents are seen as friends and co-partners in their children's education, keeping in mind that parents do not have all of the required parenting skills to cope with difficult children. As such, this research sought to clarify the aspersions as to the factors that may be responsible for the nonresilient behaviours among learners. Is it parents, the school, or the student themselves that are responsible for academic resilience among students?

Regardless, the bottom line is that it was critical to educate children in a way that fostered resilience and the ability to deal with life's challenges to combat such undesirable and unproductive behaviors. One such education can be provided in the most basic unit of society and that is the family. Based on the *Report of the Task Force on Student Discipline and Unrest in Secondary Schools of 2001* (Wangai Report of 2001) and *The Report of the Parliamentary Committee on Education of 2008* on *students discipline and unrest in*

secondary schools (Koech Report of 2008), parents' largely abdicated role came out strongly as a factor that led to students engaging in acts of violence.

A myriad of leaders in the country joined the debate and unequivocally blamed the irresilient behaviours on poor upbringing and that the parents had abdicated their roles and burden to teachers (Astariko, 2018). They asserted that children with proper upbringing had no reason to be unruly because they had a better understanding of situations. In addition, in the eyes of the teachers, parents had abdicated their responsibilities at the school gate and left their children at the school.

Indiscipline and destructiveness among students are perceived as academic irresilience in Kenya, as it is an indication of a lack of sense of meaning and purpose as well as a lack of autonomy and sense of self. Students have been blamed for indiscipline by public policy analysts and members of the public. They claim that indiscipline in schools had grown as a result of lackadaisical parenting and a ban on teachers using corporal punishment. This in the Kenyan context is a manifestation of academic irresilience.

The salient question that Kenyans should be asking themselves is that, who should justly carry the burden in the expressions of irresilent behaviours in schools? The manifestation of disharmony in the ecosystem as evidenced by the shake-up in the biosystem, microsystem, mesosystem, and exosystem in this blame game is a situation worth inquiry, which this study addressed. In addition, the macrosystem and chronosystems also formed part of this theoretical inquiry. There has been a lot of assumptions as to what could be going on in the Kenyan schools and the reasons for academic irresilience. In this study, academic resilience was conceptualized as the capacity of students to persist in the

schooling process from one level to another despite threatening situations in the education process because of personal, school, and parental involvement factors.

2.4 Studies on Academic Resilience

Cassidy (2015) asserts that academic resilience elaborates the resilience construct and reflects an improved likelihood of educational success despite adversity. Some students are endowed with intelligence and despite the most difficult of circumstances they can thrive. To some, the school setup becomes a haven. Students who have a stable home life, educated parents, good housing among other protective factors have a higher chance of academic attainment. There is evidence that academically resilient students are intrinsically motivated, optimistic, self-regulated, and adaptable. They demonstrate agency in terms of being solution-oriented, reciprocity, determination, assertiveness, and good communication skills (Zolkoski & Bullock, 2012).

Ella et al. (2015) proposed that a suitable environment was required to improve a child's academic performance. A stimulating family surrounding could help a potential mediocre develop into an intellectual giant, whereas a constraining environment could make a genius mediocre. Taking care of children and providing for their needs, particularly educational needs, are critical factors in determining a child's academic performance. Contrary to the opinion that learning and reading begin in school, the first foundation of the child begins at home.

Individual assets and resources, as well as their life and environment, aid in the ability to adapt in the face of stress and hardship (American Psychological Association, 2017). Morrison et al. (2006) assert that academic resilience promotes long-term associations,

school attachment, and an all-inclusive support across assets at the person, family, peer, classroom, and school levels. Crawford (2006) found that the blend of the identified factors did not explain a substantial amount of variance in the scores of students working in a study involving 146 sixths to eleventh-grade learners in the United States on risk and protective factors connected to resilience. Individual, the family, and outward risk variables, as well as general resilience, were insignificant in a multiple regression analysis.

Gachigi et al. (2018) investigated whether academic resilience affects secondary school students' mathematics achievement in Nairobi County, Kenya. The study's goal was to determine the extent to which academic resilience forecasts mathematics achievement, as well as the relative predictive effects of academic resilience on mathematics achievement among children in various school types. The results of the study revealed that academic resilience was a significant predictor of academic achievement. The reviewed study focussed on academic resilience and academic achievement while this study focussed on the personal, school and parental involvement factors that predict academic resilience.

Mwangi et al. (2015) discovered a positive and significant relationship between academic resilience and academic performance, as well as those internal and external protective variables strongly and significantly, predict academic resilience among secondary school students in Kiambu County while the study by Gachigi et al. (2018) that was conducted among secondary school students in Nairobi County, Kenya concurred that academic resilience is a significant predictor of academic performance.

This justified that resilience is an important construct worthy of research. Therefore, factors that determine resilience ought to be looked at in their entirety to form an informed basis

for knowing what to embark on when helping learners build their resilience and eventually experience successful academic outcomes. In Kenya, successes or failures in the future life of students depend on their performance in the Kenya National Examinations. Today's parents, pupils, and teachers need support to build the resilience necessary for the children to succeed academically. These dimensions of resilience were answered through this research.

Ismael-Lennon (2010) conducted a qualitative study to determine the interaction between individual qualities and the circumstances that enable Hispanic-American male inner-city at-risk students to develop academic resilience. The ideal home environment included the existence of at least one caring parent who prioritized education. Staff who functioned as mentors and had high expectations for the students were among the school's qualities, which were combined with a strong prominence on athletics and extra-curricular activities. Determination, leadership, dependability, charity, and a sense of humour were among the individual attributes. Even though the community was underprivileged, some organizations provided extra-curricular activities and volunteering opportunities for some students to participate. The study concluded that the interface between home, school, and environment helps to unfold academically resilient students. The reviewed study was entirely qualitative while the current study used a mixed-methods approach.

The studies on resilience continue to grow momentum as inquiries on the factors that promote or hinder academic achievement continue to intensify. The role of education in maintaining sustainable development has continued to gain push, which is a shift from the old perspective of education for economic growth. United Nations Educational, Scientific and Cultural Organization [UNESCO] (2015) identified education's global goal as

empowering learners to make informed decisions and take responsible actions for environmental integrity, economic viability, and just society for current and future generations. This kind of education can only be found in a school setting if only a student can be patient and endure the academic warfare which calls for academic resilience.

The Ministry of Education Science and Technology is mandated to provide, promote and coordinate the delivery of quality education in Kenya (Ministry of Education Science and Technology [MOEST], 2014). It's also worth emphasizing that Kenya's education system plays a crucial role in achieving Vision 2030's goals concerning the attainment of socio-economic and political development of the country. However, there is widespread agreement that the nation's declining educational standards are a major issue that is jeopardizing the nation's future labour resources. Many educationists have attempted to find out the causes of the downward trend in the academic achievement of secondary school students. This research sought to leverage academic resilience as an asset that will boost the quality of education in Kenya.

Contemporary society worldwide has realized immense challenges that have come as a result of the changes across all the ecological systems of the society. The study by Mwangi et al. (2015) on the factors that predict academic resilience among Kiambu County's public secondary school students highlighted that the cost of academic underachievement was growing by the day; stopping schooling, having a mediocre job potential, having low self-esteem, jeopardizing students' futures, and having personal as well as poor social and economic outcomes among them. In addition, increasing global occurrences of ugly incidences relating to student intolerance of school, declining academic performance, and discipline problems have raised concern about the resilience levels of today's students.

These incidences have had a great influence on the field of education as it has on other sectors. These transitions have intensified the need for teachers, parents, and students to devise a coping technique such as resilience to assist pupils in navigating these challenging periods. This research sought to fill these gaps.

2.5 Relationship between Personal Factors and Academic Resilience

Personal factors consist of elements in the biosystem that determine the child's unique traits and these traits were influenced by the microsystem which together influenced the development of a child's resilience. According to Graber et al. (2015), an individual's dispositional features invariably aided them in tackling seemingly insurmountable issues and coping with everyday pressures that erode well-being over time with imperceptible sluggishness. Motti-Stefanidi (2015) continued by stating that resources for youth adaptation can emerge from both their social context and their personal characteristics.

Ungar et al. (2008) described a rich structure of the factors that contribute to resilience, including self-efficacy, the ability to survive with uncertainty, perceived social support, parental involvement, satisfying the needs of the child, social competence, and meaningful relationships with others, perceptions of equality and social justice and access to school education, cultural/spiritual identification, link to religious organizations, and more. According to Smith and Schonert-Reichl (2013), there are numerous interrelated characteristics at work, including those of the individual, the family, and the community or environment, all of which may foster resilience. Personal factors include traits that support autonomy, empathy, and the ability to ask for and accept help from others, as well as intellectual elements like curiosity, exploration, and problem-solving abilities. Examples of these traits include positive self-esteem, a sense of self-efficacy or mastery, and a sense

of security. Individual factors typically have to do with a person's capacity to act independently and solve problems using their own resources.

The personal factors that were examined in this current study are; social competence (empathy, problem-solving, cooperation, and communication), autonomy and sense of self (self-efficacy, self-awareness, locus of control), sense of meaning and purpose (goals, motivation, and aspiration) which were considered internal student assets. Chung (2008) reiterated that individual characteristics may help to reintegrate resilience-building disruptions emanating from their school or home.

In Indonesia, Rukmana and Ismiradewi (2022) using quantitative technique investigated self-efficacy and academic resilience among a sample of 54 new students in the Department of Psychology, University of Ahmad Dahlan Yogyakarta Force 2020 during the Covid-19 era. Using cluster random sampling and regression analysis, the results of the study found that there is a significant positive relationship between self-efficacy and academic resilience ($r=0.686$, $P<0.01$). However, while the reviewed study used a quantitative technique, this study utilized a mixed-methods approach. Further, the reviewed study consisted of a sample of 54 university students while the current study used a sample of 378 high school students. The two samples differ in their size and also the target group, it was worth finding out if there would be any difference among high school students in Kenya.

Using a quantitative technique, Mwangi et al. (2015) conducted a correlational analysis among 390 form three students in Kiambu County to investigate the relationship between internal protective factors and academic resilience. The findings of the study revealed that

among social competence, autonomy and sense of self, sense of meaning and purpose, whereas all the three had a significant relationship with academic resilience, the strongest relationship was discovered between a sense of meaning and purpose and academic resilience (r (388) =.93, p.01), followed by autonomy and sense of self (r (388) =.78, p.01) and finally social competence and academic resilience (r) (388) =.34 (p.01). While this reviewed study was purely quantitative, the current study used a mixed-methods approach. Again, the study having been conducted in Kiambu, a county not categorized as marginalized cannot be generalized to Turkana County.

Erberber et al. (2015) undertook a study to examine academic resilience cross-nationally among students from low socioeconomic backgrounds using data from 2011 eighth-grade TIMSS (Trends in International Mathematics and Science Study), a large-scale, cross-national assessment of fourth- and eighth-grade students' mathematics and science achievement as well as information from the student and school questionnaires from 28 educational systems across the world, to categorize the subset of academically resilient students in each educational system and to investigate influences that may lead to academic resilience. The findings of the study revealed that of the 28 educational systems, students from 20 systems demonstrated that high educational aspirations appear to be the strongest and most consistent predictor of academic resilience. However, while the reviewed study used a quantitative approach, the current study used a mixed-methods approach in a single location to find out if the same would be true of secondary school students in Turkana County in the Kenyan context.

Mullin (2019) emphasizes autonomy, or the ability to direct one's actions in pursuit of goals that are personally meaningful to one, as a personal resource that boosts resilience in

children. Turner et al. (2017) determined the resilience of students pursuing architecture degrees. The goal of the study was to define the characteristics that lead to different levels of student resilience and evaluate the association between resilience and wellbeing in 410 undergraduate students in Melbourne, Australia, using purposive sampling. Out of the six components of resilience, students scored highest on forming networks, remaining safe, cooperating, and living genuinely, and lowest on maintaining perspective. Whereas the reviewed study focused on university students, the current study focused on high school students. In addition, a study done in Australia cannot be generalized to the African setup.

Victor-Aigboidion et al. (2020) examined the predictive power of academic self-efficacy on academic resilience in a group of 1637 males and 683 female junior secondary school students in a Nigerian state. The samples were drawn through multi-stage sampling techniques, from 10 public coeducational secondary schools in the area of study. Data was collected using the Academic Risk and Resilience scale (ARRS) (Martin, 2013) and General Academic Self-efficacy Scale (GASES), and Pearson correlation statistics performed. The findings revealed that self-efficacy has a significant positive predictive power on resilience. This is consistent with Martin and Marsh's (2006) results, which found self-efficacy to be a strong predictor of academic resilience in 402 Australian high school students. While the reviewed study engaged a sample of 1320 students which is huge and may result in researcher fatigue, consequently affecting the validity of the findings, the current study was done on a sample of 378 students. In addition, the reviewed study was purely qualitative in nature while the current study used a mixed-methods approach.

Cruz (2018) used a correctional analysis and convenience sampling technique in Colorado to examine the adolescent self-reported academic self-efficacy and maternal parental

involvement associated with resilience while moderating for the effects of sex and race. 54 teenagers, aged 11 to 18, who attended various public middle and high schools were participants. 34 of these participants did not receive special education services, while 20 of them did. The findings showed that while maternal parental involvement factors did not significantly predict resilience, adolescent perceptions of academic self-efficacy did significantly predict protective factors related to resilience. In light of these findings, suggestions are made for boosting the effectiveness of school-based social emotional programming and services for young people at risk.

In particular, developing academic self-efficacy skills may be more advantageous for encouraging protective factors linked to resilience in the adolescent age group. The current study was carried out in Kenya, a nation with a different educational system from America, whereas the reviewed study was carried out in Colorado, United States. The reviewed study used only qualitative methods, whereas the current study used a mixed-methods approach to look for any significant differences.

Using a mixed methods approach and a sample of 575 form four students from 19 secondary schools in Malaysia, Kasim and Ariffin (2019) investigated the protective and internal factors that can improve the academic resilience of children of divorced parents. The t-test results revealed no significant differences by parent's race, gender, or marital status for any of the three study-relevant variables. A strong positive correlation between protective factors, inner grit, and resilience was revealed by a Pearson correlation analysis.

Protective factors and internal strength variables were found to be the predictors of resilience by a multiple regression analysis, with protective factors being a more significant

predictor than internal strength. According to the study's findings, protective factors like relationships, high expectations, and significant involvement are the aspects that can boost a student's resilience if their parents are divorced. If communication tools like phones and the internet are used to show concern, communicate expectations, and form close bonds with the children, distance is not a barrier for parents who do not live with them. . While the current study did not place a special emphasis on any type of family, the reviewed study focused only on children of divorced parents. Additionally, the reviewed study was conducted in Malaysia, which offers a frame of reference different from Kenya which may lead to different results.

Rajan et al. (2017) investigated the impact of locus of control, academic involvement, and self-efficacy on academic resilience among high school students in Maraba, Kerala, India. There were 155 high school pupils in the sample, with 81 females and 74 males. The study employed a correlation analysis that revealed that there is a significant correlation between academic resilience and self-efficacy. Another quantitative study by Rachmawati et al. (2021) on the relationship between self-efficacy and academic resilience among 315, 7th-grade students in Indonesia using multiple regression revealed that was a strong relationship between self-efficacy and academic resilience. The reviewed studies were conducted in the Asian context and cannot be generalized to the African context. In addition, both studies were purely quantitative, while the current study used a mixed-methods approach.

Using a quantitative study, Liu and Huang (2021) studied the effects of basic psychological requirements on learners' academic resilience. Autonomy, competence, and relatedness were the constructs studied. This study was conducted among 455 grade 10 students whose

average age was 15.34 in Western China using a cluster sampling method. The results of the study revealed that students' autonomy, competence, and relatedness were highly correlated with the academic resilience of learners. The reviewed study was different from the current study as it was purely quantitative and was conducted in China. A mixed-methods approach was used in the current study to provide an in-depth understanding of the factors promoting academic resilience. In addition, the continental differences in the location of the study made this study a necessity for comprehending academic resilience in Africa.

In Victoria, Australia, Kronborg et al. (2017) undertook a multi-layered longitudinal research study that came out of a special relationship between a university and a prestigious secondary school. The goal of this quantitative study was to see how internal and external loci of control influenced academic resilience in high-aptitude and high-attaining teenagers in a high-capability learning environment. At the school, 125 gifted Year 10 students took a survey on several motivational factors, such as locus of control and resilience, at two different times. They were divided into binary groups based on their locus of control focus (internal or external), and their resilience profiles were then associated using a multivariate analysis of variance. Students with a more internally based locus of influence were more robust at two-time points, according to the findings. While the reviewed study was conducted on a small sample size of N=125 which affects its statistical power, the current study was done among 378 secondary school students. In addition, the above study was carried out in Australia, and therefore the results cannot be generalized to the African context.

Cheung et al. (2021) evaluated traits that fostered academic resilience among 50 young people from China who had successfully transferred from foster care during their first year of college, using a qualitative research technique and purposive sampling to identify the participants. External factors like social reinforcement from others in one's ecosystem, as well as internal factors like self-efficacy and self-awareness, boundary setting, and initiative, were found to contribute to these students' resilience. The reviewed study was qualitative in nature while the present study used a mixed-methods approach to satisfactorily explain the concept of resilience.

He (2014) analyzed the relationship between academic resilience and student success and tested a model for academic resilience in mathematics. The study used a longitudinal strategy with 2398 ninth-graders from Hispanics, Africans, and white Americans from the lowest socioeconomic groups. The data was gathered using the academic resilience questionnaire. The goal of the study was to see if there was a connection between students' efficacy, coping skills, and educational goals. Academic resilience, as expressed by the three attributes, was found to substantially explain variations in 39 students' mathematics success with self-efficacy and coping skills, but not educational expectations, according to structural equation modelling. The reviewed study explored a longitudinal method while the current study used the cross-sectional method. The reviewed study was quantitative in nature while the current study used both qualitative and quantitative techniques.

Ni et al. (2020) conducted a study on primary pupils' perceptions of classroom resilience-promoting variables in China and the United States. A total of 445 third to fifth-grade Chinese pupils and 325 third to fifth-grade American students were included in the study. The findings revealed that the classroom resilience promoting factors in these two groups

were teacher-student relationships, peer friendships, and academic self-efficacy. In the reviewed study, the locations of the study differ significantly from Africa, and therefore the findings may not be generalized to the African set-up.

Anagnostaki et al. (2016) investigated whether and how immigrant youth's resources account for individual gaps in academic resilience using a cross-sectional sample. The sample included 300 middle school students, 73 Albanians, and 227 Greeks (all of whom were enrolled in Greek urban middle schools and had an average age of 13.9 years). Two personal academic resilience resources included were the locus of control and self-efficacy beliefs. For both immigrant and non-immigrant youth, both of these characteristics predicted greater academic resilience. The findings show a strong correlation between a young person's agency and academic resilience. Independent of immigrant or social status, students with higher self-efficacy beliefs and internal locus of control appeared to have higher academic resilience. This study was done in Europe, while the current study was conducted in Africa, the contexts are different hence the results cannot be generalized to Kenya.

Goals provide pupils with a sense of direction and purpose because they teach them to think about what is important and necessary in their endeavours. Werner and Smith (1992) claim that one's sense of purpose is the most significant asset that can aid young people in achieving healthy outcomes despite life's adversities. Setting objectives, achieving them, and achieving educational goals are all tied to assets described as belonging to a feeling of purpose, which is linked to student academic success (Anderman et al., 2002). Findings of the study showed that meaning in life had a weak insignificant relationship with academic resilience($r = .09$, $p > .05$). This study was conducted in America whose context differs

from Kenya, hence the need to find out if there would be any notable differences in the Kenyan Context.

Malindi (2018) conducted research in a South African school to investigate adolescent mothers' self-perceived personal and socio-ecological resilience resources that helped them survive early parenting and schooling. Participants were ten young mothers from Gauteng Province in South Africa, ranging in age from 16 to 19, and in grades 10 to 12. Four young mothers were interviewed in semi-structured interviews, while six were interviewed in a focus group. The interviews concentrated on personal and socio-ecological resilience resources that enabled their resilience as early mothers and learners. An optimistic attitude toward life, a sense of humour, persistence, hardiness, commitment, religion, and prayerfulness were identified as personal resilience resources of adolescent mothers through thematic analysis of the results. The teen mothers self-reported social capital from birth parents, partners, peers, tutors, and clerics regarding social-ecological resilience resources. While the above study investigated personal factors promoting resilience in teenage mothers only, the current study explored personal factors promoting academic resilience among secondary school students.

Using quantitative research and a survey approach, Sari and Siswandari (2022) investigated the effect of individual internal protective factors on students' academic resilience. Using the proportional random sampling technique, this study was conducted on students in the 12th grade of high schools in the provinces of DKI Jakarta, Central Java, and the Special Region of Yogyakarta. Multiple regression analysis was used in data analysis. The findings demonstrated that 64.8% of an individual's internal protective factors influences a student's academic resilience, which included perceptions about online learning, digital literacy, and

self-direct learning. While the reviewed study incorporated the personal factors of perceptions ,digital literacy and self-directed learning, this study demonstrated a knowledge gap by examining social competence, autonomy and sense of self,sense of meaning and purpose on academic resilience.

Jowkar et al. (2014) investigated educational resilience and the impact of achievement goal orientations using a sample of 307 girls and 297 boys from Shiraz high schools in Iran. The students completed the Youth Development Module Scale (RYDM) and the Achievement Goals Questionnaire. Pearson product-moment correlation was used to analyse the data. The prediction of academic resilience by accomplishment goal orientations was investigated using a simultaneous multiple regression model. According to the findings, achievement goal orientation plays a critical role in students' academic resilience and achievement. While this study was conducted on high school students in Iran, it would be interesting to find out if the same results may be generalized to secondary school students in Turkana County. Moreover, the current study used interviews in addition to the questionnaire.

2.6 Relationship between School factors and Academic resilience

As agents of the exosystem, macrosystem, and mesosystem, school factors are a component of the microsystem that influences the development of resilience in children. Schools, like families, play a dual role: they provide a variety of resources and relationships that both directly support and foster child resilience (Masten et al., 2021; Ungar et al., 2019). They play an important role in the development of children in many communities around the world, to the point where most communities consider it a normal part of life. (Masten, 2020). Strong leadership, compassionate connections, collective pride and a sense of

belonging for students, pleasant routines, good communication, and opportunity to master new skills are all characteristics of great schools (Masten, 2018). Children gain life skills in the setting of effective schools, which strengthen their future resilience capabilities.

According to Twum-Antwin et al. (2020), the school setting serves as a hub where young people learn to cultivate collaborative social relations as well as the skills needed to successfully preserve relationships through interactions with friends and adults who are not immediate family members. Studies have documented school-related protective factors for students, such as student engagement (Liu et al., 2020), a sense of belonging at school (Davis et al., 2019), and constructive relationships with teachers (Forster et al., 2017). Effective schools and teachers, according to Masten et al. (2018), present students with mastery experiences, opportunities to experience success and experience achievement on a daily basis, which helps to promote intrinsic motivation, self-efficacy, and endurance in the face of failure.

In the previously reviewed study, Mwangi et al. (2015) also investigated the relationship between external protective factors and academic resilience, the factors considered were caring relationships, meaningful participation and high expectations. The finding of this study showed that high expectations had the strongest relationship (r (388) =.88, p.01), followed by caring relationships (r (388) =.84, p.01), whereas meaningful participation had the weakest relationship (r (388) =.75, p.01) with academic resilience. This reviewed study being purely quantitative, it was necessary to use another approach to get the full understanding of the nature of resilience. Hence, the current study used a Mixed-methods approach.

Osher et al. (2014) posit that because schools protect learners, it creates a sense of safety that provides a challenge and a feeling of purpose, promoting nurturing relationships with adults and peers, developing capabilities and efficacious sensations and provides students with access to social capital, mental health support, and leadership chances. They argue that when schools deviate from these roles, they unintentionally contribute to student adversities such as physical and emotional violence, boredom, alienation, academic frustration, harassment, gangs, shaming, torturing, punishment, and expulsion from the school community and resources (Osher et al., 2014).

Rustham et al. (2022) investigated the role of peer social support on academic resilience in online learning among 253 high school students in Makassar using the quantitative method and the accidental sampling technique. Using a correlation analysis and a simple linear regression analysis, the finding of the study reported a significant positive relationship between peer social support and academic resilience ($r=0.20$, $P<0.05$). This reviewed study was purely quantitative while the current study was a mixed-methods approach. In addition, while accidental sampling hinders the generalization of the results and presents a likelihood that the population was not adequately represented hence biased results, this current study also used the random sampling technique in addition to purposive and snowball sampling to ensure that the results are generalizable and the study replicable.

The National Academies of Science, Engineering, and Medicine (NASEM, 2019) in Washington, DC, in a thorough assessment on supporting equity of outcomes in childhood, emphasizes that the single most important component in promoting a child's resilience is a strong bond with at least one elderly caregiver. In the United States of America, Frisby et al. (2020) investigated students' social interactions with classmates and teachers as

potential sources of support that could stimulate academic resilience and hope in the face of overwhelming odds. The study's sample of 213 students reported a specific academic challenge they faced over the first 10 weeks of class, and also instructor rapport, classroom connectivity, academic resilience, and hope. When presented with an academic obstacle, a mix of instructor and peer interactions revealed that only peer connectedness was significantly and positively associated with academic resilience and student hope. While the reviewed study examined school factors only, the present study examined a combination of personal, school and parental involvement factors simultaneously and therefore provided a broader view of the predictors of academic resilience. Besides, the reviewed study was done in America, a context that significantly differs from Kenya where the present study was conducted.

Lady (2021) conducted research in the United States of America to determine the effect of social support on academic resilience among undergraduate students in two South-eastern universities with a mean age of 19.3. A sequential-explanatory mixed methods design was adopted in this investigation. Friends had the highest average score of all agents of support ($M = 3.56$, $SD = 1.26$), and there was a moderate to strong, positive connection between social support and academic resilience ($r = 0.33$, p 0.001). Students most frequently reported using social support for venting and educational support, according to the interview schedules. While the reviewed study focused on undergraduate students, the current study focused on secondary school students whose level of development differs from those who already transitioned to college and therefore may bring about a discrepancy in the findings.

Liew et al. (2018) conducted a three-wave longitudinal study with kids from three Texas school districts to see if tutor-student and peer connections moderated the relationship between child academic resiliency and reading or math achievement. The participants were 784 ethnically diverse adolescents who were 34.1 percent White, 37.4% Hispanic, 23.2 percent African American, and 5.3 percent other, with an average age of 6.57 years at the start of the program with a history of scholastic difficulties. These students started school as difficult readers or with poor reading skills in comparison to their mates.

Based on their income, 37% of these students were fit for free or reduced lunch, indicating that they were from low-income families. The parents of 12 percent of the 784 children had not completed high school, 39 percent had completed high school or an equivalent diploma, 30 percent had joined some college, 11.8 percent had obtained a four-year degree, and 7.4 percent had finished graduate or professional degrees. A total of 18% of children were in a family with a single parent, whereas 85% lived in a household with at least one adult working full-time. Despite their poor socioeconomic status, peer interactions were found to mitigate the influence of academic resiliency on reading, but not math, achievement. The research mentioned above was conducted in the United States of America. It is necessary to conduct this study in Kenya to see if there are any major differences.

Romano et al. (2021) conducted a cross-sectional descriptive study in Italy with 205 female and male Italian high school students from central and southern Italian high schools that filled out self-report questionnaires on teacher emotional support and academic resilience. The academic resilience subscale of the Italian Questionnaire for Anxiety and Resilience was used to assess academic resilience. The hypothesis was tested using a structural

equation model, and the results revealed that teacher emotional help was positively correlated with academic resilience. Contrary to this study, the reviewed study was conducted in Europe ,this study was conducted in Africa, contexts that differ in education systems, culture, conditions just to mention but a few. Besides, the reviewed study was purely a quantitative study while this study is a mixed methods approach. It was interesting to establish whether the results would confirm or disconfirm each other.

Fleischmann (2018) used a correlational analysis to investigate if a positive school environment and a focus on school connectedness could aid in the development of resilience and protective qualities in schools. Using data from the California Healthy Kids Survey, children who reported high versus low school environment and school connectivity, as well as their stated levels of resiliency, were compared based on four traits: Empathy, problem-solving abilities, self-awareness, and self-efficacy. To examine if there were any variations between the independent groups of students, sorted by their impressions of the school environment, and the dependent variable, their degree of resilience, a one-way MANOVA was used and the results showed that school connectedness and school environment both played a statistically important and meaningful role in the development of resilience. The above study was quantitative in nature, while the current study used both the qualitative and quantitative techniques to find out whether school factors would significantly predict academic resilience.

Erberber et al. (2015) analyzed Trends in International Mathematics and Science Study (TIMSS) data, a large-scale, cross-national assessment of fourth- and eighth-grade students' mathematics and science achievement using student achievement data as well as data from student and school questionnaires, to investigate academic resilience among

students from low socioeconomic backgrounds across countries. The purpose was to identify the portion of academically resilient children in each educational system and to investigate the factors which contribute to academic resilience in 28 different educational systems around the world. The study revealed that of the three of the five school factors studied— teachers' confidence in students doing well with difficult material in mathematics, as reported by the student; schools' emphasis on academic success as reported by the principal and indicated by teachers' high expectations for student achievement related to academic resilience. While the reviewed study used a quantitative approach, the current study used a mixed methods approach in a single location to find out if the same would be true of secondary school students in Turkana County in the Kenyan context.

Zolkoski et al. (2016) conducted a qualitative study among students in alternative education settings in the northwest United States of America to learn about the factors that contributed to their resilience. The first finding was that students who felt that their teachers cared about them and their education helped them to be resilient. To illustrate this, each participant discussed examples of how their alternative school teachers proved that they cared about the students, believed in them, were encouraging, and wanted them to succeed. Further, the participants' ideal teacher was one who was helpful, understanding, patient, and showed students that they care. The findings of this study corroborate with Bester & Kuyper (2020) who found that positive teacher-student relationships is related to academic resilience. The reviewed study was carried out among American students whose set-up differs from that of Kenya, in addition the current study was carried out among regular

secondary school students in Kenya and not alternative program centres as in the reviewed study.

Frisby et al. (2020) investigated students' personal and social interactions with instructor and classmates as possible future sources of support which might inspire academic resilience and hope in the face of academic difficulty in a data set of 213 college students in the United States of America. In the first regression, academic resilience was the outcome variable, with instructor rapport, communication satisfaction, and student interconnection as independent variables. According to the model, only classroom connectedness was significantly associated with academic resilience (=.30, p.001). When both instructor and peer relationships were considered, the results revealed that only peer closeness was significantly and positively related with academic resilience and student hope when confronted with an academic challenge. While the reviewed study was conducted among college students, it was intriguing to replicate it among Kenyan high school students.

Liew et al. (2018) conducted a three-wave longitudinal study with students from three Texas school districts to examine if the association between child academic resiliency and reading or math achievement was affected by teacher–student and peer connections. The study comprised 784 ethnically diverse students (34.1 percent White, 37.4 percent Hispanic, 23.2 percent African American, and 5.3 percent other) with an average age of 6.57 years and a history of early academic difficulties. These children began school as slow learners or with inadequate reading skills in comparison to their classmates (scoring below the median on a school-wide standardized literacy exam). Data on children's resiliency, teacher–student warmth and conflict, social preference and peer liking, and reading and

mathematical ability were collected over three years, and three-wave longitudinal mediation models were tested. Teacher reports were used to examine data on child academic resiliency and teacher–student relationships. According to the study's findings, peer interactions influenced the effect of academic resiliency on reading, but not math achievement for students nested within classrooms and ethnicity, socio - economic status, and gender.

Furthermore, strong peer relationships moderated the impact of early resiliency on future academic resilience, as measured by performance on a standardized reading test in third grade. Teacher–student interactions were not found to be an intermediary between academic resilience and achievement. The above study was carried out in a Western country and may not be generalized to the African set up. In addition, the sample consisted of children in their early years (6-7years), while the current study consisted of adolescence whose average age was 18, the experiences and developmental levels of these two groups differ and therefore cannot be generalized.

Carrillo (2018) conducted a case study on the factors that support or hinder academic resilience in newcomers at an Urban High School in Colorado, where data was collected through interviews and document analysis. The study's findings revealed that the school's caring and supportive environment significantly predicts academic resilience. However, the reviewed study was carried out in the western world and cannot be generalized to Kenya. The above study was also highly qualitative while the current study triangulated the data collection methods by using questionnaires and interviews to more clearly confirm the findings.

Holdsworth et al. (2018) conducted a semi-structured interview research of 38 undergraduate and postgraduate students in Australia, underpinned by a constructivist/interpretivist paradigm, to explore academic resilience from a student's perspective. According to a thematic analysis of the findings, students conceived resilience differently depending on their year of study and life experience, and for the majority of students, staying healthy and creating support networks were recognized as significant traits associated to resilience. The reviewed study was purely qualitative in nature while the current study used a mixed methods approach hence a pragmatic paradigm in order to understand student's resilience better. The sample of the study constituted university students while the current study focussed on high school students. Finally, the study cannot be generalized to an African country as it was conducted in Australia.

Using a quantitative research approach, Kuperminc et al. (2020) investigated the effect of meaningful engagement in enhancing student resilience among first-year American high school students classified as being at danger of dropping out in a school-based group mentoring program. A propensity score was utilized to decrease selection bias in the sample of 114 ninth grade pupils from the United States of America. Seven external resilience resources in form of developmental supports and four internal resilience resources were investigated for changes from pre-test through to program exit. The study's findings reveal a substantial link between development support and opportunities including school support and belongingness, meaningful participation, peer caring relationships and prosocial peers, and academic resilience. The studies above cannot be generalized to the Kenyan context as they were carried out in the western countries. Furthermore, a mixed studies approach that was used in this study increased the reliability of the findings.

Weissman (2013) conducted an evaluation of resiliency in American paradigm schools in the Philadelphia region during the 2012-2013 school year. Teachers and students provided quantitative and qualitative data. A regression of self-reported student resiliency on the presence of a loving and supportive adult at school revealed a high association ($R^2 = 0.418$). The findings revealed that students who experienced caring and supportive relationships reported stronger resiliency. The reviewed study was carried out in America while the current study examined the relationship between caring and supportive adult relationships and academic resilience in Turkana County in Kenya.

The important role of the school environment and resources in the mitigation of academic resilience for disadvantaged students was highlighted in a study by Agasisti et al. (2018), which used data from the Program for International Students (PISA) in reading, mathematics, and science, collected longitudinally from 2006 to 2015. A poor classroom climate, according to the study, hampered academic resilience-building. The research focused on international students whose circumstances differed from those of pupils examined in their home country, which was seen as a natural set-up. Therefore, it was significant to conduct a study on students in their natural setting to examine if there would be any notable differences. Ye et al. (2021) in a study that used the PISA 2015 data from three countries; Peru, Honkong and Norway found out that a sense of belonging to school was strongly associated with academic resilience in Norway and Hong Kong but not in Peru. This reviewed study revealed that the factors predicting academic resilience cannot be generalized globally as it is context specific hence the need to conduct this study in Africa.

Aboulhosn (2020) used a narrative technique to perform a qualitative study to determine the protective factors for academic resilience among graduate high school students in American public schools who had been homeless for at least one month while in school. Data was gathered through semi-structured interviews, and they were dispersed among five participants. Purposive and snowball sampling strategies were used to select the sample with the Resiliency Theory serving as the study's theoretical foundation. This study found out that peer and teacher support in the school was the major contributing factor to the academic resilience of these students. The reviewed study was qualitative, whereas the current study used a mixed methods approach to gain a clear understanding of the research problem. Moreover, the theoretical framework in this study is the Bronfenbrenner's Bioecological approach. It was interesting to explore whether the theoretical differences would bring out any differences in the findings of this study.

Mills (2021) used a moderated regression analysis to investigate the association between campus atmosphere and academic resilience of 388 black undergraduate students enrolled in a mostly white college in America. The study's findings demonstrated that positive school climate views predicted greater academic resilience. While the reviewed study focussed on students in the university, the current study focussed on high school students, therefore this study filled a knowledge gap as it sought to explore the kind of relationships in the school judged by the caring and supportive relationships, meaningful participation and high expectations from teachers that make up the school climate. In addition, the reviewed study was conducted in America, a context very different from Kenya and therefore analysing whether there were any significant differences formed the core of this study.

According to Nolan et al. (2014), meaningful participation means allowing children to make decisions on their own rather than providing constant direction. This type of participation in school can be boosted by cultivating an environment in which errors are expected and embraced as part of the learning process (Lyons et al., 2013). Through effective teaching behaviors, Goldman and Brann (2016) recognize the importance of the instructor's contribution in meeting students' fundamental needs for competence, autonomy, and interactions.

Fredricks and Eccles (2006) in their study linked school meaningful participation to higher academic resilience and positive educational outcomes, as evidenced by higher standardized test scores and grades. The findings of this study corroborate those of a study conducted by Wentzel and Watkins (2002) on 229 seventh grade students from four middle schools in a assorted, city Northern Californian School District, which found that students who had meaningful school experiences had higher academic resilience and, as a result, higher GPAs than students who had little meaning in their school experiences. However, this studies were carried out in a western nation and may not be generalizable to the Kenyan setup.

Scales et al. (2006) led a longitudinal study to conclude the relevance of developmental assets in predicting academic resilience and accomplishment. From 1998 to 2001, 370 kids in the 9th grade from St Louis Park, a Minneapolis suburb, were followed for three years, from the 10th to the 12th grades. The GPA was chosen as the most important outcome variable. The Search Institute Profiles of Student Life: Attitudes and Behaviour Survey (A & B) questionnaire was used to collect data. ANOVA and Factor analysis were used to evaluate the data. According to the findings, students who had a stronger connection to the

community in middle school, including participation in community service and youth programs, were three times more likely to have higher academic resilience than others. The above study cannot be generalized to the Kenyan setup, as it was conducted in the western world. In addition, while the reviewed study was quantitative in nature, the current study used both qualitative and quantitative techniques to best explain the resilience construct.

Liebenbeg et al. (2016) used data from 2,387 school going students [Canada (N =14 1,068), New Zealand (N=14 591), and South Africa (N=14 728)] living in marginalized societies who took part in the Pathways to Resilience study to establish whether teacher–student interaction boosted student resilience. The study found that teachers can scaffold resilience resources for young adults by the quality of their contact with students. While the reviewed study was conducted in Europe, this study was done in Africa and Kenya specifically, the two contexts are not similar hence the findings may not be generalized. The reviewed study was also a multicountry investigation, while this study was conducted in Kenya only.

Using the Draw-and-Talk and Draw-and-Write methodologies, Jeferris and Theron (2017) conducted a phenomenological study on 28 Sesotho speaking black South African teenage girls from the Free State Province of South Africa to evaluate the teacher aspects that contributed to their resilience. Despite being at risk, the girls enjoyed a caring and supportive relationship with their teachers, as evidenced by self-reports demonstrating that teachers listen carefully and then provide guidance; teachers inspire girls to pursue positive futures; and teachers initiate teacher-girl partnerships that kept them academically engaged. This reviewed study was conducted on girls only while the current study was done on both boys and girls, a composition that may lead to different results hence key to understanding resilience.

The place of high expectations on academic resilience is supported by Rosenthal and Jacobson (1968) who coined the Pygmalion effect to describe instances in which instructor expectations of student achievement become self-fulfilling prophecies, in which students perform better or worse than their mates based on how their teachers expect them to perform. (Collins, 2011). In addition, Rosenthal (2002), as cited in Cobos-Sanchiz et al., (2022), described three factors that influence the Pygmalion effect which are; the climate; where a teacher creates a warmer climate for students from whom more is expected; second, input; teachers teach more to students from whom more is expected; and finally, feedback; where teachers praise and reinforce students they expected more from. This may be a contributing factor to academic resilience.

Interestingly, this proposition corroborates with a study by Frydenberg (1997) who found out that high expectations have an impact on students' academic resilience and success among gifted students in various ethnic communities in the United States of America. Schools that communicate high expectations for all youth and give them the support necessary to achieve have high rates of academic success. The reviewed study cannot be generalized to the African setup as it was conducted in America.

2.7 Relationship between Parental Involvement and Academic resilience

In this study, parental involvement was considered a facet of development as illustrated in the microsystem of the theoretical framework. Similarly, parents are agents of the mesosystem, exosystem, macrosystem and therefore formed a key aspect of this study. Family is also regarded as the source of the first patterns of stress management, difficulties, and failure (Pieronkiewicz & Szczygieł, 2020). Smith and Schonert-Reichl (2013) identified family factors including variables like parental warmth, a secure and nurturing

home environment, a close relationship with a caring caregiver, and the support of family members as factors that promote resilience in children.

Therefore parental involvement; academically, physically, socially, emotionally, financially and communication of expectations may influence the academic resilience of learners. Parents who are physically present in their children’s lives can communicate with them their expectations. Family communication and resilience are deeply interwoven. As asseted, parent-child communication appears to be the most significant in "socializing children to be emotionally and behaviorally adaptive" (Theiss, 2018, p. 12).

Indigenous families and communities have a significant effect on students' academic engagement, resilience, and post-secondary aspirations (Rutherford et al., 2019; Young et al., 2017). This is demonstrated by a family's belief that their resilient children have the knowledge and self-belief to make wise decisions, by the family's encouragement of academic success, and by the family's modeling of behaviors that foster confidence in new social situations (Guenther et al., 2017). The expectations of parents and peers, according to Smith et al. (2015), are one of the most significant factors influencing a child's intention to attend university. It is interesting to establish whether this would be true about students in Turkana county.

In this study, parental involvement academically, physically, socially, emotionally, financially and communication of expectations were the domains indicating parental involvement. Families, according to Theiss (2018), provide a foundation for socializing children and equipping them with the skills they need to cope with stressors and recover from unforeseen failures. This assertion is backed by Boden et al. (2016) and Narayan et

al. (2018) that exposure to fostering and compassionate social environments, as well as other good experiences such as parental involvement, strong caregiver and teacher-child relationships, and school engagement was shown to promote health and well-being throughout developmental phases and into adulthood (Boden et al., 2016; Narayan et al., 2018).

Parents have multifaceted and versatile protective influences on many aspects of development, according to Masten and Barnes (2018), and they influence the well-being of their children when they are threatened by adversity. Similarly, effective parenting promotes positive development across all levels of risk, with larger adverse effects when conditions are more threatening. Choe et al. (2013) argue that the family environment, specifically family structural situations, parental responsiveness, management approaches, and exposure to adjusted models, has a serious influence on children's and teenagers' self-regulation skills, a feature associated with resilience. Romero et al. (2018) further emphasize the importance of parents in building resilience by reducing the negative effects of harsh conditions. Although emotionally supportive parents cannot prevent difficulties in life, they can provide comfort and support to their children as they adjust to and make sense of life's challenging experiences.

According to Ofiesh and Mather (2013), adults who have been successful in life despite having been challenged by learning problems as children described their family members as "extraordinarily supportive." Parents who continued to encourage academic success supplied financial resources, and aided access to necessary programs were among those who provided this assistance. Parent employment for instance affects both the quality and quantity of parent-child bonding time and therefore determines how the mother or father

parents (Han et al. 2019). In the spirit of improving the life chances of children growing up in adverse conditions, parents and parenting were key considerations.

Kong (2020) conducted research using data from the Growing Up in Ireland longitudinal study to determine the association between parental socioeconomic status and academic resilience, this was connected to the construct of parental involvement financially in this study. The work status and educational level of the parents were used to determine their socioeconomic status. The population in 1998 comprised 8,000 9-year-olds and 10,000 9-month-olds, who are now 22 and 12 years old, respectively. Multiple regression was used to evaluate the data, and the study discovered that children from low socioeconomic backgrounds showed high academic resilience due to the strength of parent-child connections. The implication for this study was that parental involvement financially leads to high academic resilience. However, while the reviewed study was longitudinal in nature, the current study was cross-sectional in nature. Further, Ireland is different from Kenya in terms of the economy, availability of infrastructure, life expectancy among others, and therefore the need to conduct the study in Kenya.

Anagnostaki et al. (2016) investigated whether and how personal and family resources of immigrant youth account for personal variation in academic resilience in a cross-sectional study in which 300 middle school students, 73 Albanian children, plus 227 Greeks (average age 13.9 years) were included in the sample, all of them were registered in Greek inner-city middle schools. Four family resources (parental involvement in school, family support, and parents' education) were assessed for academic resilience. Immigrant and non-immigrant youth both had stronger academic resilience when their families had more

resources. The findings showed that there was a strong connection between family resources and academic resilience. Independent of immigrant or social status, students who had greater family support and whose parents had a higher level of education and were more committed to their child's school were likely to have greater academic resilience.

The Project Competence research in Minnesota by Garmezy et al. (1984), is a model work on the subject of resilience, particularly worth revisiting. The study looked at how life stressors affected the aptitude of 612 primary school students in grades 3-6 in two Minneapolis public schools. The sample was chosen to reflect the socioeconomic disparity and ethnic minorities in the public school system at the time. Garmezy and colleagues (1984) focused on the association between competence, hardship, inner functioning, and a set of personal and familial characteristics. A total of 205 children and families took part in the subsequent studies at the ages of 7, 10, and 20 to provide longitudinal data on competence and resilience. During the school years, tutor ratings, peer feedback, and school record data were used to assess competence, while a life event questionnaire was used to assess stress exposure. Using an exploratory multiple regression correlation analysis, the investigators also interviewed parents about their family's social order and their child's perspective.

According to the study's findings, disadvantaged children with lower IQs and SES, but also less positive family characteristics, were generally less capable and more likely to be disruptive in school. This implies that the lack of parental involvement financially as indicated by low SES affected academic resilience. The researchers discovered, however, that some of the disadvantaged children were capable, doing well, and did not exhibit behavioral problems. This discovery prompted researchers to wonder why some children

did not succumb to adversity and thus did not develop negative adaptations. This study was carried out among children in the western world, which has a different education system from Kenya and cannot be generalized to children in the Kenyan context.

Morales (2010) explored the protective factors in the lives of ten elementary-aged pupils, all of whom were over the age of eight, who lived in a rural Virginia school division that had experienced hardship. Fifty low-income students of colour who were academically resilient were selected. The students that took part in the study had a parent with poor educational backgrounds, low-paying jobs, and were classified as ethnic minorities. Inverted triangulation interviews were used to interview each student at least three times. The study revealed that academically resilient students had protective factors that include high parental expectations, and a mother modelling a strong work ethic. The reviewed study was highly qualitative while the current study is a mixed-methods study. While the sample in the above study consisted of only ten participants, a lesser sample size which is prone to the margin of error, the present study consisted of 378 students.

Catterall (1998) employed a sample of 6,779 tenth grade students who improved their grades from the eighth grade in the 1988 U.S. Department of Education Longitudinal 18 Study (NELS: 88). Resilience was characterized in the study as improving from a C in English class in eighth grade (the lowest 26 percent of all eighth-grade pupils) to an A or B in tenth grade. Students self-reported their English grades in eighth grade, whereas their teachers recorded their tenth-grade grades. Catterall ran a multiple regression on the resilience outcome variable, which is the amount of positive effect on student English grades from eighth to tenth grade. Family characteristics such as ethnicity, family socioeconomic status, language, parents' highest level of education, and supportive family

behaviours were among the predictive variables. The results of this regression model indicated that high socioeconomic status and supportive family behaviors were significant predictors of academic resilience. The primary data collection tool in the reviewed study was questionnaires. There is a need to use other tools such as interviews to triangulate these findings.

Cappella and Weinstein (2001) looked at environmental factors that were thought to predict academic resilience. They built on prior studies by Finn and Rock (1997) and Catterall (1998) by analysing data from the NELS: 88 and focusing on students who had significant academic difficulty before entering high school but progressed to intermediate or advanced proficiency by the end of high school. SES, ethnicity, family structure, and sex were all factors in the demographic domain. The first regression analysis revealed that socioeconomic status, ethnicity, and gender were small but significant predictors of academic resilience. Students more likely to be resilient were those who came from a higher SES, belonged to the majority caucasian ethnic group, and were female. The above study focused on students from the Western world whose education system is different from Kenya and may not be generalized to the Kenyan setup.

Sandoval-Hernandez and Biaowolski (2016) investigated how poor socioeconomic status influenced academic resilience in mathematics among Asian Education System pupils. In the five countries, the research sample included 23,354 pupils from 720 schools. Singapore, South Korea, Hong Kong, Chinese Taipei, and Japan were the countries involved. In Singapore, disadvantaged and non-disadvantaged students showed a difference in academic expectations and time spent on mathematics at home. In Korea, being male increases the likelihood of resilience, and in Taipei, low levels of bullying at school

increase the odds of resilience. The findings indicated that interventions influencing behavior as reflected in differentially associated variables could aid disadvantaged students in becoming academically resilient. This study was limited to Asian countries only thereby hindering generalization. It was important to carry out the study in Kenya to examine any notable differences.

Despite the highly competitive academic environment in China, Li (2017) conducted a quantitative analysis to determine the explanation for Chinese students' academic resilience. The sample consisted of 693 mixed-gender pupils randomly recruited from five public and one private secondary school in China. When school commitment, individual conflict attitudes, parental supervision, and school involvement/recognition were examined alongside academic resilience, the study found that parental supervision, school involvement, and recognition improve academic resilience. The reviewed study was conducted in China, an Asian country with a different education system and philosophy. The present study assessed parental involvement in an African setup and Kenya in particular.

Research supports parental support as an influential variable in promoting resilience. Theron and Van Rensburg (2020) conducted an inferential, secondary data analysis of narratives and visual data derived from two samples of adolescents on primary caregivers and adolescent resilience in an African context on South African adolescents 133 from rural and 385 from urban settings. Parent figures who encourage resilience offer additional access to material resources, co-regulate teenage behaviour, encourage dedication to education, and provide emotional support in the form of affection, according to the findings of the study on resilient adolescents. The study affirmed that parent figures do matter for

adolescent resilience. While data from this previewed study was obtained through secondary data analysis, the present study deduced academic resilience based on primary data obtained from questionnaires and interviews. In addition, the reviewed study focused on general resilience, the current study focused on academic resilience.

Educational challenges for children exposed to any risk factor, according to Kwok et al. (2016), are receptive to differences in the quality of the home and school atmosphere. Lofgren and Lofgren (2017) employed a narrative analysis to investigate educational resilience from the perspective of 12-13-year-old Swedish grade six students in eleven schools. Family expectations increased educational resilience, according to the study's findings, resilience is a matter of living up to family expectations. This reviewed study was conducted among grade six pupils whose cognitive development level is lower compared to those in secondary schools which the current study was concerned with. In addition, the study was purely qualitative while the current study implored a mixed-methods approach to understanding parental involvement and academic resilience.

Rojas (2015) carried out an exploratory study to determine the variables that may hamper academic resilience. The research looked into how various parental and individual environmental factors influence academic resilience. Six pupils studying in a public school in Bogotá, Colombia, participated in the exploratory study. The school was in a low-income, marginalized neighbourhood of the city, where social issues like poverty and violence were frequent. Document analysis, as well as interviews with instructors and parents, were used to collect data. The results of the study revealed that individual and parental involvement are the strongest predictors of academic resilience. The reviewed study was conducted on six students which hinders its generalization as well increasing the

chances of great error margins. This study used a sample of 378 students and this may make it generalizable and reduce the margin error. In addition, the reviewed study was purely qualitative, the present study used a mixed-methods approach to fill in the gaps in the literature.

Boutin-Martinez et al. (2019) sought to find out if there was a link between personal and parental protective variables and Latina/o high school students' academic resilience, as well as their connection with 12th-grade Mathematics achievement, dropout rates, and post-secondary enrollment. The National Centre for Education Statistics' Education Longitudinal Study of 2002 dataset was used to compile the data for this study (NCES). Latent class analysis was performed to examine academic protective profiles, or latent groups, among high school Latina/o students (N=141610) and to properly evaluate group differences between males and females, socioeconomic background, immigrant status, student's native language, early education attendance, and 10th-grade mathematics. The research results reported the existence of academic protective groups, which differed significantly in terms of academic discussions with parents and attitudes toward mathematics including parental communication, parental involvement, and attitudes. Whereas the findings of the reviewed study were based on a longitudinal study, it was interesting to find out if the results would differ in a cross-sectional study as in the present study.

In their study of 120 high school students in Indonesia on the role of authoritative parenting in academic resilience, Fauziah and Triyono (2020) assert that the role of parents as first educators in the family framework is fundamental and contributes significantly to the formation of student academic resilience and that changes and the formation of resilience

behavior can be observed and studied in the family environment. This finding is supported by Firoze and Santhar (2018) who conducted a study to elaborate on the impact of parenting styles on the academic resilience of 140 students in India and found out that authoritative parenting is associated with high resilience. This present study sought to confirm these assertions.

On a sample of 16,916 children aged 3-7 from the United Kingdom Millennium Cohort Study, Flouri et al. (2015) investigated the longitudinal effects of these three risk factors on children's internalizing and externalizing problems, as well as the function of parenting in moderating these effects. Parental involvement in learning, parental discipline, and the quality of the parent-child bond were all factors in parenting. According to the findings of this study, a positive parent-child relationship can help early children develop emotional and behavioural resilience to many types of environmental risk. The reviewed study focused on emotional and behavioural resilience while the current study focused on understanding parental involvement in academic resilience.

Carrillo (2018) undertook a qualitative study at Urban High School in Colorado to determine the elements that enhance or hinder academic resilience in immigrants. Interviews and document analysis were used to gather information. The study's findings demonstrated that family separation, whether permanent or temporary, has an emotional impact on academic resilience. This study's findings support the nuclear family as the optimum family for developing resilience. However, the above study was carried out in the western world and cannot be generalized to Kenya. In addition, the above study was predominantly qualitative in nature, while the current study used both qualitative and quantitative techniques.

Li et al. (2017) investigated risk and resiliency in the classroom for children and teenagers in Chinese and Singaporean schools. The main purpose of this research was to find factors that shield kids from the negative consequences of risk and stress and hence help them succeed academically. This study discovered that, in addition to pan-human attributes, Asian students' academic resilience could be credited in part to Asian characteristics such as focusing on education, students' tenacity, discipline, and their parents' educational values. This reinforces the significance of taking culture and national context into account in studies of academic resilience. The Asian cultural context differs from the African cultural context and it is crucial to explore academic resilience in the African Context.

Marcelo (2018) conducted a study in the United States of America to determine the academic resilience protective factors among Black and Latino gifted children. To investigate the impact of protective factors in helping gifted kids of colour to succeed academically, the researchers used a qualitative phenomenological research approach. The sample size was eight high-achieving Black and Latino brilliant middle school children who excelled academically. Semi-structured interviews and classroom observations were used to obtain data. According to the findings of the study, increased parental participation promoted academic resilience. The reviewed study utilized a small sample of eight students, however, the current study utilized a larger sample of 378 students to analyse the relationship between parental involvement and academic resilience. In addition, the reviewed study was highly qualitative, the existing study used a mixed-method approach where the quantitative and qualitative data were collected. This method ensured high validity of the findings.

Olaseni (2020) conducted a quantitative study in Ondo State, Nigeria, to determine the influence of parental involvement in predicting academic resilience among 347 teenagers (178 males and 169 females). The study was guided by Flach's theory of resilience, and the study sample was selected purposively. The data was also subjected to multiple regression analysis. The study's findings demonstrated that parental involvement substantially predicts academic resilience. The reviewed study was highly quantitative while the current study contributed to filling in the gaps in the literature by employing a mixed-methods approach. Moreover, the reviewed study utilized a purposive sampling approach which limits the generalization of the results, the current study used random, purposive and snowball sampling techniques.

Using an ecological approach and a quantitative technique, Dotterer and Wehrspann (2016) investigated the association between parental engagement in school and academic outcomes. The sample comprised 118 kids in grades 6-8 from an urban school in the United States Midwest. According to the study's findings, parental involvement has a favourable impact on academic outcomes. Additionally, excellent academic outcomes will be achieved when parents collaborate with their child and their child's school to encourage favourable academic growth. The reviewed study was carried out among American students, therefore the findings of the study may not be generalized to students in Kenya. The current study also sought to find out whether parental involvement would successfully predict academic resilience among students in an African setup like Kenya.

Florez (2015) undertook an exploratory study to look into the factors that influence academic resilience in middle school, as well as the risk and protective factors that influence academic outcomes. Six pupils were chosen from a public school in Colombia

that was located in a marginalized and impoverished area of the city. Document analysis and interviews with teachers and parents were used to gather data. Protective factors, according to the findings of this study, can be linked to family supervision, support, and meaningful engagement, which, when provided, enhance academic resilience and, as a result, academic achievement. The above study was carried out on a small sample of 6 students which is prone to a margin of error, while the present study was being carried out on 378 secondary school students thereby decreasing the margin of error. Besides, the above study was carried out in South America, a context different from Kenya.

Parents who are present in their children's lives communicate their expectations of success to their children**.** Parents' communication of the expectations of their children may affect their academic resilience levels. High expectations, according to Frydenberg (1997), have an impact on pupils' academic resilience. Parents who expect their children to excel academically become high achievers, while parents who have low expectations become low achievers. Parents should guide their children by verbalizing their expectations of them, rather than expecting that children should know what they should be doing on their own. According to Schoon (2006), families who set high standards for their children's behavior from an early age help them develop resiliency. It was interesting to find out if the present study would confirm or disconfirm these assertions.

Bester and Kuyper (2020) used a quantitative approach to investigate the relationship between additional educational support and academic resilience of 117 grade nine to ten poverty-stricken adolescents in two schools in Gauteng, South Africa, that differed in terms of socio-economic nature and educational support provided. The findings revealed that parental participation was positively connected to resilience. The reviewed study was

purely quantitative. However, the current study examined, parental involvement and academic resilience using a mixed-methods approach that provided a complete understanding of the academic resilience construct.

2.8 Personal, school and parental involvement on Academic Resilience

This section presents the interaction of the personal, school, and parental involvement factors in influencing the development of resilience as demonstrated in Bronfenbrenner's Bioecological Systems Theory. It also clarifies the ecosystem which exerts more influence than others concerning the development of academic resilience.

International research suggests that students who have at least one securely attached relationship with a supportive adult, access to competent, prosocial adults (role models) in the larger community, and positive relationships with their schools, religious institutions, and other community networks that take into account the larger cultural context become more resilient themselves (Glover, 2009;Khanlou & Wray, 2014; Luthar & Cicchetti, 2000; Wright et al., 2013). However the context-specific findings of these and other studies (Jongen et al., in press; Langham et al., 2018) show that for Indigenous students, resilience may not be situated internally within students but between students, their peers, families, teachers, and other adult role models, demonstrating the importance of a relational systems approach which this study took.

Dias and Cadime (2017) examined protective variables and adolescent resilience in Portugal. The Healthy Kids Resilience Assessment was used to collect information about four protective variables of school, home, community, and peer environment and resilience from 393 secondary school kids. The study's findings revealed that the kids' levels of

resilience was highly influenced by their home, community, and peer environments, with the home environment being the most important predictor. The above study did not consider the personal factors which are key predictors of academic resilience. The current study focused on personal,school and parental involvement factors.

Internal and external influences on academic resilience were investigated by Aliyev et al. (2021). The researchers wanted to see how internal protective variables affected academic resilience in 541 Turkish university students. Using Structural Equation Modelling, the constructs of perceived social support, parenting style, and academic motivation were compared to academic resilience. Although external influences are important for academic resilience, the study found that internal factors make students more academically resilient. However, the results of this study could not be generalized to Kenya as Turkey is located in Asia and Europe, two continents that differ significantly from Kenya.

Permatasari et al. (2021) investigated the impact of perceived social support in the family, school, and peers on academic resilience during the Covid-19 era among 291 cadets at the Marine Science Polytechnic in Makassar City, Indonesia, using accidental sampling and a Linear Regression Analysis as the statistical method. The research was quantitative and employed a correlational design. According to the findings, perceived social support contributes to academic resilience by 71.8 percent (R^2= 0.718; Sig 0.01), while extraneous variables contribute by 28.2 percent (R^2= 0.718; Sig 0.01). Further analysis found that all three factors contributed to academic resilience with family support contributing to 42.4%, teacher support at 16.6%, and peer support at 12.8%.

However, the reviewed study differed from the current study in many ways that made it necessary to conduct this study: the reviewed study used accidental sampling while the current study used simple random sampling to arrive at its respondents, simple random sampling ensures adequate representation as each individual in the larger population has an equal chance of being selected, the study was also purely quantitative while the current study utilized a mixed-methods approach which leads to a potent understanding of the research problem. In addition, the reviewed study was also conducted in the Covid-19 era specifically and therefore the effect of the research environment may have affected the external validity of the findings, the study also did not consider personal factors as a predictor of academic resilience which the current study did. Finally, the reviewed study was carried out in Asia, a continent that differs significantly from Africa and therefore hindered the generalization of the findings.

Garca-Crespo et al. (2021) looked into the impact of educators, families, and student profiles on academic resilience among 117,539 fourth-grade students from 4,324 schools in European Union member states who were involved in the Progress in International Reading Literacy Study 2016. The research found that a sense of belonging to the school, improved the chances of being resilient by 40%, and family support but before preschool, the school and family factors best predicted academic resilience. This reviewed study was conducted in Europe a continent that is different from Africa hence may not adequately explain the academic resilience of learners in the Kenyan context.

Mwangi et al. (2015) researched how internal and external protective factors combined to predict academic resilience and achievement among secondary school students in Kiambu County, Kenya. In this study, a descriptive correlational design was adopted. A total of 390

students from form three were included in the study. Data was collected using a demographic form and the California Healthy Kids Survey-Module B 2007 edition (Centre, 2008) and Pearson's Product Moment Correlation and Multiple Linear Regression Analysis were used to analyse the data.

The study's findings demonstrated a strong positive association between academic resilience and external and internal protective factors. In addition, while both internal and external protective factors significantly predicted resilience, internal protective factors had a greater positive and significant predictive value on academic resilience than external protective factors. One such external protective factor is caring and meaningful relationships. Whereas the reviewed study was conducted in Kiambu County. The current study focused on Turkana County which is the most marginalized county in Kenya ,and resilience being a construct born out of hardship and setbacks, it will be best understood in this context. Torres and Artuch (2014) through an empirical research identified three significant conditions in the conceptualization of resilience: growing up in, or finding oneself in, adversity, the availability of both internal and external protective factors, and the ability to adapt positively despite adversity.

The above reviewed study also focused on sub-county secondary schools only which may not be sufficient in explaining the resilience of students, the current study was therefore conducted in all categories of secondary schools; national, extra-county, county, and sub county schools to examine whether the results would differ. Further, in addition to the internal and external protective factors such as the school, the learner, and peers that the reviewed study investigated, this study sought to fill a gap in concepts such as parental

involvement academically, physically, socially, financially, emotionally and communication of expectations.

A gap in implication too was filled as it led to the proposition of an academic resilience model that may be adopted for use in the education sector in Kenya. In addition, while the above study was highly quantitative using only questionnaires, the current research used a mixed-methods approach to promote the potent understanding of the concept of academic resilience among our students today. The reviewed study was a resilience-based approach to school achievement in Kiambu County while the current study searched for the impetus behind the academic resilience of the students in Turkana county and to know why they persist in education despite the high illiteracy levels, low access to education, unemployment levels, erratic climatic conditions, low infrastructure and high poverty index, inadequate health facilities, food insecurity, low access to water and electricity, insecurity, low land productivity, and historical injustices.

Ungar et al. (2019) used a social-ecological perspective to investigate how schools in various contexts and cultures around the world affect student resilience by providing services linked to better developmental outcomes such as access to material resources, access to positive relationships, formation of a desirable personal identity, experiences of power and control, adherence to cultural traditions, and experiences of social justice. Educational facilities, in partnership with families and communities, are a type of psychosocial intervention that can enhance children's resilience, according to findings from research all over the world. However, schools can have the greatest effect on resilience among the most vulnerable children. It was necessary to find out if the same would be said of students from Turkana County,the most marfinalized county in Kenya.

Human relationships, together with student traits, parental influences, community variables, and school programs, are the most important factors in student resiliency, according to Johnson (1997). As a result, the importance of loving and supportive people in the classroom cannot be overstated. While children with strong personal protective factors are more likely to be academically resilient, Wang and Gordon (2012) discovered that supportive families and/or schools can help kids who lack personal protective factors achieve academic resilience.

William (2011) looked into the factors at home, school, and in the community that influences educational resilience in African American high school graduates from low-income, single-parent families in metropolitan regions. As part of a multiple case study, the researcher conducted in-depth individual and focus group interviews with eight African American high school graduates who achieved academically despite difficulties. The study's findings demonstrated that elements from the home, school, and community all impacted academic resilience. The reviewed study focused on a small sample of eight students which greatly hinders generalization as it is more prone to a margin of error, the present study focused on 388 students and 10 teachers. Besides, while the above study was highly qualitative, the current study used a mixed-methods approach to examine any significant differences.

Gross (2011) investigated how indicators of academic resilience and outcomes interact in a natural setting in the United States of America. The study enlisted the participation of 167 low-income urban African American adolescents. Data was gathered via parents' notes, self-reports, and in-person recollections of the adolescents' daily experiences. The researcher constructed a multivariable classification tree model for predicting academic

outcomes using the Optimal Data Analysis statistical procedure. The study found that school characteristics were the most powerful determinants of academic resilience. However, the above study was highly quantitative while the current study used both qualitative and quantitative methods. It is also not possible to generalize the findings from the above study to Kenya because the American and African contexts differ.

2.9 Summary of Reviewed Literature and knowledge Gap

The literature reviewed on personal, school and parental involvement factors and academic resilience revealed contextual, knowledge and methodological gaps that the current study sought to fill. For example, a majority of the studies on personal factors used either a qualitative or quantitative approach but not both. The current study sought to fill the methodological gap by using a mixed-methods approach. In addition, most of the studies were carried out in Western and Asian contexts and could not be generalized to the Kenyan context.

Regarding school factors and academic resilience, the reviewed literature suggested that most of the studies were carried out in either Europe or America, due to this contextual gap, the findings of the study may not be generalized to Kenya. Literature is scarce in Africa and Kenya on the personal, school and parental involvement factors that predict academic resilience among public secondary school students in Turkana County. Khalaf (2014) found a statistically significant association between academic resilience and academic achievement in a study of 100 university students in Egypt.

The most recent studies on academic resilience in Kenya were carried out by Mwangi et al. (2015), Oyoo (2018), and Gachigi et al. (2018). Mwangi et al. (2015) investigated the

predictors of academic resilience and its connection to academic achievement among Kiambu County secondary school students. The similarity in the two studies were in some of the constructs; the personal factors (internal factors) of social competence, autonomy and sense of self, sense of meaning and purpose ; and school factors (external factors) of caring and supportive relationships, meaningful participation and high expectations and also the data analysis technique.

However, this current study sought to fill the knowledge, methodological and contextual gaps from this previous study. Knowledge gaps through examining the academic resilience levels of students from the most marginalized county in Kenya, the inclusion of parental involvement factors and academic resilience and the varying operational definition of the term academic resilience; while Mwangi et al. (2015) viewed academic resilience as the form three students' ability to overcome academic setbacks, stress and study pressure associated with school, based on the internal and external protective factors, this study defined academic resilience as the capacity of the secondary school students to persist in the schooling process from one level to another despite the threatening situations in the education process due to marginalization because of the personal, school and parental involvement factors.

Further, methodological gaps were filled by using a mixed-methods approach so as to generate new insights and contextual gap by studying academic resilience in the most marginalized county in Kenya, Turkana. Kong (2020) agrees that resilience as an inferential concept was demonstrated under two conditions: severe risk exposure and evidence of positive adaptation.

Other studies on academic resilience in Kenya include, Oyoo (2018) who investigated academic resilience as a predictor of academic burnout among form four students in Homa-Bay County, Kenya. Gachigi et al. (2018) investigated predictors of academic resilience and its relationship to academic achievement in mathematics among secondary school students in Kiambu County, Kenya.

Most of the literature reviewed on the parental involvement factors that predict academic resilience did not focus on parental involvement as an important correlate of academic resilience. They focused on the different correlates of parental involvement such as academic achievement, while this study was inclined toward parental involvement academically, physically, financially socially, emotionally and communication of expectations as predictors of academic resilience. In addition, the reviewed studies were either inclined to the positivist or interpretivist paradigm. This study was anchored on the pragmatic paradigm which seeks to have a potent understanding of the research problem. Only two of these reviewed studies were carried out in Kenya as most were carried out in America and Asia, with a single study carried out in Nigeria. The system of education in these contexts is different from Kenya and this implores research in the Kenyan context. Li et al. (2017) emphasize the importance of taking cultural and national background into account while studying academic resilience.

The studies done in Kenya were conducted among students in Kiambu County. According to the Commission on Revenue Allocation Working Paper (2012), Kiambu County was ranked as the 41st most marginalized county out of the 47 counties in Kenya while Turkana County was ranked as the first and most marginalized county of the 47 counties in Kenya.

This justifies Turkana County as a suitable study location because resilience is a construct best measured in the presence of adverse conditions.

Furthermore, the literature review demonstrates a knowledge gap as there has been no research done on the relationship between personal, school, and parental involvement factors concurrently. It also seeks to fill the contextual gap as none of the studies have been conducted in Turkana County. In addition, most of the studies reviewed are inclined to either qualitative or quantitative approaches. It is crucial to use a mixed-methods approach to examine any significant differences to fill the methodological gap.

In conclusion, some of the studies examined were conducted on minority groups, indicating that more research on protective and risk factors related to academic resilience was required. The present study, therefore, sought to fill the gaps in the studies reviewed. An awareness of the factors that promote or hinder academic resilience in marginalized settings, may help boost successful education outcomes thereby promoting the global goals of education.

3.0 CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Overview

The choice of the research design and methodology in a study is informed by a myriad of reasons including the strategies that will work in answering the research objectives. Thus, this chapter presents a detailed description of the study's research paradigm, the location of the study, the study population, sample and sampling techniques, research instruments, pilot study, the validity and reliability of the instruments, trustworthiness, and authenticity of the qualitative data, data collection procedures, method of data analysis and the logistical and ethical considerations.

3.2 Research Approach

This research employed a mixed-methods approach. According to Creswell and Plano Clark (2018), this type of approach comprises at least one quantitative and one qualitative method, neither of which is necessarily tied to any specific inquiry paradigm. Compared to single methods approaches, this strategy, according to Cohen et al. (2017), provides a more extensive and complete interpretation of a phenomenon and more meaningfully answers challenging research problems. The two types of data were then integrated into the concurrent triangulation design analysis by integrating and embedding the data to overcome the limitations and biases associated with collecting qualitative and quantitative data separately (Creswell & Plano Clark, 2018).

Tashakkori and Creswell (2007a) defined mixed method research project in more elaborated terms while focusing on the necessity of merging in every step: research in which the investigator collects and analyzes data, integrates the findings, and draws

inferences using both qualitative and quantitative approaches in a single study or program of inquiry. According to Hafsa (2019) by giving researchers the opportunity to triangulate or corroborate the results from various sources of evidence with the aid of a single study, mixed methods research facilitates the study of complex problems. In education, a researcher is oftenly not only interested in exploring the external or visible aspects of a study, but frequently must also delve into the motivations behind people's actions and behaviors. Using a variety of tools and having the freedom to approach the research problem from various angles and methodologies are all benefits of mixed methods research. Therefore, mixed methods research is an option for researchers who want to truly understand the study's variables from a variety of perspectives.

This type of approach, according to Tashakkori and Teddlie (2010), allows the researcher to investigate what interests and matters to them, analyse it in the different ways that they deem necessary, and apply the findings in ways that enhance the value system. It also delivers more than the sum of two components, according to Fetters and Freshwater (2015), who recommend it since it provides the research equivalent of 1 + 1 = 3. Furthermore, if a researcher can combine the benefits of qualitative and quantitative research while also compensating for the flaws of each method, the researcher can discover more about their research problem (Johnson & Onwuegbuzie, 2014). This methodology combines two popular research genres; as a result, it has the potential to overcome the disadvantages of a single approach and increases the validity and reliability of a study's findings.

The study's quantitative component was influenced by the post-positivist worldview, in which the researcher investigated the theory by stating the hypotheses explicitly and then collecting data to accept or reject the hypotheses (Creswell, 2014). This worldview is

bound by the deterministic philosophy that causes determine effects or outcomes. According to Hodis and Hancock (2016), quantitative methodological decisions are critical to the field of educational psychology because they are very objective.

The qualitative component of this study's main goal was to obtain a comprehensive and in-depth understanding of the construct of resilience and to explicate the ways students in Turkana County manage their day-to-day situations. The data was collected through interview schedules. The goal of qualitative research, according to Queiró et al. (2017), is to comprehend a complex reality and the significance of actions in a specific context. The researcher in this study sought to understand the reality of academic resilience in the presence of difficult circumstances in Turkana County. Denscombe (2017) supports that mixed methods design need not necessarily attach equal weight to quantitative and qualitative techniques. Contrastingly, the quantitative data was considered equal to the qualitative data in this study.

3.3 Research Paradigm

This section justifies the need for the use of both quantitative and qualitative approaches in this study. The study adopted a pragmatic worldview which is a philosophical foundation for mixed methods studies that focusses on a research method and data collection technique whether numerical or qualitative that seeks to address the research purpose, problems and questions (Cohen et al., 2018). Pragmatism allows for a variety of worldviews, methods, assumptions, and several other types of data collection and analysis. This approach is suitable because it works to provide a potent understanding of a research problem.

Tashakkori and Teddie (2010) describe it as an approach that focusses on what works in getting the research questions answered. In addition, it is problem-centred and real-world practice-oriented. Thus, different world views, various approaches, and different assumptions, as well as different ways of data collection and analysis, are all possible with pragmatism (Creswell & Creswell, 2018; Morgan, 2007; Cherryholmes, 1992). This study contends with the pragmatists' principle that research is embedded in the social, historical and political contexts. It is anchored on the knowledge that the contexts of the units of study are important in determining their academic resilience. Thus this paradigm was crucial because in understanading academic resilience in the context of Turkana County the most marginalized county in Kenya.

3.4 Research Design

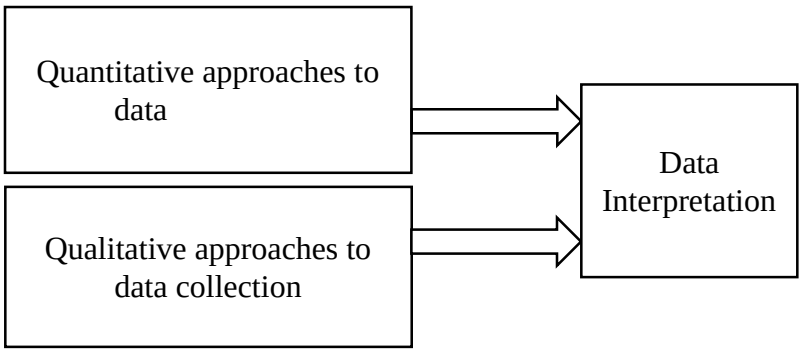
A research design is a set of procedures and strategies for collecting and analysing the variables indicated in the research problem (Creswell, 2014). In terms of the mixed methods design, this study used the concurrent triangulation design where both quantitative and qualitative data were collected simultaneously to compare or combine both results to obtain more complete and validated conclusions (Plano Clark & Ivankova, 2016).

In this study, the researcher gave both quantitative and qualitative data equal priority hence the quantitative and qualitative approaches were combined after the data in both study strands had been analyzed, and the quantitative and qualitative results were compared or synthesized to identify confirming evidence and gain a better knowledge of the research problem which is an advantage of this design. According to Creswell & Plano Clark (2011), this design entails gathering both quantitative and qualitative data at the same time and equally weighting both. The data was collected and analyzed individually, the results were

integrated, and the findings were compared to determine if they supported or contradicted each other. The special issues on simulative study and interaction in scientific classrooms by Turner and Nolen (2015) and Sinatra et al. (2015) respectively, showed the value of strengthening Educational Psychology research by drawing on a diverse variety of techniques and methodologies such as those utilized in this study. Figure 3 below shows the concurrent triangulation mixed methods design.

Figure 3

Concurrent Triangulation Mixed Methods Design



*Source***.** Adapted from Creswell (2014)

3.5 Location of the Study

According to the survey report on marginalized areas/counties in Kenya, and as previewed in Table 1, out of the forty-seven counties, Turkana County was ranked number one(1) in terms of the marginalized counties of Kenya (Commission on Revenue Allocation Working Paper, 2012) with a Skewed 21.87 % marginalization index compared to the other forty-six counties. The criteria used to ascertain the marginalization were; the level of education, infrastructure, poverty index, health facilities, access to water, insecurity, and historical injustices among others.

In this study, marginalization was conceptualized as a condition that prevents a student from full and rightful access to education, health facilities, and water infrastructure and exposes them to poverty, insecurity, armed conflict, and historical injustices and therefore places them at a disadvantageous point as compared to other students in the country. Masten (2001) affirms that people are not deemed resilient if they have never been subjected to serious risks since it is only through experiencing adversity that people can learn how to "bounce back". Consequently, factors that hamper adaptive systems like cognition, emotion regulation and learning motivation pose the biggest risks to the growth of resilience (Masten 2001). This study sought to establish the factors that promote the resilience of secondary school students in Turkana County.

In addition, a United Nations Children's Fund Annual Report (2017) found out that Turkana County stands out as a county affected by geographical inequity. For example, regarding poverty levels, the research revealed that 85 percent of children live in poverty in Turkana County, compared to 7 percent in Nairobi, the capital city of Kenya. In this study, these are considered risk factors that children in these counties are exposed to.

Despite the adverse conditions in these counties some key personalities in Kenya have been birthed. Some form of resilience is in play and this was worth investigating. Because resilience is a cultural construct, some researchers have argued that understanding resilience in specific cultural contexts should be based on the expertise of the local people (Didkowsky et al., 2010). Therefore to understand resilience in the context of marginalized locations, it was necessary to research Turkana County.

Turkana County is the second most populous of Kenya's 47 counties. The map in Appendix J depicts the location of Turkana County, which occupies 71,597.6km^2 and accounts for 13.5 % of Kenya's total land area (Turkana County Investment Plan, 2016-2020). It is located between the latitudes of 10° 30'N and 50° 30'N and the longitudes of 34° 30'E and 36° 40'E. Turkana is located in northwest Kenya, bordering Uganda to the west, South Sudan to the north, and Ethiopia to the northeast. Internally, it is bordered to the south by West Pokot and Baringo counties, to the southeast by Samburu County, and the east by Marsabit County. Turkana North, Turkana West, Turkana Central, Loima, Turkana South, and Turkana East are the six sub-counties that make up the county (Turkana County Annual Development Plan, 2018).

The study location was found to be appropriate because resilience is a product of surviving tough times and adversities such as those present in Turkana County and pushing on to realize one's goals and aspirations. Table 1 below shows the ten most marginalized counties in Kenya.

Table 1

Ten Most Marginalized Counties in Kenya

County	Fraction	Percentage
Turkana	1689	21.87
Marsabit	681	8.82
Mandera	636	8.23
Lamu	621	8.04
Wajir	594	7.69
Samburu	372	4.82
Isiolo	370	4.79
Tana River	324	4.19
West Pokot	307	3.97
Garissa	282	3.65

Source. Commission on Revenue Allocation Working Paper (2012).

A comparison of the Kenya Certificate of Secondary Education results of Turkana County with other counties categorized as least marginalized reveals that the difference in performance is minimal. For instance, Kericho County is ranked as the third least marginalized county in Kenya as per the Commission for Revenue Allocation Working paper (2012) and it would be assumed that because they are not exposed to adverse conditions, students in Kericho County perform far much better in national examinations compared to those of Turkana County. Table 2 shows the difference in KCSE performance between Turkana and Kericho Counties.

Table 2

A Comparison of Turkana and Kericho Counties KCSE Performance

	KCSE Mean Scores	
Year	Turkana County	Kericho County
2017	3.03	3.408
2018	3.327	3.630
2019	3.442	5.006
2020	3.95	4.33

Source. County Education Office, Turkana and Kericho Counties, 2020.

Table 2 shows that despite the adverse conditions that students in Turkana County face in their daily pursuit of education, they are still able to perform at per with their peers in the least marginalized counties such as Kericho. This is an indicator of academic resilience too.

3.6 Study Population

According to the information obtained from the Turkana County Education Office, Turkana County has 52 public secondary schools. The target population of the study consisted of 52 public secondary schools with 16,444 students and 392 teachers. The study targeted secondary school students because, unlike young children and pre-teens, adolescents have more likely developed some patterns of behaviour and their repertoires for coping. In addition, they are also considered cognitively able to respond to questionnaires and interview schedules.

3.7 Sample Size and Sampling procedures of Respondents for Quantitative Instruments

Sampling is the process of drawing a representative group of units or cases from particular populations (Mohapatra and Chamola, 2020). Bairagi and Munot (2019) posit that a

sampling procedure should be based on two principles for effectiveness; the principle of statistical regularity which states that a sufficient number of samples drawn at random from the study's target population have the appropriate population characteristics, and the principle of inertia of large numbers that states that the more samples one examines, the more accurate their results will be. This study was governed by these two principles.

The study adopted stage random sampling and purposive sampling techniques. The first stage in the sampling process was random sampling. This technique was used in the selection of the schools. Out of the 52 public secondary schools in Turkana County, 16 public secondary schools were selected as guided by the aforementioned scope of this study.

From the selected schools, random sampling was employed to arrive at the 382 students who responded to the questionnaires. Bairagi and Munot (2019) advocate for this sampling technique as it observes the principle of statistical regularity and therefore a widely preferred technique. After obtaining the proportion meant for the school in the 16 sampled schools, purposive sampling was used to select form four students while simple random sampling was used in arriving at 23 students in each school. The number of students was arrived at through students picking folded papers, whereby those who picked a paper written ‘yes’ participated in the study.

The sample size of the respondents was arrived at using Yamane's (1967) simplified formula for proportions. A 95% confidence level and P=.05 was assumed. It was calculated using the formulae below while table 3 below shows the research population sample:

$$n = \frac{N}{1+ N (e)^2}$$

Where:

N = the population size,

e = the level of precision

Therefore;

$$n = \frac{8343}{1+ 8343(0.0025)}$$

$$=382$$

Table 3

Research Population Sample

Study population Unit	Sampling Method	Target Population	Sample size
Schools	Random	52	16
Students (For Questionnaires)	Random	8343	382
Students (For Interviews)	Purposive	8343	10
Teachers	Purposive/ snowball	121	10
Total	-	16,859	418

Source. Field data, 2020 and sample determination formulae, Yamane (1967).

3.8 Inclusion Criteria for Respondents of Qualitative Instruments

Mattered et al. (2016) argue that sampling in qualitative research is determined by the information power held by a given sample. One of the determinants of the information power was the specificity of the sample, where the more specific the characteristics of the participants used the lesser the sample size required. Participants in the interview schedules

comprised of students and teachers. For teachers, the researcher sought to identify teachers who were natives of Turkana County and had studied in the county as they had a better understanding of the lived experiences of the participants and the specific resilience-building factors. In case there were many natives in the same school, the researcher selected the longest-serving in terms of those who had the most experience in the teaching profession. Consequently, after arriving at the school and through the help of the deputy principal, the snowball sampling technique was used to arrive at this sample. Sharma (2017) advocates that snowball is a suitable technique when there is no other way the researcher can access their sample.

The researcher had a target of interviewing 16 teachers but by the 10th teacher, data saturation was attained as no new information, themes, and codes were generated through the interpretation of the data. There is a link between sample size and data saturation in qualitative studies (Ravitch & Carl, 2016). In addition, qualitative researchers are more concerned with assessing if the sample size is large enough to achieve data saturation than with the sample size being too large or small (Fusch & Ness, 2015). Saturation is used to determine when there is enough data from a study to develop a robust and valid understanding of the study phenomenon and is applied to non-probability samples (Hennink & Kaiser, 2019). On the other hand, Malterud et al. (2016) argue for a more consistent approach to sampling in qualitative research. As a result, they propose the concept of information power, which states that the fewer the participants necessary, the more information the sample has that is important to the investigation.

For students, purposive sampling was used to sample a student president from each school and in case they were absent, the researcher selected the vice president or school prefect in

case the vice president was absent. Due to their interaction with the learners and influence in the school, they were better placed to give their views confidently regarding personal, school, and parental involvement, and academic resilience. The researcher aimed to interview 16 student presidents but saturation was attained at the tenth student president interviewee as no new data emerged from the subsequent interviews.

The location of the study was Turkana County because of the adverse conditions that would sufficiently explain academic resilience. Crossman (2019) advocates for a homogeneous purposive sample since it is critical in selecting a population with a shared trait or collection of characteristics relevant to the research topic. The student population was distributed over the schools on a proportionate basis.

Cohen et al. (2017) recommend purposive sampling when a sample is being chosen for a specific purpose, similarly, the selectivity of a non-probability sample comes from the researcher's targeting of a certain population. Thus, the 16 teachers were purposively sampled based on being natives of Turkana County and also having lived and studied in the county. The saturation concept was used to determine the sample size for qualitative data.

Lowe et al. (2018) define saturation as a point at which observing more data will not lead to the unearthing of more information connected to the research questions. Similarly, Marshall and Rossman (2016) nuance that qualitative research has no clear rules regarding the sample size, and as such, it is determined by the fitness for purpose and the sample size. For qualitative data collection, interviews were conducted on 10 teachers and 10 students.

According to Mason (2010), the ideal sample size for qualitative interviews is 10-30 participants.

3.9 Data Collection Instruments

The instruments that were employed in data collection were questionnaires and semistructured interviews. The questionnaires were administered to students while the interview schedules were administered to teachers and students. The use of the three instruments was for data triangulation. The scores for the whole sample were computed based on the number of respondents in the sample or sub-group.

3.9.1 Student's Questionnaire

A questionnaire is a document that consists of a series of questions printed in order on a form or set of forms, with respondents required to read, comprehend, and respond to the questions on the space supplied in the questionnaire (Kothari, 2014). The rationale for using the questionnaire was that they could reach a wider sample making the results more dependable. They are also objective as they are free from the prejudices of the researcher. Patten (2016) advocates for its use because of its anonymous nature and therefore encourages the respondents to be honest.

The selection of the personal factors; social competence ;empathy, problem-solving, cooperation, communication; autonomy and sense of self ;self-efficacy, self-awareness, locus of control; Sense of meaning and purpose (goals, motivation, and aspiration) and school factors (caring and supportive relationships, meaningful participation, high expectations) and elements were guided by their use in the California Healthy Kids Survey as Resilience Constructs. This instrument was developed in 1999, authored by WestEd

(2007) to address youth resilience and development supports to help meet youths' basic developmental needs, which, in turn, promote the growth of internal assets.

For qualitative data, the researcher developed various themes that captured relevant information on personal, school and parental involvement factors as predictors of academic resilience. On the other hand, the questionnaire consisted of a note to the respondent informing them about the researcher and the title of the research as well as a request to participate in the study coupled with instructions on how to answer the questions and part I, II, and III containing the personal, school and parental involvement factors scales each described below.

3.9.1.1 Personal Factors Scale

Aspects of the statements were adapted from the California Healthy Kids Survey (CHKS), (Module B) (Appendix D) Part I to collect data on personal factors that predict academic resilience. The scale consisted of nine items, three for items on social competence, three for items on autonomy and sense of self, and three for items on a sense of meaning and purpose.

3.9.1.2 School Factors Scale

A questionnaire that consisted of statements adapted from the CHKS, module B (Appendix D) part II was used to measure school factors and academic resilience. Appendix D shows the specific items that were adapted to measure the school factors. The questionnaire (Part II) consisted of nine items, three of which contained items on caring and supportive relationships from the teachers and peers, three items on meaningful participation in school, and three items on high expectations from teachers in the school.

3.9.1.3 Parental involvement Scale

The questionnaire on parental involvement (Appendix D) (Part III) was constructed by the researcher and consisted of one section which contained indicators of parental involvement academically, physically, socially, emotionally, financially, and communication of expectations to children. The questionnaire (Part III) consisted of six parts each with two items, summing up to twelve items for this scale. The indicators of parental involvement were borrowed from the CHKS.

3.9.1.4 Academic Resilience Scale by Martin and Marsh (2006)

The academic resilience scale for high school students by Martin and Mash (2006) was adapted to suit the current study. However, the language was modified for easy comprehension of the questions. For example, item 1 'I believe I am mentally tough when it comes to exams' was changed to 'I believe I am able to perform well in exams'. Item 2 'I do not let study pressure get on top of me' was changed to 'I know how to deal with too much school work'. The researcher personally administered the questionnaires to provide room for any clarification and to create a good rapport with the participants, which would lead to an increased readiness to participate in the study and to provide truthful information.

3.9.2 The Interview schedule for Teachers

The researcher constructed a semi-structured interview for teachers (Appendix E). The objective of interviewing was to know their perceptions and insights about the student's personal, school, and parental involvement characteristics that may be used to account for academic resilience or lack of it. Bairagi and Munot (2019) support the use of interviews because the researcher tactfully collects the data by cross-examining the respondents hence collected data is very consistent. Teachers were considered resource persons who may

provide their perceptions based on having the first-hand experience as they interact with the students often or have knowledge on the student's background.

This method is significant compared to the structured interviews as it gives way for two-way interactions (Yin, 2011), consequently it allows the participants to provide historical information that will help in the understanding of the factors that build or block resilience. Also, it allowed the researcher to control the line of questioning to only what was important in answering the objectives of the study. While structured interviews rely on the words which make up the meaning of the researcher, the unstructured interviews aim at understanding respondents individually, specifically how they derive meaning from their lived experiences and cognition (Brenner, 2006). This is in tandem with tenets of the qualitative research that emphasizes depicting the complex social world from the perspective of the participant and not the researcher.

The interviews would then be analysed for recurring themes such as risk and protective personal, school, and parental involvement. The researcher collected the data by taking handwritten notes and this information represented the primary material. The interviews were carried out based on scheduled appointments, where the respondents were unavailable even after the appointments, several other appointments were scheduled.

3.9.3 The Interview schedule for Students

The researcher constructed a semi-structured interview schedule for students (Appendix F). Interviews are important, according to Denscombe (2017), because they generate data that delves into themes in great depth and complexity, allowing topics to be researched and issues explored. Moreover, Denscombe notes that the gist of interviews is in the

researcher's access to privileged information. These special insights about a subject of inquiry are given directly by the key players in the field. Thus, the information given by the students on their lived experiences built a rich data source for triangulation. It was also important to use semi-structured interviews because unlike the structured and unstructured interviews, this method is extremely adaptable since it allows the interviewee to speak extensively and elaborate on the issues raised by the researcher.

3.10 Reliability and Validity of Students Questionnaires

According to Mohajan (2017), the two most important features in the evaluation of any measurement instrument for successful research are reliability and validity. The researcher ensured that the reliability and validity of the instruments were catered for before the collection of the data.

3.10.1 Reliability of Questionnaires

Cohen et al. (2017) define reliability as the consistency, replicability, and dependability of data across time, instruments, and groups of respondents. Kothari (2014) posits that a measuring instrument is reliable if it provides consistent results. Kumar (2014) defined reliability as the consistency and stability of a research tool, making it predictable and accurate. The higher the level of consistency and stability, the more reliable it is. According to Anastasi and Urbina (1997), to establish the reliability of a measure, we expect a strong correlation coefficient— usually in the .80s or .90s—between the two variables or scores being measured. This indicates a strong and positive relationship between the variables.

The researcher used the internal consistency test of reliability which was established through computation of the Cronbach Alpha Coefficient to establish the reliability of the

questionnaire items. Cohen et al. (2018) argues that the reliability for quantitative analysis can be carried out only through split-half reliability and the Alpha Coefficient. However, McMillan and Schumacher (2010) advocate for the Alpha Coefficient as an appropriate type of reliability for survey research that comprises a range of possible answers for each item. Therefore, its main advantage over the split-half is that it can be used for multi-item scales, the questionnaire in this study comprises multi-item scales in form of the Likert Scale. This test assesses how effectively a group of items evaluates a specific trait within the test. The internal consistency of the items of the instrument was measured using the *Cronbach Alpha* and coefficients obtained per sub-scale were used to compute the overall instrument reliability. In a unidimensional test, the coefficient alpha is important for determining item-specific variance reliability (Cortina, 1993).

Cronbach Alpha increases as the number of items increases and as the intercorrelations between items increase. The acceptable value of the inter-item correlation is ≥ 30 (Cortina, 1993). Therefore, the researcher ensured that the number of test items in the questionnaire was adequate. Similarly, to ensure that the results of the quantitative data were reliable, the researcher piloted 30 randomly sampled students in Turkana County who were not part of the actual study.

In this study, the student's questionnaire (Appendix D) had four subscales; personal factors scale (Part I), school factors scale (Part II), parental involvement scale (Part III), and academic resilience scale (Part IV). The reliability of the four sub-scales was ascertained by an assessment of the scales' internal consistencies. Using Cronbach alpha, the researcher was able to investigate the qualities of measurement scales and the elements that make them up.

If the Cronbach alpha coefficient of a scale is more than 0.7, according to Oso and Onen (2011), a questionnaire has strong internal consistency. For each of the four subscales in the student questionnaires, the researcher calculated the reliability of multi-item opinion items independently. According to Table 4 below, the Cronbach's Alpha for the Student's questionnaires revealed that the instruments had adequate reliability for the study. According to Mohsen (2011), the suggested Cronchbach alpha is 0.7-0.9, and a high value of alpha > 0.9 indicates that the test items are redundant. Consequently, the scales in the student's questionnaire were within range and therefore fit for use.

Table 4

Cronchbach's Alpha Results for Questionnaires

Scale	**No. Items**	**Cronbach's Alpha**	**Cronbach's Alpha Based on Standardized Items**
Personal factors Scale	9	.845	.850
School factors Scale	9	.738	.743
Parental involvement Scale	12	.775	.786
Academic Resilience Scale	9	.784	.790

Source: Researcher, 2020

There are other studies that also established the reliability of internal and external protective factors. Hanson and Kim (2007) observed that the CHKSB's psychometric qualities allow for balanced coverage of internal and external protective variables, with moderate construct validity. For both boys (range.75–.93) and females (range.69–.91), the results reveal moderate to high internal consistency reliabilities (alpha coefficients) for each of the Resilience & Youth Development Module Report (RYDM) subscales. These findings support school psychologists' use of the RYDM as part of individual student social-emotional assessments.

Using a sample of students in Kiambu County, Kenya, Mwangi (2015) established the internal consistency of the CHKSB. Internal consistency was reported to be between .93 and .71 for the six sub-scales. With overall reliability of .87, the scale was considered reliable and suitable for this study as it was conducted among a sample of students from Kenya. Furthermore, Büyüköztürk (2016) concurred that correlation coefficients in the .30–.70 range indicate a moderate level of correlation, whereas correlation coefficients above.70 indicate a high level of correlation which the scales in this study attained.

The academic resilience scale for high school students by Martin and Mash (2006) was adapted to suit the current study. The original scale had acceptable fit values for confirmatory factor analysis (comparative fit index (CFI) = 0.97; non-normed fit index (NNFI) = 0.97), as well as a Cronbach's alpha of 0.89 and total item correlations ranging from 0.59 to 0.78.

Khalaf (2014) conducted a study to investigate the validity and reliability of the Martin and Marsh Scale in the Egyptian Context. The scale is reliable, according to the results of exploratory factor analysis and the Cronbach's alpha is 0.71. Cronbach's alpha was utilized to determine the scale's reliability. Gachigi et al. (2018) found an alpha coefficient of 0.78 upon using this academic resilience scale on high school students in Kenya. Due to the minimal number of items on the scale, this result was acceptable and an indicator of the stability of the scale scores. All these data confirm that the academic resilience scale by Martin and Marsh (2006) is reliable.

3.10.2 Validity of Questionnaires

This study utilized a mixed-methods approach and therefore incorporated both questionnaire and interview schedules to answer the research objectives. As such, this study used questionnaires to collect quantitative data, and therefore validation of this research instrument was done. For the qualitative data collection tool, interview schedules, the study assessed the credibility, dependability, confirmability and transferability of the research tool.

The importance of the test of validity is the most critical criterion in a research study (Kothari, 2014). Reynolds et al. (2021) define validity as the evidence that backs the analysis of test results as reflecting psychological constructs that the test was defined for. They nuance further that threats to validity occur when a test does not measure significant aspects of the constructs it purports to measure, or when the test measures content, features that do not relate to the test construct. Creswell and Creswell (2018) advocate for the use of multiple validity measures to increase the ability to access the accuracy of the findings besides persuading the readers of the accuracy. This study considered the content, construct, and criterion-related validity which are discussed below.

3.10.2.1 Content validity

Content validity is defined by Surucu and Maslakçi (2020) as a sort of validity that exposes the magnitude to which each item in the measuring instrument serves the function it was designed to serve. According to Matsumoto (2009), content validity is the extent to which test items are related to the target topic, performance, or content field. It aims to determine whether the test items can measure the entire content domain implied by the construct label.

In addition, Wallen and Fraenkel (2013) explored the extent to which the content validity of an instrument should extend. They uncover that this validity should find out whether the instrument logically ascertains the intended variable, the representativeness of the sample of questions, and the appropriateness of the format. Further, they pinpoint that it was important to consider the clarity of the print, the font size, the appropriateness of the language used, the adequacy of the space, and the clarity of the directions in the instrument.

Based on this guide, the researcher sought judges who were experts in Educational Psychology who expressed their opinions on the relevance, clarity, and applicability, particularly of the questionnaire scales. Coolican (2017) consents that it is fundamental for experts to judge the items to establish whether the collection of items has failed to test certain skills or if particular features of the domain are too weighted compared to others.

The judges were then provided with the operationalized definition of terms together with the objectives of the study and the sample. They then put a cross for every item that they felt did not relate to the objectives or the variables of the study, they also crossed items that were unclear and those that needed rephrasing as well as the formatting. Equally important, they commented on the font size, the spacing, the appropriateness of the language, and the clarity of the directions. After this, the researcher revisited each comment, and as advised made the necessary amendments until they assented to its validity.

According to Kumar (2014), the greater the variance attributed to the constructs, the higher the instrument's validity. Kumar defines content validity as the extent to which the items and questions cover all the characteristics of the issue being measured, thereby the greater the coverage, the higher the content validity. As advised, the study ascertained the content

validity by ensuring that the coverage of academic resilience was balanced; that is, the personal, school and academic resilience scale consisted of nine items while the parental involvement scale consisted of twelve items.

3.10.2.2 Construct Validity of the Questionnaire

Cohen et al. (2018) define a construct as an abstract theoretically derived. In addressing this validity two key stages are involved: ensuring that the construct and its key elements have been correctly and adequately defined. This may necessitate expert opinion, comparison with other tests of the construct in question, extensive literature analysis and assessment of research in the field, grounding in relevant theories of the construct in question, and fair operationalization of the constructs so that the data collection instruments only cover the intended construct and not any other (Cohen et al.,2018).

Examples of constructs used in this study were personal factors of social competence, autonomy, and sense of self, and sense of meaning and purpose; school factors of caring and supportive relationships, meaningful participation and high expectations; parental involvement academically, physically, socially, emotionally and communication of expectations by parents and academic resilience. These constructs were extensively covered in chapter one in the operational definition of terms section and chapter two which covered the literature review. The constructs are further described below.

A key construct of this study was academic resilience. This referred to the capacity of the secondary school students to persist in the schooling process from one level to another despite threatening situations in the education process due to marginalization because of personal, school and parental involvement factors. The variables linked to academic

resilience in this study were personal, school and parental involvement factors. The variables were measured in relation to academic resilience. This ensured that each construct contributed to the total variance in the phenomenon of academic resilience. The contribution of these factors to the overall academic resilience was an indication of the construct validity of the instrument.

Personal factors refer to the students' social competence, autonomy and sense of self, and sense of meaning and purpose and the questionnaire investigated academic resilience in relation to these factors. School factors refer to caring and supportive relationships from teachers and peers, meaningful participation in school, and high expectations by teachers in the school. Under school factors, the questionnaires examined academic resilience in relation to the listed factors. Under parental involvement, the study sought to measure academic resilience based on parental involvement academically, physically, financially socially, emotionally, and communication of expectations by parents. Parental involvement was defined as bonding and meaningful relationships with the family that define and shape the growing up of students.

The California Healthy Kids Survey, a thorough student self-report tool related to kids' health, was used to model the study's constructs. The Resilience and Youth Development Module (RYDM) of the survey are based on the idea that youth who have high levels of environmental assets in three areas – high expectations from adults, caring relationships with adults, and opportunities for meaningful participation – will develop resilience traits, a sense of connection to the school, and a desire to learn, all of which lead to positive academic, social, and health outcomes (Constantine et al. 1999). Every year, over 600,000 students in California participate in the Healthy Kids Survey, which includes this resilience

and youth development module. This, therefore, increased the suitability of the constructs adapted in this study. The external and internal resilience protective factors are shown in Appendix G.

Cohen et al. (2018) illustrate that to ensure that an instrument has construct validity, the data-collection instrument has to be administered to a single group that is known to have the construct in question and then identifying the responses to which items in the test did and did not correspond to the construct in question, then those that did not correspond are extracted. A pilot study of the instrument was conducted on form fours in public schools in Turkana County who did not constitute the sample for the study. As a result, questions that were ambiguous or not corresponding to the constructs were weeded out.

3.10.2.3 Criterion-related validity

According to Jackson (2015), criterion-related validity involves the degree to which a measuring instrument precisely predicts behaviour. Data collected with one instrument must be highly correlated with data collected with another instrument. In this regard, triangulation was used. This study entailed the use of a questionnaire to form four students, an interview schedule for students and teachers. The interview schedules for the students and teachers were used to confirm or disconfirm information from the students. The findings of the study confirmed the concurrent validity of the instruments used as the results of the two different instruments highly correlated as was discussed in chapter 4.

3.11 Trustworthiness and Authenticity of Qualitative data

The trustworthiness and authenticity of the qualitative research can be ensured by the researcher using several approaches namely; credibility, dependability, conformability,

and transferability as elucidated by Ravitch and Carl (2016). The term "credibility" refers to the process of determining whether the findings of qualitative research are believable from the standpoint of the research participants, whereas transferability refers to the extent to which qualitative research findings can be applied to other settings. Dependability is concerned with whether the same results would be obtained if the researcher tests the same aspect twice while conformability refers to the degree to which the findings could be substantiated by other sources. (Trochim & Donnelly, 2007).

3.11.1 Credibility of the Interview schedules

Denscombe (2017) argues that the salient question is how far qualitative researchers can show that their data is truthful and suitable. Therefore to address this concern, researchers ought to look into the aspects of triangulation, respondent validation, and grounding of the data. Johnson and Rasulova (2016) confirm that to maintain credibility, researchers should employ measures to minimize bias and have faith in their findings as being honest.

Triangulation of the methods, the data collection instruments, and the researchers formed a key pillar of this study and guaranteed the credibility of the research. This research used qualitative and quantitative methods and is, therefore, a mixed study method. The researcher triangulated the data sources to build on the themes by use of interview schedules and questionnaires. According to Creswell & Creswell (2018), when themes are developed based on the convergence of many sources of data or viewpoints from participants, this process can be regarded as enhancing the study's validity. The themes in the two sources were then established by investigating evidence from different sources. Credibility was established by the use of the concurrent triangulation approach which included the different methods of data collection; questionnaires and interviews. The

researchers were also triangulated as the study encompassed the researcher and two research assistants from each gender to prevent gender biases.

The researcher and her assistants also ensured that they each maintained a journal that helped to record the daily occurrences during the research process. In order to avoid researcher bias, the researcher clarified to the participants that their role in the study was merely to collect data for the purposes of completing their doctoral studies only. In addition, the researcher used member checking by asking the participants about the accuracy of the data. The questions that guided this process were derived from Ravitch and Carl (2016) : If the transcript accurately represented their viewpoint and what may be the differences, and why. Correspondingly, the researcher found out if there was anything in the transcript that they didn't understand or the researcher had overlooked so as to lessen the misinterpretation of interviewees' reports.

Finally, the researcher also incorporated a peer debriefer who reviewed and raised concerns about the research so that it was 'owned' by others and not only the researcher. Creswell (2014) points out that this criterion that involves an interpretation beyond the researcher adds credibility to the research. In addition, an external auditor unfamiliar to the researcher was also be incorporated to provide an objective assessment after the research.

3.11.2 Dependability of the Interview schedules

Denscombe (2017) posits that dependability is primarily centered around a researcher's demonstration that their study mirrors methods and decisions that other investigators can 'see' and assess in terms of how dependable the procedures are and how rational the decisions are which essentially serves as a baseline for the ability to repeat the studies. As

such, the researcher explicitly explained the appropriateness of methods selected for the study based on the goal of the study, the research questions, and the research methodology. The researcher also sought input from experts in Educational Psychology regarding the research design and other potential shortcomings that may have arisen from the study.

3.11.3 Confirmability of the Interview schedules

For confirmability, Ravitch and Carl (2016) advised that researchers use reflexivity throughout the research process. This is the researcher's understanding of how their identity, assumptions, positionality, and subjectivity might affect the data's meaning and interpretation. In this regard, the researcher kept a personal journal in which they recorded any personal biases that surfaced during the interview, the interview circumstances, and their relationship with the subjects as illustrated by (Korstjens & Moser, 2018). Further, the transcripts were constantly checked to ensure that there was no apparent mistake in the process of transcription, also the researcher constantly compared the data with the codes to ensure that the meaning of the codes did not change during the coding process. There was also regular communication among the researcher and assistants where the analysis was shared and cross-checked if they were following the study's goals.

The researcher also reported the data with an open mind. According to Denscombe (2017), all researchers should approach data analysis with an open mind, and qualitative researchers should not overlook data that does not match the analysis. This implies therefore that negative cases or deviant examples that contradict the emergent analysis must be identified and accounted for to see if there is some genuine explanation in them that could be accommodated in the current study. In this study, the researcher posted any

data that contradicted the general perspective of the theme as it was. Creswell and Creswell (2018) posit that by presenting contradictory evidence, the account becomes truthful.

3.11.4 Transferability of the Interview schedules

The transferability of this research was achieved by giving the reader detailed descriptions and excerpts from participants' stories, allowing them to understand the background and surroundings as they apply to their situation. The researcher provided a thorough description of the background of the study, methods, sampling procedure and sampling size, narration of the stories, and results as advocated by Korstjens and Moser (2018). Creswell and Creswell (2018) explain that in-depth descriptions of the setting with numerous perspectives about a theme, make the results more realistic as well as rich.

Moreover, the outcomes of the study were compared to the findings of similar other studies from different settings and groups to check if they corroborate. The researcher also used quasi-statistics as presented in the data presentation, analysis, and interpretation section by the use of actual numbers and figures instead of adjectives in place of words like ‘typical’, ‘rare’ or ‘prevalent’ (Maxwell,1996). The researcher also ensured that they used a rich and dense description to convey the findings. This is also key because future researchers interested in the transferability of the results will have a compact framework for comparison.

3.12 Data collection Procedure

First, the researcher obtained an introductory letter (Appendix L) from Moi University, School of Education, after which the researcher obtained an official permit from the National Commission of Science and Technology and Innovation (Appendix K). The

researcher and her assistants visited the sampled schools with a copy of the permit as proof of the credibility of the research and described the study's nature and objective to the school principal. The researcher with the help of her research assistants administered the questionnaire and conducted interviews about the study.

The research assistants were debriefed and advised on the data collection to ensure that they had a good understanding of the objectives and the purpose of the study. Moreover, they were chosen from each gender to cater for issues sensitive to each gender when they arose in the course of carrying out the research. A pilot data collection was carried out by the researcher and her assistants in Turkana County among thirty (30) secondary school students who were not part of the final data collection, to familiarize themselves with the data collection procedures and the issues that may be anticipated in the course of data collection. In collecting data from the questionnaires, the students were issued with the questionnaire, after which a debrief was done to clarify aspects of the questionnaire to the respondents.

3.13 Scoring of Questionnaires

The respondents were asked to give their perspectives on the different sections of the questionnaire as per the instructions given. The questionnaire (Appendix D) consisted of four subscales: Part I the scale of the personal factors, part II the school factors scale, part III the parental involvement scale, and part IV the Academic Resilience Scale.

The personal and school factors scales, each consisted of nine items which were measured based on a five-point Likert Scale ranging from strongly disagree to strongly agree with ratings as 1=Strongly Disagree (SD), 2= Disagree (D), 3=Undecided (U), 4=Agree (A) and

5=Strongly Agree (SA) which were then collapsed into agreeing, moderately agree and disagree.

The personal factors scale ranged between 9-45 with the lowest scale being below 20 depicting low social competence, low autonomy and sense of self and a low sense of meaning and purpose, 21-32 depicting moderate social competence, autonomy and sense of self ,and a sense of meaning and purpose whereas 33-45 depicted high social competence, autonomy and sense of self and sense of meaning and purpose.

This school factors scale ranged between 9-45 with the lowest scale being 20 depicting the least caring and supportive relationships, meaningful participation and high expectations, 21-32 depicting moderate caring and supportive relationships, meaningful participation, and high expectations whereas 33-45 depict high caring and supportive relationships, meaningful participation, and high expectations.

The parental involvement factors were organized into six categories; parental involvement academically, physically, socially, emotionally, financially, and communication of expectations to their children. These factors were assessed on a Likert scale ranging from Never to Always with ratings as 1= Never, 2= rarely, 3=Sometimes, 4=Often, and 5=Always which was eventually collapsed into Always, Sometimes, and Never. The scale ranged between 12 -60 with the lowest score being 27 and below depicting the least parental involvement, 28-43 depicting moderate parental involvement, and 44-60 depicting the highest parental involvement.

The academic resilience scale ranged between 9-45, with a score of 20 and below indicating a low level of academic resilience, while a score of 21-to 32 indicated a moderate level of

academic resilience, and a score of 33-to 45 indicated a high-level academic resilience. The use of weighted scoring allowed the researcher to adjust the score threshold to categorize academic resilience into three levels each: high, moderate, and low. The 'Not sure' response by the students did not imply the absence of the characteristic but that the respondent was unsure of the characteristic. The ultimate score of the questionnaire was calculated by recording and aligning responses to specific categories, dividing the summed weights by the maximum possible weight for that group, and then expressing the result as a percentage.

3.14 Coding of Interviews

Coding is the process by which the researcher starts to categorize parts of the raw data (Denscombe, 2017). The qualitative data was derived from the interview schedules for the teachers (Appendix E) and the interview schedules for students (Appendix F). Through this, the researcher was able to see if that particular portion of the data had something in common, pertain to the same issue, including accounts of the same emotion, or share the use of a related word or phrase about personal, school, and parental involvement factors after carefully scrutinizing the interview transcript.

The first step in the coding process was open coding. At the outset, the codes were fairly detailed, with pieces of data being labeled according to their content. These codes were subject to alterations and modification as the research progressed. The second step was Axial coding, here as the codes began to form, the researcher looked for ties and associations that allowed certain codes to be subsumed under broader headings and certain codes to be viewed as more important than others, this step then shifted the analysis towards the identification of key components. The third step that the researcher undertook was

selective coding where they focused their attention on crucial components and the most important categories and concerted their efforts on only these. The goal of this method was to come up with concepts that explained the factors that predict academic resilience and how they interrelated in a unified concept (Denscombe, 2017).

3.15 Ethical Considerations

Israel and Hay (2006) emphasize the need to protect the research participants. The study considered ethical issues as elaborated by the American Psychological Association (2020), the American Educational Research Association (2000), Milgram (1977), Creswell (2014), and Resnik (2015). A research approval from Moi University's Graduate School (Appendix L) and a research permit from the National Commission for Science, Technology, and Innovation (Appendix K) and Turkana County's County Director of Education were obtained before conducting the study. By enlisting the assistance of important persons, the researcher was able to acquire local authorization from the site and participants.

The researcher’s choice of location of the study was devoid of any vested interest in the results of the study. The researcher visited the sampled schools before the actual collection of the data, to notify the respondents that the studies were purely educational and that the research was a requirement by the University for the completion of the researcher’s doctoral studies.

Before collecting data, the researcher sought the guardian consent (Appendix B) from the principals, after the appropriate consent of the participants was sought (Appendix C) and the participant’s consent form signed, the participants were requested to participate in the data collection voluntarily. The respondents were also informed that they were free to opt-

out of the study at any point in the data collection. The researcher also endeavoured to respect and conform to the norms and charters of the society by first finding out the cultural, religious, and other societal aspects that needed to be appreciated. The researcher informed the key personnel in advance, of the anticipated schedule disruptions that could have occurred as a result of collecting the needful information, this was crucial as it built trust with the informants.

The researcher was guided by the principles of beneficence, non-maleficence, justice, respect, research merit, and integrity as outlined by Resnik (2015). In abiding by the principle of respect, at the beginning of the study, the researcher divulged the goal of the study by contacting the informants and their guardians, and informing them of the general purpose of the study.

During data collection, the researcher truthfully discussed the purpose of collecting the data and how the data collected was put into use. Each of the students was given five minutes to read the researcher's introduction letter and continue only if they agreed to willingly and voluntarily participate in the study. The participants were given 30 minutes on average to respond to all the sections of the questionnaire. The researcher collected information strictly adhering to the objectives of the study. The participants were assured of privacy and anonymity. The confidentiality of the participants was ascertained by the use of serial numbers instead of their actual names to keep the students' identities anonymous.

This researcher observed the principle of beneficence and non-maleficence by ensuring that the purpose of this research was solely to find new information that would be of benefit

to society. No other information was sought that was outside the objectives of the study and would hurt or expose the participants to risk.

The principle of justice was observed by selecting the participants based on the random sampling technique. This ensured that the participants in the study were not exploited or discriminated against (Resnik, 2015). As recommended by Creswell (2014), by avoiding leading questions and statements that would indirectly convey the researcher's position, the researcher also respected the power imbalances and exploitation of participants. The researcher did not ‘use ‘the participants by departing from the site once the data has been collected. The participants were given tokens of appreciation.

During data analysis, the researcher reported multiple perspectives and contradicting findings, while respecting the privacy of the participants by using fictitious numbers that represent student responses where illustrations were made using examples. During the presentation of the data, the researcher reported honestly and with clear language. The researcher will ensure that the findings of the study are shared among the participants, the stakeholders, and other researchers through publishing online and leaving a copy in the Moi University repository as well as NACOSTI. Similarly, the researcher acknowledged the ownership of the data by the researcher, participants, and university supervisors. In conclusion, the raw data of the study will be stored securely for five years after which it will be permanently and irreversibly pulverized.

3.16 Data Analysis and Presentation

Academic resilience in this study was viewed as a trichotomous psychological construct where students were considered to have either high, moderate, or low levels of academic

resilience. Due to the nature of the design of this research, the researcher conducted a side-by-side comparison of the quantitative and qualitative data, by reporting the quantitative statistical results and then a discussion of the qualitative findings. Summarizing huge amounts of raw data, categorizing, rearranging, and ranking data were all part of the data analysis process. This began by filtering the acquired data to eliminate irrelevant information.

3.16.1 Data Analysis and Presentation for Quantitative data

Despite having its weaknesses, quantitative analysis is advantageous because it provides data scientifically using statistical techniques that provide the analysis with an aura of respectability (Denscombes, 2017). Further, the statistical tests of significance enhance the confidence in the researcher in their findings and therefore the interpretations and findings are based on measured quantities that can be checked by other researchers for authenticity.

In analysing quantitative data, using a Statistical Package for Social Sciences (SPSS) version 25, for synthesis and analysis, the data collected was coded, entered, and analysed. Inferential and descriptive statistics were used. Descriptive data originated from the primary analysis of the research data that was collected. The descriptive data information was in the form of frequencies, percentages, means, scatter plots and standard deviations, prepared in tables to facilitate description, analysis, and conclusions. Kaliyadan and Kulkarni (2019) assert that descriptive statistics are important because they group, illustrate and summarize statistics. Appropriate inferential statistical procedures (Pearson's Product Moment and Multiple Regression Analysis) were used to test each hypothesis. A one-way ANOVA was also run to establish the significance of the results of Ho_4. All hypotheses

testing was done at α=.05 significance level, if p-value ≤α then the null hypotheses H_o would be rejected whereas if the p-value ≥ α null hypotheses H_o would be accepted. The following null hypotheses were tested at α =.05;

H_{O1}: There is no significant relationship between personal factors and academic resilience among secondary school students in Turkana County schools.

Statistical Test: Multiple regression analysis was used because personal factors were considered at three distinct levels: social competence, autonomy and sense of self, sense of meaning and purpose, and Pearson Product Moment Correlation Coefficient was used to establish the relationship between personal factors and academic resilience**.**

H_{O2}: There is no significant relationship between school factors and academic resilience among secondary school students in Turkana County schools**.**

Statistical Test: Multiple regression analysis was used because school factors were considered at three distinct levels: caring and supportive relationships, meaningful participation, and high expectations, and Pearson Product Moment Correlation Coefficient was used to establish the relationship between school factors and academic resilience.

H_{O3}: There is no significant relationship between parental involvement factors and academic resilience among secondary school students in Turkana County schools.

Statistical Test: Multiple regression analysis was used because parental involvement was evaluated on six levels; academically, physically, socially, emotionally, financially and communication of their expectations to their children, and Pearson Product Moment Correlation Coefficient was used to establish the relationship between parental involvement and academic resilience.

H_{O4}: There is no significant difference in the comparison of the predictive values of personal, school, and parental involvement factors on academic resilience among secondary school students of Turkana County.

Statistical Test: Multiple regression analysis was used as it aided to investigate how well the set of the independent variables was able to predict the academic resilience of secondary school students in Turkana County. The analysis provided information about the relative contribution of each of the variables that make up the model and an ANOVA was used to assess the statistical significance of the result of the Regression Analysis.

The Pearson Product Moment correlation is used when measuring the strength of a linear correlation between two variables and one of the assumptions is that the variables must be either in interval or ratio measurement scales. To establish the relationship that existed between the variables, the total score for each of the independent variables (personal, school, and parental involvement factors) was generated and correlated with each of the student's academic resilience (dependent variable).

3.16.2 Data Analysis and Presentation for Qualitative data

Braun and Clarke (2020) categorize thematic analysis into three different approaches namely; coding reliability approaches, reflexive approaches, and codebook approaches. This study took on the reflective approaches which Clarke and Braun (2018) describe as involving themes developed at a later stage from codes and conceptualized as patterns of shared meaning underpinned by a central organizing concept.

In addition, according to Willig and Rogers (2017) thematic analysis can be either of critical or experiential orientations. Experiential orientations focus on what participants

think, feel and do, it is also anchored on the theoretical perspective that language reflects reality. The critical orientation seeks to interrogate the various patterns of meaning, and language is viewed as creating rather than reflecting reality. This research incorporated an experiential orientation.

Denscombe (2017) reports that qualitative analysis techniques are also advantageous in the sense that there is richness and detail to the data in the way that it is concerned with complex social situations, it allows ambiguities and contradictions, there is also the prospect of alternative explanations and that the data and the analysis have their grounding in the conditions of social existence.

Consequently, to analyse qualitative data, the raw data was read through and coded, a concurrent triangulation approach where the themes were established by converging interviews from the participants was used. Identifying, analysing, and reporting themes within data, as well as interpreting various aspects of the research subject, are all part of the thematic analysis (Braun & Clarke, 2006). Processes including data reduction, display, conclusion, and verification are all part of qualitative data analysis. The raw data collected from the respondents during the interviews were transcribed and read several times to ensure that there were no gaps, inconsistencies, or extraneous data.

The researcher searched through the interviews to find repeated patterns of meaning. The major themes were then shaped into general descriptions. The researcher then coded the data by writing a word that represented a category in the margin, the codes were based on emerging and pre-determined themes. The codes were then used to generate the themes for analysis. The themes and descriptions were then represented as a detailed discussion of the

various themes, including subthemes, specific illustrations, and multiple perspectives from individuals. The researcher then interpreted the qualitative research findings. In the phases depicted in Appendix H, transcription was evaluated as highlighted by Braun and Clarke (2006). Table 5 provides a summary of this study's data analysis procedures.

Table 5

Data Analysis Procedure

Objective		Variables	Quantitative Analysis	Qualitative Analysis
i.	To examine the levels of academic resilience among public secondary school students of Turkana County.	Academic resilience	Frequencies, Means, Percentages, Standard deviation,	-
ii.	To investigate the relationship between personal factors and academic resilience.	Social competence autonomy and sense of self, sense of meaning and purpose	Frequencies, Means, Percentages, Standard deviation, scatter plot Pearson Product Moment Multiple Regression	Thematic Analysis
iii.	To investigate the relationship between school factors and academic resilience	Caring and supportive relationships, meaningful participation and high expectations	Frequencies, Means, Percentages, Standard deviation, scatter plot Pearson Product Moment Multiple Regression	Thematic Analysis
iv.	To investigate the relationship between parental involvement factors and academic resilience	Academically, Physically, Socially Emotionally, Financially, Communicatio n of expectations	Frequencies, Means, Percentages, Standard deviation, Pearson Product Moment Multiple Regression	Thematic Analysis
v.	To compare the predictive value of personal, school, parental involvement on academic resilience	Personal factors School factors Parental involvement	Multiple Regression ANOVA	Thematic Analysis

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Overview

The process of collation, structuring, and giving meaning to the collected raw data which is the purpose of this chapter is significant as it serves to answer the research objectives of this study and consequently forms a basis for decision making, policy formulation, and the generation of new knowledge in as far as academic resilience is concerned. This chapter presents the analysis and interpretation of data that addresses the five objectives of the study: to examine the level of academic resilience among public secondary school students of Turkana County, to investigate the relationship between personal factors and academic resilience, to investigate the relationship between school factors and academic resilience, to investigate the relationship between parental involvement factors and academic resilience; and to compare the predictive value of personal, school and parental involvement factors on academic resilience.

4.2 Questionnaire Response Rate

The target population of the study was 16444 students, whereas the accessible population consisted of 8343 students. The students to whom the questionnaires were administered constituted a sample size of 382. Conversely, only 378 questionnaires were dully filled, the remaining were considered spoilt as the respondents did not complete them. The data collected revealed that 378 students participated in the study. The actual study sample was therefore 378 student respondents.

From a total of 382 questionnaires administered to the students, 378 of them were returned for data analysis, which was equivalent to a 98.9 % response rate. This was considered adequate and representative of the study population (Cohen et al., 2018). According to Morgan (2006), a 50 % return rate is appropriate, a 60 % return rate is sufficient, and a return rate of over 70 % is excellent. Based on this assertion then, this study's questionnaire response rate was considered very good. This kind of response was attributed to the presence of the researcher during the data collection process and encouraging the students to participate in the study. The school administration also invigorated the students to take part in the study.

The teachers' and students' interview schedules response rates were adequate, the researcher anticipated to interview 16 teachers and 16 students but by the tenth teacher and tenth student, no new themes emerged from the interviews, hence the interviewer stopped at the tenth interviewee respectively. Mason (2010) opines that the ideal sample size for qualitative interviews is 10-30 participants. This was achieved in this study due to the scheduling of appointments with the participants beforehand and the researcher personally conducting the interviews.

In summary, therefore, in the actual study, 16 public secondary schools participated in the study, 378 students responded to questionnaires while 10 students and 10 teachers responded to the interview schedules.

4.3 Level of Academic Resilience

The first objective was to examine the level of academic resilience among public secondary school students in Turkana County. This objective was achieved by finding an answer to

the following research question; what is the level of academic resilience among public secondary school students in Turkana County? Table 6 below shows the descriptive statistics on students' academic resilience which was the independent variable in this study.

Table 6

Students' Academic Resilience

Academic resilience	**Agreed**		**Moderately Agree**		**Disagree**		**Mean**	**SD**
Items	***F***	***%***	***F***	***%***	***F***	***%***		
1	331	87.6	41	10.8	6	1.5	4.44	1.03
2	310	82	56	14.8	12	3.1	3.91	1.12
3	232	61.4	89	23.5	57	15	3.76	1.52
4	153	40.5	161	42.6	64	16.9	3.30	1.82
5	187	49.5	87	23	90	23.8	3.15	1.41
6	354	93.6	12	3.2	12	3.1	4.57	1.09
7	368	97.4	7	1.9	3	0.79	4.44	1.64
8	293	77.5	49	12.9	36	9.5	4.21	1.36
9	378	100	0	0	0	0	4.51	1.01
							4.03	1.33

Note .N=378,F=Frequency

From table 6, the mean average on academic resilience was 4.03 with a standard deviation of 1.33. Further, the scores ranged between 9-45, with a score of 20 and below indicating a low level of academic resilience, while a score of 21-32 indicated a moderate level of academic resilience and a score of 33-45 indicated a high academic resilience. The mean of the scores was 39.75, which lies between a score of 33-45. The interpretation, therefore, was that public secondary school students of Turkana County have a high academic resilience.

The findings of this study corroborated with the findings of studies by Dias and Cadime (2017) and Permatasari et al. (2021) who found that school and family/home factors predicted academic resilience, Mwangi et al. (2015) also established a significant

relationship between internal and external protective factors and academic resilience in addition to Garca-Crespo et al. (2021) who found a significant relationship between school and family factors on academic resilience. Moreover, these findings are in tandem with assertions by Ungar (2021) that resilience is a product of multisystem factors.

4.4 Relationship between Personal factors and Academic Resilience

The second objective was to investigate the relationship between personal factors and academic resilience. This objective was achieved by finding an answer to the following research question; what is the relationship between personal factors and academic resilience? Indicators of personal factors were social competence, autonomy and sense of self, sense of meaning, and purpose. Table 7 shows a summary of the students' perspectives in percentage frequencies.

Table 7

Personal factors scale

Personal factors	**Agreed**		**Moderately Agree**		**Disagree**		**Mean**	**SD**
	F	***%***	***F***	***%***	***F***	***%***		
1.Social Competence	328	86.8	30	7.9	20	5.3	4.32	0.91
2.Autonomy and sense of self	302	79.9	40	10.6	36	9.5	4.19	0.95
3.Sense of meaning and purpose	365	96.6	4	1.1	9	2.4	4.73	0.64
Mean							4.42	0.83

Note.N=378,F=Frequency

From the analysis of the views of the respondents in table 7, it emerged that although the students held different levels of social competence, autonomy, and sense of self, sense of meaning, and purpose, generally over half of the respondents were positive on personal

factors. For example, sense of meaning and purpose recorded the highest percentage (96.6%) on the scale of agreed followed by social competence (86.8%) while autonomy and sense of self-recorded the lowest percentage (79.9%) among the three indicators but which was also considered above average (50%) hence a positive response. This was reflected by a mean response rate of 4.42 (standard deviation=0.83), on a scale of 1 to 3.

Interviews from students revealed that most learners are socially competent, a quality of resilient students which kept them in school. Some students had this to say about what kept them going in school, 'I have very good friends, some in my class and some in other classes, and we assist each other in academics and also when we have other problems. Most of my classmates are good people (Student, 7).

> You see in form two I almost dropped out of school because my parents were not able to pay my school fees, but I was lucky I sought help from a well-wisher who agreed to pay my school fee and that is why I am in school now (Student, 1).

From the excerpt by students 7 and 1, the theme of social competence emerges because they exhibit a sense of cooperation,problem solving, communication, and empathy. Student 1 can find solutions to their problems while student 7 knew whom to go to when they had a problem and these are their peers. Owing to the desire of the student to be in school they had to seek help from a well-wisher. Academically resilient students demonstrate a sense of empathy, problem-solving, cooperation, and communication. This finding conforms to the findings of Fleischmann (2018) that student perception of school climate and school connectedness, assist in the building of resiliency in a statistically significant and meaningful way and Turner et al. (2017) who established that social competence through cooperative interaction is a component of resilience.

Concerning autonomy and sense of self, regarding the item ‘I can solve my problems, 64.8 % of the students strongly agreed with the item, 19.3% were undecided while 7.9% strongly disagreed with the item which indicated low autonomy and sense of self. Judging by the interviews, some learners showed that they had a strong sense of self-efficacy while some exhibited a low sense of self-efficacy.

Some students had this to say when asked about their ability to solve problems by themselves, ‘Most of the time I solve the problems that I have by myself, although not all at least 90% of my problems. For example, when I realized that Chemistry was giving me a challenge I decided to seek help from a student who is the best performer in my class (Student 4), ‘Even when I think I have done my best to solve a problem I still doubt my decision. I feel like someone else would have solved it in a better way (Student, 7).

From student 4, the theme of self-efficacy emerges. The student’s belief that they were able to solve most of their problems was an indication of high self-efficacy, while student 7 demonstrated a low self-efficacy. The fact that the student was able to point out their weakness in Chemistry revealed some sense of self-awareness. The excerpt of student 4 reflected a low self-efficacy as the student exhibited uncertainty as to whether they would excel in school or not.

The finding is in line with He (2014) that found a relationship between self-efficacy and academic resilience. The excerpt of student 2 implied that they believed they had what it took to excel academically. Consequently, the themes of self-efficacy and locus of control emerge. These findings were consistent with the findings of Rukmana and Ismiradewi (2022), Rajan et al. (2017), Victor-Aigboidion et al. (2020), Anagnostaki et al. (2016), and

Cheung et al. (2021) that established a significant correlation between self –efficacy and academic resilience.

A majority of students demonstrated a strong sense of meaning and purpose. For instance, when asked whether they planned to join university or college, 296 (78.3%) strongly agreed with the item which indicated a strong sense of meaning and purpose, 5(1.3%) were undecided while 6(1.6%) disagreed indicating a low sense of meaning and purpose. In several ways, qualitative data revealed the extent to which some personal factors correlate with academic resilience through the expressions of students and teachers who were interviewed. Interviewees commented:

> I am in school to better my future, I have seen that education can change my future, I have seen some people in our village who have gone to school and changed their backgrounds, I also want to get my family out of poverty and the only way is through education (Student, 9).

> I really want to study hard so that I can go to a university out of my county so that when I come back I can improve my county through what I will have seen from other counties. I want to change the wrong narrative that people out there have about our county (Student, 8).

From the excerpt by students 9 and 8, it emerged that when learners have a goal they want to achieve, they are driven to stay in school and to persist through the schooling process. For instance, student 9 had a goal to change their future and to drive their family out of poverty. The respondents' views indicated that their autonomy and sense of self, combined with their sense of meaning and purpose were associated with their academic resilience.

The students stayed in school because education meant changing the future of their families and Turkana County. The findings corroborate with the findings of Mullin (2019) and Liu and Huang (2021) which emphasize autonomy as a personal resource that boosts resilience in children.

When probed whether they believed they will excel in education, while one interviewee replied assenting another expressed some sense of self-doubt in their ability to excel in academics, 'I am not sure I will make it because sometimes I put in a lot of effort but I still perform poorly, but I will still try my best (Student, 4). Commenting on why the students persist in school, one teacher made this observation, 'You know a majority of these students have goals and dreams in life, and this drives them to keep schooling. The hardship and poverty that most of these learners have experienced motivate them to be better. These students treat education as an equalizer (Teacher, 9).

The findings corroborate with the findings of Jowkar et al. (2014) that support the premise that achievement goal orientation correlates with academic resilience. However, they contradict those of Karaman et al. (2020) who explored the connection between the meaning of life and academic resilience and established that meaning in life had a weak insignificant relationship with academic resilience($r = 09$, $p > .05$).

To investigate whether there was any statistically significant relationship between Personal Factors and Academic Resilience among Public secondary school students in Turkana County schools, the null hypothesis was tested. The hypothesis was stated as follows:

H_{O3}: There is no significant relationship between Personal factors and Academic resilience among Public secondary school students in Turkana County schools.

A parametric test, Pearson Product Moment Correlation Coefficient was computed, with scores on personal factors as the independent variable and academic resilience as the dependent variable. The level of personal factors was computed from the frequency of responses and converted into continuous scale, where high scale ratings implied favourable personal factors and vice-versa. Academic resilience among students for each respondent was obtained from the Academic Resilience Scale. The significance level (p-value) was set at .05. If the p-value was less than 0.05, the null hypothesis would be rejected and the conclusion reached that a significant difference does exist. If the p-value was larger than 0.05, it would be concluded that a significant difference does not exist. Table 8 shows the correlation analysis results in SPSS output. To test the correlation between indicators of personal factors and academic resilience, Pearson Product Moment correlation was computed. The results from the analysis are presented in Table 8.

Table 8

Correlation coefficients of Personal factors

Personal factors	**N**	**r**	**Sig. (2-tailed)**
Social competence	378	0.544	0.000
Autonomy and sense of self	378	0.599	0.000
Sense of meaning and purpose	378	0.638	0.000
Overall	**378**	**0.712**	**0.000**

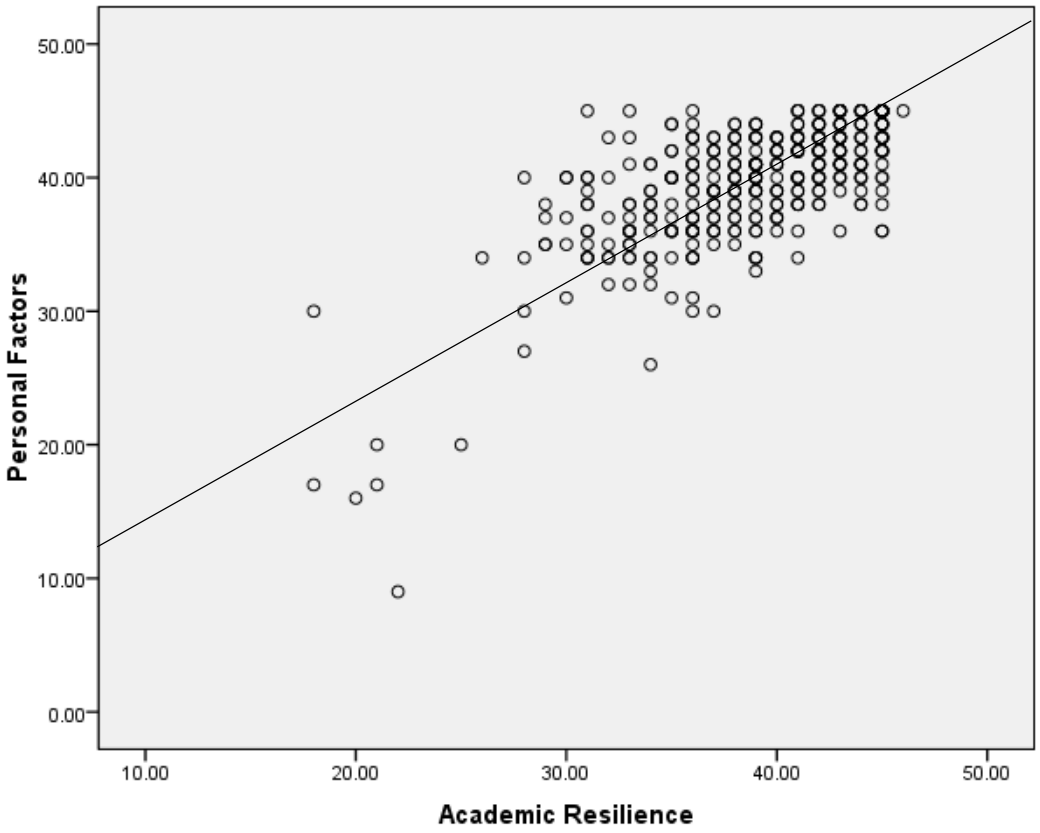
The study results revealed a statistically significant relationship between sense of purpose and sense of meaning ($r=0.638$, $P<0.05$). This was followed by autonomy and sense of self ($r=0.599$, $P<0.05$), and then social competence ($r=0.544$, $P<0.05$). Interestingly, this

finding is in line with that of Mwangi et al. (2015) who established that sense of meaning and purpose and academic resilience had the highest correlation ($r=0.93$, $P<0.01$) followed by autonomy and sense of self ,and finally social competence. This finding also corroborated with the findings of other studies by Rajan et al. (2017), and Kronborg et al. (2017) who reported a significant correlation between academic resilience and self-efficacy, locus of control. However, the statistically significant correlation between sense of meaning and purpose ($r=0.638$, $P<0.05$) in this study, was contrary to that of Karaman et al. (2020) who established that meaning in life had a weak insignificant relationship with academic resilience($r = 0.09$, $p > 0.05$).

The analysis also revealed that there was a strong significant positive correlation between personal factors and academic resilience ($r=0.712$, $P<0.05$). Given the statistical significance of the relationship, the hypothesis that "there is no statistically significant relationship between personal factors and academic resilience among the secondary school students in Turkana County" was rejected. Therefore, it was concluded that there is a statistically significant positive relationship between Personal factors and Academic Resilience among secondary school students in Turkana County. Graber et al. (2015) assert that certain dispositional characteristics of a person aided them in confronting seemingly insurmountable obstacles and coping with daily stressors that slowly undermined well-being.

Figure 4

Relationship between personal factors and Academic Resilience



In addition, from the scatter plot in Figure 4, there was evidence of a positive correlation between personal factors and academic resilience. The pattern of dots appears to slope from lower left to upper right, a sign of a positive correlation between the two variables. Further, the line of best fit (trend line) revealed that there was a correlation between the two variables. The scatters incline in the vicinity of the identity line, implying that the relationship was real and not by chance. This was in agreement with Rajan et al. (2017), Kronborg et al. (2017), and Anagnostaki et al. (2016) who established that different personal factors significantly predicted academic resilience. Further, the results corroborated with those of Mwangi et al. (2015) who established that internal protective

factors were positively correlated to academic resilience. A Regression Analysis was used to compute the coefficient of determination.

Table 9

Model Summary of Regression of Personal factors

Model	R	R^2	Adjusted R^2	Std. Error
1	0.717[a]	0.514	0.510	3.54201

a. Predictors: (Constant), Sense of meaning and purpose, Autonomy and sense of self, Social Competence

Table 9 revealed that indicators of personal factors explain 51.0% of the variation in academic resilience. This implies that the model is good enough to explain the variation in academic resilience (adjusted $R^2 = 0.510$). The model summary reveals that the personal factors accounted for 51% (adjusted $R^2 = 0.510$) of the variation in academic resilience among public secondary school students in Turkana County. This finding implies that variation in academic resilience is 51% explained by the variability of the personal factors among secondary school students.

4.5 Relationship between School factors and Academic Resilience.

The third objective was to investigate the relationship between school factors and academic resilience. From the objective, a research question was derived which stated that; what is the relationship between school factors and academic resilience? Indicators of school factors were, caring and supportive relationships in school, meaningful participation in

school, and high expectations from teachers. In order to answer the research question, participants were requested to respond to the items in part II of the students' questionnaire. The respondents' views were summarized in percentage frequencies as shown in Table 10.

Table 10

Descriptive statistics on school factors scale

School factors	**Agreed**		**Moderately Agree**		**Disagree**		**Mean**	**SD**
	F	***%***	***F***	***%***	***F***	***%***		
1. Caring and Supportive relationships	325	86	28	7.4	25	6.6	4.22	0.96
2. Meaningful participation	275	72.8	55	14.6	48	12.7	3.92	1.13
3. High Expectations	363	96	9	2.4	6	1.6	4.64	0.66
Mean							4.25	0.92

Note. N=378,F=Frequency

The results generally showed that school factors were associated with high academic resilience 4.25. From Table 10, the study showed the following findings of school factors in relation to academic resilience: among the school factors, the indicator that had the highest percentage of students agreeing (96%) was high expectations, implying that a majority of the students had teachers who verbally expressed the high expectations they had for them, this was followed by the indicators of caring and supportive relationships (by the teachers and students), where 86% agreed, while 72.8% agreed that they engaged in meaningful participation in the school. On a scale of 1 to 3, school factors generated a mean response rate of 4.25 (standard deviation=0.92) in general.

The findings of this study were confirmed by the qualitative data obtained from the teachers and students. It emerged that for instance, the environment and resources in the school created a conducive environment for the learners. The schools had put together strategies to keep the learners in school which eventually translated to high academic resilience. Some teachers said this when they were asked about the school factors that keeps learners in schools:

> When a student gets to form 3, we give them academic mothers/fathers who talk to them about academics and solve personal problems in case they have. You see, some of these students come from very stressful backgrounds and just need to be shown some love. Some of these students are also encouraged to see some of us who grew up and studied here excelling, we always tell them that if we made it then they had no excuse (Teacher, 3).

The parent-like relationship between the teachers and the students, as shown in the excerpt by Teacher 3, illustrated that the students had someone to talk to and this established a friendly bond between them. In addition, the teachers' expectations of their students are perceived. More qualitative data obtained from teachers also indicated that teachers showed concern and support to the learners due to the difficult family backgrounds from which a majority of the learners came. For instance, one teacher said that:

> Most of these students come from very difficult backgrounds and so we try as much as possible to create a warm school environment for them. I have a student who came to me when she was in form 2 and on the verge of dropping out of school. She is now in form 4, she confided in me, she really had deep problems and I really

> empathized with her and since that day, I have been buying her some basic school needs such as books, geometrical set, and pens, once in a while I buy her uniform, just from my pocket. I am so glad she is almost completing school (Teacher, 1).

As expressed in the above statement (Teacher 1), having a teacher who can listen to a student promotes academic resilience. In this case, the student persisted through schooling because of a teacher who listened to them which is an expression of care and support. Hence, despite the hard condition from the home, the school played a critical role. Another student had this to say about how they perceived their relationships in school with teachers and peers:

> I am happy to be in school than at home, our teachers understand us and mentor us, they have time for us but at home, no one cares about education, no one listens to me. I requested my Kiswahili teacher to buy me a watch so that I can keep time for my studies and she did, I was so happy (Student, 5).

When asked whether their peers were supportive. This was the response given by one student:

> Some students are good while others are harsh. But for me, those that are my friends help me a lot. One day I fell sick in school, imagine it was my friend who used to wash for me my clothes until I got well. When I recovered she even helped me to copy notes from what they had been taught. I also help her, we share our shopping when one finishes theirs (Student, 10).

The excerpt by student 5 depicts caring and supportive relationships in the school as there is evidence of ‘close’ relationships with teachers. Being happy in school confirms that the

care and support that students get from their teachers makes them happy being in school. The student's feeling of being understood and listened to is a key school factor that promotes academic resilience. From Student 10, a warm relationship with peers is revealed. A recurrent theme in the student interviews was a sense of warmth and connectedness to the school which is an indication of protective school factors that promote academic resilience. Another teacher commented:

> Our students participate in co-curricular activities, any student can participate no matter their academic performance. Also, the school caters for the spiritual, emotional, psychological needs of the students which most parents/guardians are ignorant about (Teacher, 3).

This study's findings are similar to those of another study by Rustham et al. (2022) who found a positive relationship between peer social support and academic resilience and, Carrillo (2018) who revealed that a caring and supportive environment within the school significantly predict academic resilience. Similarly, Agasisti et al. (2018) found out that, a negative school climate mired academic resilience-building, which also supports the present study finding. Liu et al. (2020) concur that school-related protective factors promote students' academic engagement which contributes to resilience. In addition, Davis et al. (2019) vouch for a student having a sense of belonging in school whereas, Forster (2017) and Ni et al. (2020) advocate for having positive relationships with teachers. This is also supported by an evaluation study by Weissman (2013) who found that students who experienced caring and supportive relationships reported stronger resiliency. Finally, they concur with Romano et al. (2021) who found an association between teacher emotional support and student academic resilience.

In contrast to these findings, Frisby et al. (2020) found that when both instructor and peer relationships support were considered together, only peer connectedness was significantly and positively associated with academic resilience and student hope when faced with an academic challenge. The finding of this study also disconfirms the findings by Liew et al. (2018) who established that teacher-student relationships do not predict academic resilience.

Concerning meaningful participation in school, 39.9% of the respondents strongly agreed that they engaged in interesting activities in school while 37.0% agreed, only 12.7% disagreed, implying that they did not engage in any interesting activities in school. A student had this to say regarding their participation in school activities, ‘School is fun compared to home, we go for games, we go for music festivals, we hold debates, and we have C.U (Christian Union). I never miss out on games, I love games (Student, 5).When asked about the roles they played in class, another student commented that:

> Because I always perform well in English, I am the subject champion, I liaise with the teacher regarding anything that would make the students perform well in English. I also help students who have difficulty in the subject, so I ensure that my grades in English are always above expectations (Student, 8).

The excerpt from Student 5 confirms the various meaningful activities that the students engaged in. Terming school as ‘fun’ is a testament to the activities that make school exciting other than just learning, making school a conducive environment to be in. From the interview by student 8, it was clear that when a student engaged in meaningful activities, they were motivated to be in school and that is an indication of resilience. These

findings are confirmed by Nolan et al. (2014) who support that meaningful participation entailed allowing children to make decisions on their own rather than providing constant assistance. Fredricks and Eccles (2006) linked school meaningful participation to higher academic resilience and positive educational outcomes.

However, an interesting yet divergent and conflicting discourse emerged from one of the interviewees. When asked about how they felt being in school, the student alluded to the notion of disliking school though it was a better option than being at home. This is what the respondent had to say, 'I don't like school, I find the environment too restricting because of the rules that are too strict, but it is better I stay here than at home.'(Student, 6).

From the expressions of student 6, the school environment is not conducive because of the rules and regulations that have to be observed, this expression may in no way indicate a risk factor in school as this may be more of a question of the student's sense of meaning and purpose than the school environment. Nevertheless, this finding confirms the finding of Frisby et al. (2020) that students' interpersonal relationships with instructors were negatively related to their academic resilience.

On high expectations from teachers in school, interestingly, 66.4% of the students reported that they strongly agreed that their teachers believed they will succeed, while 2.9% were not sure, only 1.9% strongly disagreed with this item. Teachers were asked about how they communicated the expectations they had of their students while the students were asked how they knew what teachers expected of them. This is what they had to say respectively:

> We also have motivational talks for these students where we talk to them about careers, passing in examinations and we also set goals for them, every year we

> always have a target and beating that target has a big reward like taking them for a tour out of this county. This has been a big motivation for them. (Teacher, 8).
>
> We have class assemblies every Wednesday, our class teacher encourages us to work hard to make our future better. He has set targets for everyone in the class, if you don't achieve your target you must give a good reason as to why. I have to work hard to reach my target, I have no option (Student, 4).

From the account of teacher 8, high expectations by teachers emerged; this was revealed by the motivational talks from which targets are set and students rewarded; the participation in co-curricular activities was also an indication of meaningful participation in school. All these themes indicated protective school factors. Student 8 talked about the class meetings where targets were set and monitoring of the targets done. From the target setting, high expectations by the teachers were concluded. The finding seems to be in agreement with that of Mwangi and Ireri (2017) who concluded that high expectations by teachers significantly predict academic resilience.

To investigate whether there was any statistically significant relationship between School Factors and Academic Resilience among Public secondary school students in Turkana County schools, the null hypothesis was tested. The hypothesis was stated as follows:

Ho_2: There is no significant relationship between School factors and academic resilience among Public secondary school students in Turkana County schools.

A parametric test, Pearson Product Moment Correlation Coefficient was computed, with scores on school factors as the independent variable and academic resilience as the

dependent variable. The level of school factors was computed from a frequency of responses and converted into continuous scale, where high scale ratings implied favourable school factors and vice-versa.

Academic Resilience among students for each respondent was obtained from the Academic Resilience Scale. The significant level (p-value) was set at 0.05. If the p-value was less than 0.05, the null hypothesis would be rejected and the conclusion reached that a significant relationship does exist. If the p-value was larger than 0.05, it would be concluded that a significant relationship does not exist. Table 11 shows the correlation analysis results in SPSS output. In order to test the correlation between indicators of school factors and academic resilience, Pearson Product Moment correlation was computed. The results from the analysis are presented in Table 11.

Table 11

Correlation coefficients of school factors

Indicator	**N**	**r**	**Sig. (2-tailed)**
Caring and supportive relationship	378	0.464	0.00**.
Meaningful participation	378	0.097	0.06
High expectations by teachers	378	0.428	0.00**
School factors	**378**	**0.550**	**0.00****

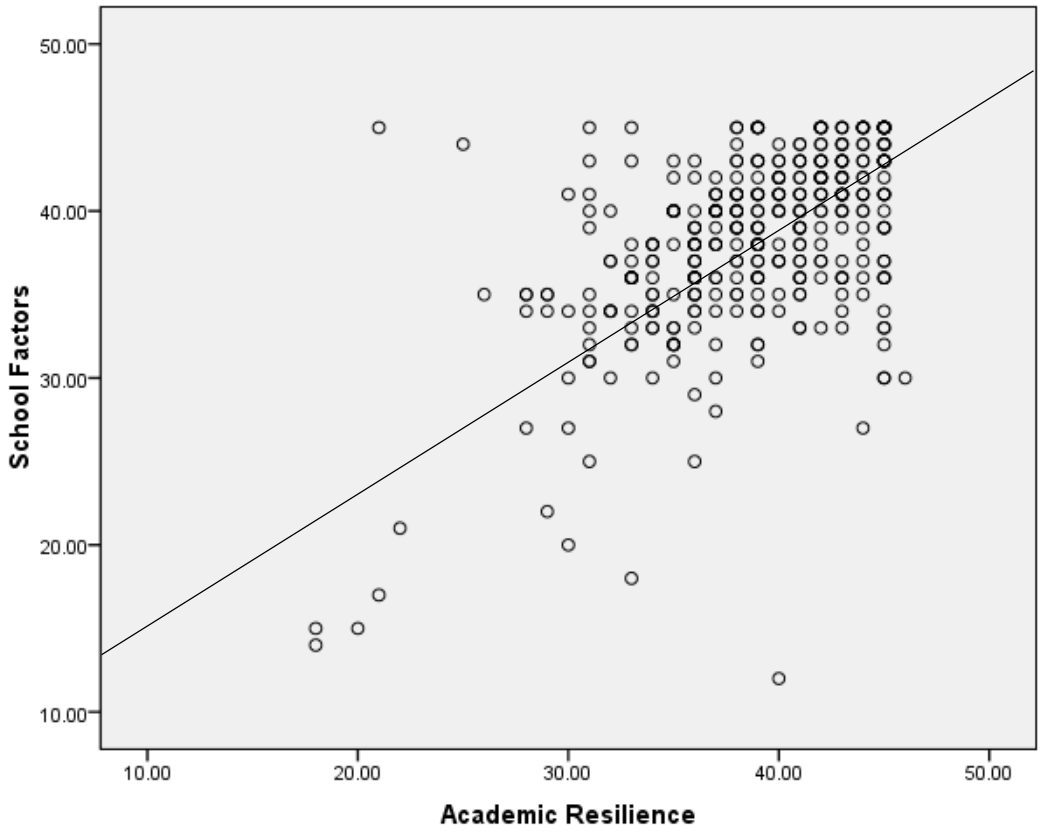
**. Correlation is significant at the 0.05 level (2-tailed).

The results revealed that there is a statistically significant relationship between caring and supportive relationships and academic resilience ($r=0.464$, $P<0.05$). It was also revealed indicated that there is a statistically significant correlation between the high expectation of teachers and academic resilience ($r=0.428$, $P<0.05$).

However, there was no statistically significant correlation between meaningful participation and academic resilience (r=0.097, n=378, P>0.05). Overall, the findings demonstrated a statistically significant relationship between school factors and academic resilience (r=0.550, n=378, P0.05). Given that the relationship was statistically significant, the hypothesis that "there is no statistically significant relationship between school factors and academic resilience among Public Secondary school students in Turkana County" was rejected. It was therefore concluded that there is a statistically significant positive relationship between School factors and Academic Resilience among Public Secondary school students. The findings of this study corroborate with the findings of other studies by Mwangi et al. (2015) regarding high expectations, caring relationships but not meaningful participation , Goldman and Brann (2016), Agasisti (2018), Rothman and McMillan (2003) all of whom reported a significant positive relationship between school factors and academic resilience. A scatter plot was generated to further demonstrate this association, as seen in Figure 5.

Figure 5

Relationship between school factors and Academic Resilience



From the scatter plot in Figure 5, there is evidence of a positive correlation between school factors and academic resilience. The pattern of dots appears to slope from lower left to upper right, a sign of a positive correlation between the two variables. Further, the line of best fit (trend line) reveals that there was a correlation between the two variables. The scatters incline in the vicinity of the identity line, implying that the relationship was real and not by chance. This was in agreement with Mwangi et al. (2017) study in Kenya which reported a statistically significant, though weak, positive relationship between school factors and academic resilience among secondary school students, and Agasisti et al.

(2018) that highlighted the significance of the school environment and resources in the mitigation of academic resilience.

Similarly, the study aimed to determine the extent to which school factors influence academic resilience. This was determined utilizing Regression Analysis to establish the coefficient of determination. Table 12 presents the results of the inferential statistics.

Table 12

Model Summary of Regression of school factors

Model	R	R^2	Adjusted R^2	Std Error
1	0.530[a]	0.281	0.275	4.31041

a. Predictors: (Constant), High Expectations, Meaningful Participation, Caring and Supportive

The model summary revealed that the school factors accounted for 27.5% (R^2 =0.275) of the variation in academic resilience among public secondary school students. This finding meant that variation in academic resilience is 27.5% explained by the variability of school factors among the public secondary school students. Findings of the study confirm the findings of a study by Mwangi and Ireri (2017) that revealed external protective factors significantly predicted resilience and also another study by Carrillo (2018) that revealed that a caring and supportive environment within the school significantly predict academic resilience.

4.6 Relationship between Parental involvement and Academic Resilience

The fourth objective of the study was to investigate the relationship between parental involvement factors and academic resilience. The following research question was derived

from the objective; what is the relationship between parental involvement factors and academic resilience? Parental involvement factors were investigated on six levels; academically, physically, socially, emotionally, financially, and communication of their expectations to their children against academic resilience. Table 13 below provides a summary of the descriptive statistics regarding parental involvement factors. The findings were as summarized below.

Table 13

Parental Involvement scale

Parental Involvement Scale	**Always**		**Sometimes**		**Never**		**Mean**	**SD**
	F	***%***	***F***	***%***	***F***	***%***		
1. Academically	300	79.4	54	14.3	24	6.3	4.46	1.02
2. Physically	204	54	101	26.7	73	19.3	3.69	1.44
3. Socially	167	44.2	105	27.8	106	28	3.38	1.48
4. Emotionally	272	72	62	16.4	44	11.6	4.18	1.51
5. Financially	265	70.1	78	20.6	35	9.2	4.23	1.11
6. Communication of Expectations	327	87	20	5.3	31	8.2	4.53	1.09
Mean							4.08	1.28

Note.N=378,F=Frequency

From Table 13, academic, physical, emotional, financial, and communication of expectations constructs of parental involvement were associated with academic resilience, except social involvement that manifested ambivalent academic resilience. Further, the following findings were revealed about parental involvement academically, physically,

socially, emotionally, financially and communication about expectations; generally, parental involvement resulted in high academic resilience (4.08). For example academically, 79.4. % of students reported that their parents were always involved academically, while 6.3% responded that they were never involved academically, 14.3% responded that their parents were involved in their academics sometimes. Regarding parental involvement physically, 54% of the students testified that their parents were physically involved in their academics whereas 26.7% said that this happened only sometimes and 19.3 % reported that their parents were physically never involved in their academics.

Qualitative data from the teachers divulges that the involvement of parents in their children's lives exists but only to some extent. One of the teachers observed,

> Some parents show seriousness by coming to school to check performance, attending academic meetings, paying school fees, and buying the materials needed, talking to their children about academics and you find that for such children despite the academic challenges they never give up because they do not want to let their parents down. But we have parents who no matter how much you invited them to school to discuss their children's academics they can never turn up. I have never seen parents of some students since they were in form one despite them being alive (Teacher, 2).

From the excerpt by teacher 2, the concept of parental involvement academically (checking performance), physically (coming to school), financially (paying fee, buying books), emotionally (talking about academics) build the spirit of not giving up. This concept of

endurance in school is resilience. This finding is in agreement with Marcelo (2018) who reported that high parental involvement promoted academic resilience. This is also in line with the findings of Li (2017) who found out that parental involvement in school promotes academic resilience. This is also reported in the qualitative findings below. Another teacher had this to say;

> Most parents in this region do not value education but are slowly embracing it. Those who come to school to check on performance and talk to their children about academics are passing a message to their children regarding the importance of education. There are also those parents who act as mentors for children in school; they talk to them when they notice negative changes in performance and keenly monitor them even when they are at home, such children work hard in school (Teacher 7).

The response by teacher 7 is an indication that parental involvement physically (they come to school), emotionally (they talk to them when there is a drop in performance), pushes students to persist through schooling. Concerning the social involvement of parents in their children's lives 44.2% of parents were said to be always socially involved, 27.8% responded that this only happened sometimes while 28% reported that their parents were never socially involved. Notably, this was the highest percentage on the scale of never among all other items in the parental involvement scale. Inferring from this, for most parents, knowing the friends of their children and even attending social functions together was not important. When asked whether her parent knew any of her friends, one student commented, 'My parents have never asked me who my friends are, as long as I behave well they don't have a problem' (Student, 4).

Concerning the emotional involvement of parents in their children's lives, 72 % of the students reported that their parents were always involved while 16.4 % reported that this happened only sometimes and 11.6% responded that this never happened. Nevertheless, the 72% positive response reflects effort from the parents. Qualitative data obtained from another teacher indicated that parents who are present for their children and act as mentors in the schooling process promote the academic resilience of learners. A student confirmed, 'When I don't perform well my father encourages me to do my best, he even takes me for extra tuition and buys me revision books, and I don't want to let him down (Student 10).

From the excerpt of student 10, the concept of parental involvement emotionally (my father encourages me) and financially (takes me for extra tuition and buys me revision books) was revealed. Because of this, the student feels obligated to persist in school. This support propels the students towards resilience. This finding is supported by Theron and Van Rensburg (2020) who assert that resilience enabling parents give emotional support in the form of affection that the adolescents appreciate.

On parental involvement financially, 70.1% of the respondents said that their parents always supported them by buying them books and other school requirements, while 20.6 % said that this happened only sometimes, 9.2 % said that they were never supported by their parents. For instance, some teachers observed:

> Most of the parents here are very poor and so are not able to support their children's education and rely on well-wishers, sponsors, bursaries, etc. However, I have seen a father who sold his camels, cows, and goats so that his son could finish school, the son is now a teacher. Myself, I was born and raised here, my father was a pure

> pastoralist, no education, no job, nothing but he sold his camels most of the time until I finished secondary and university (Teacher, 6).

From the comments by Teacher 6, the sacrifice that some parents make despite the poverty levels was a testament to their involvement academically and financially, and like in teacher 6 self-reporting, it can be deduced that resilience was at play because of the involvement of parents. The finding is in tandem with those of Theron and Van Rensburg (2020) who agree that parent-figures who enable resilience provide access to material resources.

This scale also sought to find out whether parents communicate their academic expectations of their children to their children and the results were striking. From the responses 87% of respondents reported that their parents always told them what they expect from them academically, while only 5.3 % responded that this only happened sometimes, 8.2% reported that their parents never told them what they expected of them. Perhaps awareness of the importance of education is vast. One student commented:

> My mother tells me she did not go to school and that is the reason why she was married early, she always tells me that she does not want me to live the kind of life she has lived and that if I work hard in school I will be a better person in the future. She tells me that she wants me to get a good grade that will take me straight to university (Student .4).

The above expression is an indication that some parents communicate to their students their academic expectations of them. This is a trigger and an encouragement to the child to persist in education. This backs up a previous study by Theiss (2018), who discovered that

the function of parents–children communication is the most important "in socializing children to be emotionally and behaviorally adaptive." Boutin-Martinez et al. (2019) also confirm the role of parental communication in their study that reported parent communication with their children as a resilience protective factor. Table 14 indicates the mean scores of parental involvement and academic resilience.

Table 14

Mean scores of Parental involvement factors and academic resilience (N=378)

Parental involvement	**N**	**Mean**	**STD Deviation**
Academically	378	8.9233	1.8273
Physically	378	7.3968	2.8202
Socially	378	6.7540	2.2790
Emotionally	378	8.3545	2.1226
Financially	378	8.4365	1.9523
Expectations	378	9.6556	1.9488
Overall	**378**	**48.92**	**8.10**

The results revealed that regarding parental involvement indicators, parental communication of expectations and academic resilience was very high = 9.6556. This was followed by parental involvement academically = 8.9233. Parental involvement socially had the lowest mean score of = 6.7540. It should be noted that the mean scores on only parental involvement academically, emotionally, financially and communication of expectations were high since the maximum points were 12. In contrast, parental involvement socially and physically was moderate.

To investigate whether there was any statistically significant relationship between parental involvement factors and academic resilience among public secondary school students in Turkana County schools, the null hypothesis was tested. The hypothesis was stated as follows:

Ho_3: There is no significant relationship between parental involvement factors and academic resilience among public secondary school students in Turkana County schools.

A parametric test, Pearson Product Moment Correlation Coefficient was computed, with scores on parental involvement as the independent variable and academic resilience as the dependent variable. The level of parental involvement was computed from the frequency of responses and converted into a continuous scale. The p-value (significant level) was set at.05. The null hypothesis would be rejected if the p-value was less than 0.05, and a conclusion would be drawn that a significant difference exists. If the p-value was more than 0.05, it was concluded that there was no significant relationship. In order to establish the relationship between parental involvement and academic resilience, Pearson Product Moment Correlation was computed against the scores that were obtained in Appendix D, part III of the students' questionnaire. The results of the correlation are presented in Table 15.

Table 15

Correlation coefficients of Parental involvement and Academic Resilience

Parental Involvement	N	r	Sig (2-tailed)
Academically	378	0.140	0.007**
Physically	378	0.104	0.042**
Socially	378	0.242	0.000**
Emotionally	378	0.229	0.000**
Financially	378	0.141	0.006**
Expectations	378	0.235	0.000**
Overall	**378**	**0.285**	**0.000****

**. Correlation is significant at the 0.05 level (2-tailed).

The findings revealed that there was a significant correlation between indicators of parental involvement (academically, physically, socially, emotionally, financially, parental expectations) and academic resilience. This is because all the P-values of the indicators were less than the level of significance of 0.05. However, it was also revealed that the social aspect of parental involvement had the strongest correlation compared to all the other aspects (r=0.242). This was followed by the expectations of the parents (r=0.235). The weakest correlation was noted in the physical aspect of parental involvement (r=0.104) and parental involvement financially (r=0.141). In addition, it was noted that the correlation of indicators of parental involvement and academic resilience was weak but significant since all the correlation coefficients were below 0.05. Cumulatively, parental involvement significantly correlates to academic resilience as indicated in table 15 at $P<0.05$.

The findings showed that there was a low degree of correlation (R=0.285). The results also indicated that parental involvement accounted for 9.7% of the variation in academic resilience among public secondary school students. Qualitative data from the teachers

indicated that the majority of the students had parents whose involvement financially was low. For instance, one teacher observed:

> Most of the parents here are illiterate and therefore, somehow the poverty levels are high, paying the fee in this region is a big problem and so many children depend on well-wishers, sponsors, bursaries, CDF, and so students from such families have no option other than to stick to school as a possible life-changer. We don't usually send these students home to collect school fees because that may be the last time they will be seen in school. The parents are poor (Teacher 4).

The excerpt above has the theme of parental involvement financially (poverty levels are high) and academic resilience emerging. Because of poverty, students stick to school because of the hope that school may change their lives. The aspect of sticking to school implies persistence due to the hardship at home because of poverty. One of the key features that indicate that one is academically resilient is persistence, which has been termed as sticking. One student had this precise statement to say, 'When I look at the poverty where I come from, I better try my luck in school, maybe it will change my life and that of my family' (Student 3).

The implication of this excerpt is that poverty which is an indicator of low parental involvement financially is a motivation for a student to remain in school. Staying at home is not an option and school is better. This suggests that the low parental involvement financially promotes the academic resilience of students in the sense that students want to move from poor conditions through education. These findings contradicted the findings of a study by Sandoval-Herna´ndez and Białowolski (2016) who established how low socio-

economic status negatively affected academic resilience in mathematics among students in the Asian Education System, findings revealed that the low family SES affected the parents' academic expectations of their children and the time spent at home with their children, consequently influencing the students' academic resilience negatively.

The findings of this study corroborate the findings of another study by Anagnostaki et al., (2016) whose results highlighted the important connection between parenting and academic resilience, that students with more parental support and whose parents were more knowledgeable and interested in their child's school had higher academic resilience.

In summary regarding the relationship between parental involvement factors and academic resilience, the study found out that there was a statistically significant, positive correlation between parental involvement factors and academic resilience, with a high level of parental involvement academically, physically, socially, emotionally, and financially associated to academic resilience among the secondary school students and vice-versa.

Given that the relationship was statistically significant, the hypothesis that "there is no statistically significant relationship between Parental involvement factors and Academic Resilience among the form four students" was rejected. It was therefore concluded that there is a statistically significant positive relationship between parental involvement factors and Academic Resilience among the Public Secondary School students in Turkana County. The findings of this study are in tandem with that of Marcelo (2018) who found out that a strong significant relationship exists between high parental involvement and academic resilience. The findings also support the findings of a study by Florez (2015) who found that the protective parental involvement factors of family guidance, support, and

meaningful involvement boosts academic resilience significantly. Similarly, the study sought to estimate the level of influence of parental involvement on academic resilience. This was done by use of regression analysis to compute a coefficient of determination. The results of the inferential statistics are presented in Table 16 below.

Table 16

Model Summary of Regression Analysis of Parental involvement factors and Academic Resilience

Model	R	R^2	Adjusted R^2	Std Error
1	0.334[a]	0.111	0.097	4.81010

**. Correlation is significant at the 0.05 level (2-tailed).

The model summary reveals that the parental involvement factors accounted for 9.7 % (R^2 =0.097) of the variation in academic resilience among public secondary school students. This finding means that variation in academic resilience is 9.7 % explained by the variability of parental involvement factors among the public secondary school students. The findings of this study corroborate with the findings of other studies conducted by Kong (2020), Anagnostaki et al. (2016), Theiss (2018), Boden et al.(2016), and Romero et al.(2016)` who found out that parental involvement increases academic resilience of students.

4.7 Personal, school and parental involvement factors on Academic Resilience

The fifth objective was to compare the predictive value of personal, school, and parental involvement factors on academic resilience. After conducting preliminary investigations on the suitability of data and appropriate assumptions of multiple regressions, the

researcher established a linear model that could be used to describe the optimal level of student academic resilience in secondary schools in Turkana County.

This was found by the use of standard multiple regression analysis, where all the three independent variables were factored in the model at once. A multiple-regression was appropriate because it aided in the investigation of how well the set of the independent variables was able to predict the academic resilience of secondary school students in Turkana County. The results of the study revealed the relative contributions of each of the model's variables. Each independent variable was assessed in terms of its predictive power, which was compared to the predictive power of all other independent variables. It allowed the researcher to determine how much distinctive variance each of the independent variables explained in the dependent variable. Table 17 summarizes the regression analysis model output from SPSS.

Table 17

Regression Analysis Model: Personal, school and parental involvement on Academic Resilience

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.757[a]	.573	.563	3.34516

a. Dependent Variable: Academic Resilience

Table 17 indicates that there was a good degree of correlation (R=0.757). It was revealed that 57.3% of the personal, school, parental involvement factors explain the variation in

academic resilience. This implies that the model is good enough to explain the variation in academic resilience (adjusted $R^2 = 0.563$).

The value of R; the multiple correlation coefficient, which is a measure of the quality of the prediction of the dependent variable (Academic Resilience) among public secondary school students, was represented in the model summary by the "R" column. The number of.757 shows that the degree of prediction is extremely good. In addition, the value of R Square (.573) indicates how much of the variance in the student academic resilience was explained by the personal, school, and parental involvement factors. This value expressed as a percentage means that the model accounted for 57.3 percent of the variance in student academic resilience. This is the percentage of variance in student academic resilience explained by personal, school, and parental involvement factors; it is the percentage of variance described by the regression model above and beyond the mean model. However, to determine the statistical significance of the result, an ANOVA test was performed, the results of which are provided in Table 18.

Table 18

ANOVA- Personal, school and parental involvement and Student Academic Resilience

Anova[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5530.965	8	691.371	61.784	.000[b]
Residual	4129.154	369	11.190		
Total	9660.119	378			

a. Dependent Variable: Academic Resilience
b. Predictors(constant) Personal, school and parental involvement

The ANOVA was used to test the null hypothesis that multiple R in the population equals 0. In this case, the model reached statistical significance [F (8, 369) =61.784, R^2=.573, p <.05,] implying that the model was highly significant and adequate to explain the variation in secondary school student academic resilience. In summary, the findings show that the independent variables predict academic resilience in a significant way, indicating that the regression model is a good fit for the data.

Evaluating the Contribution of each of the Independent Variables

The goal of the study was to investigate how much the personal, school and parental involvement factors in the model contributed to the prediction of student academic resilience. As seen in Table 19, coefficient values suggest that each independent variable contributed to the model differently.

Table 19

Coefficient Output: Personal, school and parental involvement factors and Student Academic Resilience

Coefficients[a]

Model	Unstandardized Coefficient		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1(Constant)	2.389	1.871		1.277	.202
Parental involvement	.055	.023	.087	2.409	.016
School Factors	.207	.038	.222	5.399	.000
Personal Factors	.611	.044	.571	13.959	.000

a. Dependent Variable: Academic Resilience

Since the results for each of the four variables were translated to the same scale so that they could be easily compared, a standardized coefficient was used to compare the level of

influence of personal, school, and parental involvement factors. It was clear from the model that the independent variables contributed differently in influencing academic resilience among the public secondary schools' students. For example, the contribution of personal factors had the highest influence on student academic resilience in secondary schools, while the parental involvement factors made the least contribution in explaining the variability of the model.

The variables of personal factors specifically had the largest beta coefficient of 0.571 ($p<.05$), implying that it made the most significant contribution to understanding the variation in student academic resilience. This means that a one standard deviation increase in the level of personal factors leads to a 0.571 standard deviation rise in student academic resilience, with the other variables held constant. Internal protective variables showed the strongest positive and significant predictive value on academic resilience, according to Mwangi et al. (2015). In another study, Rojas (2015) established that personal and school factors are the strongest predictors of academic resilience. These findings are validated by those of Aliyev (2021) that although external factors are important for academic resilience, internal factors make students more academically resilient.

The parental involvement factors had the lowest beta value, at 0.087, indicating that they contributed the least to the model; a one standard deviation increase in parental involvement would only result in a 0.087 standard deviation increase in student academic resilience when all other variables in the model were held constant; however, this effect was significant ($p=.0.05$). In conclusion, all three variables made a statistically significant ($p<.05$) unique contribution to the model. Hence, it was concluded that the personal, school

and parental involvement factors made a significant unique contribution to the prediction of the academic resilience of secondary school students in Turkana County.

4.8 Discussion of the results

The conceptual framework in this study envisioned that personal, school, and parental involvement predicts academic resilience. Concerning the personal factors the examined factors of social competence, autonomy and sense of self, sense of meaning and purpose account for 51.4% of academic resilience among the public secondary school students in Turkana County. Further, the school factors investigated also account for 27.5% variation in academic resilience, this implies that other than the examined factors of caring and supportive relationships, meaningful participation, and high expectations by teachers, other factors in the ecosystem account for academic resilience. Among the parental involvement factors, the small percentage of R^2 adj. (9.7%) pointed to the existence of other factors in this microsystem that predicts academic resilience Together, the three factors all interact and predict academic resilience at different levels.

Based on the discussion, the results of this study were consistent with the prediction of Bronfenbrenner's model applied in this study in the sense that, the relations between the ecosystems emanate from the personal factors as well as their environment which consists of the school and parental involvement factors with the child being at the centre as a recipient and contributor in the ecosystem. Undoubtedly, concerning the development of academic resilience, the results of this study underpin the tenets of the theory, that a child is not a passive recipient of the environment but an active participant who construes meaning from their environment in the family and at school which ultimately influences their academic resilience. In addition, besides the personal, school, and parental

invovement factors that the study investigated, there are also other factors within the ecosystem that account for students' academic resilience.

4.9 The Regression model

The link between these independent factors and the dependent variable is depicted in the regression model below. Because each of the explanatory variables was independent and non-mutually exclusive, this model was adequate.

In this model: $Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon$.

Where: Y is student academic resilience

X_1 Personal Factors

X_2 School Factors

X_3 Parental involvement Factors

Optimum level of Student Academic Resilience was presented by:

$$Y=2.389^{units} + .611\ x_1^{units} + .207\ x_2^{units} + .0.055\ x_3^{units} + \text{error}$$

From the equation, the coefficients indicate how much the student academic resilience varied with an independent variable when all other independent variables were held constant. For example, the unstandardized coefficient, X_3, for parental involvement was equal to .87 meaning that for each one-unit increase in parental involvement in a student, there is only an increase in academic resilience of .87 units. Similarly, for each one-unit increase in school factors, there is an increase in academic resilience of .222 units. Furthermore, for a unit increase in personal factors, there would be a .571 unit rise in academic resilience.

In addition, it was noted that the coefficients of all the variables were all statistically significantly different from 0 (zero). This implies that none of the personal and socio-contextual factors was worth eliminating from the model; they all contributed significantly to predicting student academic resilience. In general, it was concluded that the model was adequate to predict student academic resilience; it was statistically significant [F (8, 369) =61.784, R^2=.573, sig <.05]. A respectable variability (≈61%) in student academic resilience is explained by the personal and socio-contextual factors.

Conclusion

Basing on the findings of this study, the researcher concluded that personal and socio-contextual factors were predictors of academic resilience among public secondary school students in Turkana County in Kenya. The results of the study revealed; a significant positive relationship between personal factors and academic resilience (r=.712, n=378, p<.05); a significant positive relationship between school factors and academic resilience (r=0.550, n=378, P<.05), and a significant positive relationship between parental involvement factors and academic resilience (r=.285, n=378, p<.05). In addition, personal factors accounted for 51% (adjusted R^2 = 0.510) of the variation in academic resilience, school factors accounted for 27.5% (R^2 =0.275) of the variation in academic resilience, parental involvement factors accounted for 9.7 % (R^2 =0.097) of the variation in academic resilience while 57.3% of the personal, school, parental involvement factors explain the variation in academic resilience. Further analysis revealed that among personal, school, and parental involvement factors, personal factors had the highest positive predictive value on academic resilience (β= 0.571, p<.05). In addition, qualitative data revealed that personal factors; students' social competence, autonomy and sense of self, sense of

meaning, and purpose have a positive correlation with academic resilience. Similarly, school factors that yielded high academic resilience among students were caring and supportive school relationships and high expectations by teachers. Finally, parental involvement academically, physically, socially, emotionally, financially and parental communication of expectations yielded high academic resilience among students.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Overview

This chapter contains a summary of the study's findings, conclusions, and recommendations prepared by the researcher as a consequence of data analysis, as well as recommendations for future research. The study's goal was to investigate the personal and socio-contextual factors that predict academic resilience among secondary school students in Public Secondary Schools in Turkana County, Kenya. It was anticipated that personal and sociocontextual variables would manifest themselves in a variety of ways as indicated from both quantitative and qualitative data as generated from the results of the study.

5.2 Summary of findings

The summary of the findings from the research objectives**;** to examine the level of academic resilience, to investigate the relationship between personal factors and academic resilience, to investigate the relationship between school factors and academic resilience, to investigate the relationship between parental involvement factors and academic resilience and to compare the predictive value of personal, school and parental involvement on academic resilience were summarized in this section.

5.2.1 Level of academic resilience

The first objective was to examine the level of academic resilience among public secondary school students in Turkana County, Kenya. Descriptive statistical analysis revealed that the students had a high level of academic resilience since the mean of the scores was 39.75 in a range of 9-45.

5.2.2 Relationship between Personal Factors and students' Academic Resilience

The second objective was to establish the relationship between personal factors and academic resilience among public secondary school students in Turkana County, Kenya. Descriptive statistical analysis revealed that students had different domains of personal factors which were social competence, autonomy and sense of self, sense of meaning, and purpose that influenced their academic resilience. Generally, there was a moderate influence of personal factors on academic resilience among students (M=3.82, SD = 1.07) on a scale of 1 to 5. Inferential statistics of Pearsons Product Moment correlation revealed that there was a statistically significant strong positive correlation (r= .712, n=378, P> .05) between personal factors and academic resilience, with a sense of meaning and purpose having strong associations to academic resilience and vice versa. This was followed by autonomy and sense of self (r=0.599, P<0.05), and then social competence (r=0.544, P<0.05). Given that the relationship was statistically significant, the hypothesis that 'there is no statistically significant relationship between personal factors and academic resilience among public secondary school students in Turkana County, Kenya was rejected. Therefore, it was concluded that "there is a statistically significant relationship between personal factors and academic resilience among public secondary school students in Turkana County, Kenya. Further regression analysis revealed that personal factors accounted for 51.4 % (R^2 = .514) of the variation in academic resilience. Similarly, qualitative data from interviews revealed that students with high protective personal factors are more academically resilient while those students with low protective personal factors have low academic resilience.

5.2.3 Relationship between School Factors and Students' Academic Resilience

The third objective of the study was to determine the relationship between school factors and academic resilience among public secondary school students in Turkana County, Kenya. The study employed both quantitative and qualitative data collection techniques to determine the extent to which school factors were related to academic resilience. Quantitative data was used to test the hypothesis while the qualitative data from interviews of students and teachers was to enable the researcher to get the true feelings and views of the participants as regards school factors.

Descriptively, the indicators of school factors were measured and the study revealed that many students in Turkana County had high protective school factors towards academic resilience with a mean average of 4.05 and SD of 0.60 on the school factors scale of 1 to 5. From inferential statistics, empirical evidence revealed that there was a statistically significant positive relationship between school factors and academic resilience among public secondary school students in Turkana ($r=0.550$, $n=378$, $P<0.05$) based on Pearson Product Moment correlation coefficient that was computed. Noting that the relationship was statistically significant, the hypothesis that, "there is no statistically significant relationship between school factors and academic resilience among public secondary school students in Turkana County, Kenya" was rejected.

It was therefore concluded that there is a statistically significant positive relationship between school factors and academic resilience among public secondary school students in Turkana County, Kenya. In addition, regarding the indicators of school factors, caring and supportive relationships and academic resilience ($r=0.464$, $P<0.05$) had the highest

correlation followed by the high expectation of teachers and academic resilience (r=0.428, P<0.05). However, there was no statistically significant correlation between meaningful participation and academic resilience (r=0.097, P>0.05). This implies that students who have more caring and supportive relationships in school and whose teachers have high expectations of them had higher academic resilience. Further regression analysis revealed that school factors accounted for 27.5 % of the variation in academic resilience, as signified by co-efficient R^2 = .0275.

Furthermore, because the patterns of dots appear to slope from lower left to upper right on the scatter plot, there is evidence of a positive link between school factors and academic resilience. Furthermore, the line of best fit (trend line) demonstrates that the two variables were related. The scatters incline near the identity line, indicating that the association was real and not accidental.

Inferring from the interview responses from students and teachers regarding the relationship between school factors and academic resilience, it was revealed that the caring and supportive relationships in school, meaningful participation, and high expectations by teachers experienced by students in Turkana County contribute to their academic resilience. From the qualitative findings, it is evident that students who experienced caring and supportive relationships, and high expectations by teachers in school had a high academic resilience, a finding that is concurrent with the quantitative data findings.

5.2.4 Relationship between Parental involvement factors and Students' Academic Resilience

The fourth objective of the study was to determine the relationship between parental involvement and academic resilience among public secondary school students in Turkana

County, Kenya. The study employed both quantitative and qualitative data collection techniques to determine the extent to which parental involvement were related to the academic resilience. Quantitative data was used to test the hypothesis while the qualitative data from interviews of students and teachers was to enable researcher get the true feelings and views of the participants as regards parental involvement.

Regarding parental involvement and academic resilience, descriptively, the indicators of parental involvement were measured and the study revealed that many students in Turkana County had fairly high parental involvement protective factors towards academic resilience with a mean average of 4.14 and SD of 1.19 in the parental involvement scale of 1 to 5. From inferential statistics, empirical evidence revealed that there was a statistically significant positive relationship between parental involvement factors and academic resilience among public secondary school students in Turkana ($r= 0.285$, $n= .378$, $P<.0.05$) based on the Pearson Product Moment correlation coefficient that was computed.

Noting that the relationship was statistically significant, the hypothesis that, “there is no statistically significant relationship between parental involvement and academic resilience among public secondary school students in Turkana County, Kenya” was rejected. Therefore, it was concluded that there is statistically significant positive relationship between parental involvement and academic resilience among public secondary school students in Turkana County, Kenya. In addition, the social aspect of parental involvement had the strongest correlation ($r=0.242$) with academic resilience. This was followed by the communication of expectations by parents ($r=0.235$). The weaker correlation was noted in the physical aspect of involvement ($r=0.104$) and parental involvement financially ($r=0.141$). That is to say, students who have more parental involvement socially,

physically, financially, emotionally and those whose parents communicate their expectations to them manifest better academic resilience. Further analysis revealed that parental involvement factors accounted for 9.7% of the variation in academic resilience, as signified by co-efficient $R^2 = .097$.

From qualitative data sourced from students and teachers regarding the relationship between parental involvement and academic resilience, it was revealed that students in Turkana County experienced parental involvement financially, physically and that parents communicate their expectation to them and this may contribute to academic resilience. Regarding the relationship that existed between the variables, it was also revealed that students whose parents were involved had high academic resilience, a finding that is concurrent with the quantitative data findings.

5.2.5 Personal, school and parental involvement on Academic Resilience

The fifth objective was to compare the predictive value of personal, school, and parental involvement on academic resilience. The study concluded that among personal, school, and parental involvement factors, personal factors had the highest positive predictive value on academic resilience ($\beta= 0.571$, $p<.05$). It was revealed that 57.3% of the personal, school, parental involvement factors explain the variation in academic resilience.

5.3 Conclusions

The study sought to determine the level of academic resilience among public secondary school students in Turkana County and the extent to which personal, school, and parental involvement factors predicted Academic Resilience among public secondary school students in Turkana County, Kenya. Four variables were studied namely; personal, school,

parental involvement, and academic resilience. The following conclusions were drawn from the study per objective:

The first objective was to examine the level of academic resilience among public secondary school students in Turkana County. The study concluded that there was a high level of academic resilience among public secondary school students in Turkana County. On an Academic Resilience scale ranging from 9-to 45, the score was 39.75, indicating a high academic resilience.

The second objective was to investigate the relationship between personal factors and academic resilience. The study concluded that there was a strong significant positive relationship between personal factors and academic resilience ($r=0.712$, $P<0.05$). In addition, sense of meaning and purpose ($r=0.638$, $P<0.05$) was the strongest correlate of academic resilience among the school factors followed by autonomy and sense of self ($r=0.599$, $P<0.05$), and then social competence ($r=0.544$, $P<0.05$). Qualitative data on this objective corroborated the quantitative findings, students manifested social competence, autonomy and sense of self, sense of meaning and purpose all which made them academically resilient.

Regarding the third objective, it was concluded that school factors had a strong significant positive relationship with academic resilience ($r=0.550$, $n=378$, $P<.05$). In addition, caring and supportive relationships in school had the strongest correlation with academic resilience ($r=0.464$, $P<0.05$) followed by the high expectation of teachers and academic resilience ($r=0.428$, $P<0.05$). However, there was no statistical significant correlation between meaningful participation and academic resilience ($r=0.097$, $P>0.05$. The findings

were further supported by the qualitative data which showed that students who felt connected to teachers and peers and their school and are given the chance to participate in meaningful activities and those whose teachers consistently told them the kind of performance they expected from them have higher chances of persisting through the schooling process.

On the fourth objective, it was concluded that there was a positive significant relationship between parental involvement factors and academic resilience ($r=.285$, $n=378$, $p<.05$). Similarly, it was observed that among parental involvement factors, parental involvement socially was the strongest ($r=0.242$) correlate of academic resilience. This was followed by the expectations of the parents ($r=0.235$). The weaker correlation was noted in the physical involvement ($r=0.104$) and parental involvement financially ($r=0.141$). A substantial number of students experienced protective parental involvement. Furthermore, qualitative data also revealed that students who experience high parental involvement manifested academic resilience majorly because they felt a sense of personal obligation toward their parents/guardians and vice-versa.

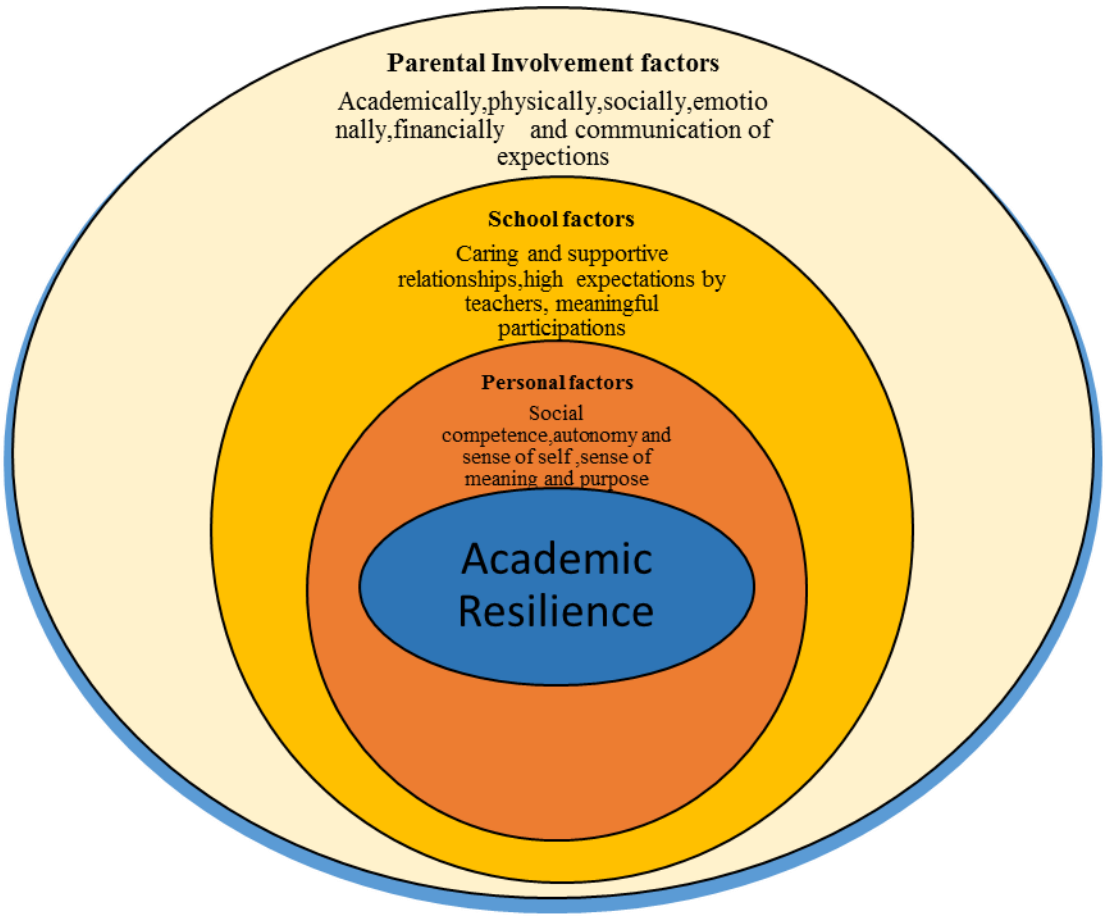
On the fifth objective, among personal, school, and parental involvement factors, personal factors had the highest positive predictive value on academic resilience ($\beta= 0.571$, $p<.05$), followed by school factors ($\beta= 0.222$, $p<.05$).

Finally, to foster the development of academic resilience, the major determinant in the ecosystem is the biosystem. Therefore, nurturing individual capacities to rise above adversity ought to be the foremost goal in the development of an academic resilience model, followed by the school factors and finally parental involvement factors. This study

thus was concluded by the researcher developing an academic resilience model as illustrated in figure 6 below;

Figure 6

Predictors of Academic Resilience Model



Source. Researcher's (2021)

5.4 Recommendations

Based on the conclusions and discussions, the following recommendations were made:

i. The first objective found out that there was a high level of academic resilience among public secondary school students in Turkana County. Therefore, this level of academic resilience could be harnessed to promote positive academic outcomes thereby increasing the chances of improved livelihoods in Turkana County.

ii. The second objective found that personal factors have a positive relationship with academic resilience. As a result, both parents and teachers have a role to support students to develop and increase social competence, autonomy, and sense of self, meaning, and purpose in their lives, and nurture positive relationships to enhance academic resilience. This can be done through personal or school guidance on self-awareness, self-efficacy as well as availing opportunities where students can practise empathy, problem-solving, cooperation, and communication. Also, the teacher training institutions should consider training teachers on how to build the internal assets of students. Finally, teachers and parents should motivate learners by setting achievable goals and exposing them to role models they could relate with and emulate. All these serve to manifest and boost children's internal assets.

iii. The third objective established that school factors have a positive relationship with academic resilience. Consequently, school principals and teachers should intentionally foster a caring and supportive school environment by encouraging an empathetic relationship between teachers and students. Teachers should communicate the high expectations they have of their students through class meetings as well as giving them opportunities for meaningful participation in and outside the classroom. In addition, the

indicator of caring and supportive relationships in school had the strongest relationship with academic resilience among school factors. The study also recommends the nurturing of compassionate and understanding relationships between teachers and students and among peers in school.

iv. The fourth objective found that parental involvement factors have a positive relationship with academic resilience. The study, therefore, recommends that parents should be involved in their children's lives in all aspects and communicate to them the high expectations they have of them. In addition, parental involvement socially had the strongest correlation with academic resilience among other indicators of parental involvement. Parents may be educated through formal and/or informal meetings on the need for playing a supportive collaborative role in providing a conducive environment that boosts their children's academic resilience. In this regard, therefore, the study recommends that parents enhance their social involvement in their children's lives by showing interest in knowing and meeting their children's friends as well as attending important social functions together.

v. The fifth objective established that among personal, school, and parental involvement, personal factors were the strongest predictor of academic resilience. The study recommends that there is a need for school-parent-child partnerships and the teachers and parents should play a supportive collaborative role in providing a conducive environment that enables students to reap maximum educational benefits from their internal assets. Further, the Kenyan government together with the Ministry of Education should formulate policies that promote educational outcomes in marginalized counties by boosting personal, school, and parental involvement factors.

5.5 Suggestions for Further Research

From the findings, conclusions, and study recommendations, the following considerations are suggested for further research:

i. Personal, school, and parental involvement factors as correlates of Academic Resilience among primary school pupils, college and university learners in Kenya.

ii. Other factors that may contribute to academic resilience such as culture, and the community ought to be researched further for a comprehensive understanding of the construct of resilience.

iii. Other domains of resilience such as emotional, physical, community, spiritual domains.

iv. A multisystemic approach to understanding resilience should further be nuanced. Are parents functioning well enough to meet the resilience needs of their children? When parents' psychosocial needs are addressed, they are more likely to be successful in their position as caregivers. The well-being of the main actors in the growth of children cannot be overlooked. (Goodman & Garber, 2017; Luthar & Eisenberg, 2017). As they help children to be resilient, they should also be helped.

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APPENDICES

APPENDIX A: INTRODUCTORY LETTER

Moi University
Faculty of Education
Department of Educational Psychology
P.O Box 3900-30100,
ELDORET.

Dear Sir/Madam,

RE: Participation in Research.

I am a postgraduate student in the Department of Educational Psychology pursuing a Doctor of Philosophy (Ph.D.) degree in Educational Psychology. I am conducting a research entitled 'Personal and Socio-contextual factors as Predictors of Academic Resilience among Public secondary school students of Turkana County Kenya. You are kindly requested to facilitate the research study by filling out the attached questionnaire and/or participating in the interview as truthfully as you can. The information you provide will be treated with strict confidence and is needed purely for academic purposes. Your assistance and co-operation will be highly appreciated.

Yours sincerely,

Janet Surum
Mobile phone. 0724500224

APPENDIX B: GUARDIAN CONSENT FORM FOR PARTICIPATION OF MINORS IN THE RESEARCH

RESEARCH TITLE: 'Personal and Socio-contextual factors as Predictors of Academic Resilience among Public Secondary School Students of Turkana County, Kenya'.

SCHOOL CONSENT

I give consent for my school to participate in the above study. I have read and understood the information required for this research. I have understood that the information that my students, teachers, and I, will give, shall be treated with the utmost confidentiality. I have been allowed to ask questions and I am contented with the answers given by the researcher. Finally, I have been assured that any of my teachers, students, and I are free to withdraw from the study at any time and that they shall not be penalized or asked reasons for withdrawing.

1. PRINCIPAL'S NAME: _____

   PRINCIPAL'S SIGNATURE: _____

   DATE: _____

2. RESEARCHER'S NAME: _____

   RESEARCHER'S SIGNATURE: _____

   DATE: _____

APPENDIX C: PARTICIPANTS CONSENT FORM

TITLE OF THE RESEARCH STUDY: PERSONAL AND SOCIO-CONTEXTUAL FACTORS AS PREDICTORS OF ACADEMIC RESILIENCE AMONG PUBLIC SECONDARY SCHOOL STUDENTS: A CASE OF TURKANA COUNTY, KENYA.

Participants Consent Form

I, the undersigned, confirm that (please tick box as appropriate):

1	I have read and understood the information about this research as provided on this consent sheet by the researcher.	
2	I have been given the opportunity to ask questions and I am satisfied with the clarifications made by the researcher about the study	
3	I declare that my participation in this study is purely voluntary that I have not been forced to participate by the researcher in this study	
4	I have been informed that I can withdraw from this study at any time that I cannot be punished or even asked the reasons for my withdrawal.	
5	I have been assured of the confidentiality of the information that I will provide and that my identity was concealed.	
6	The use of this data involving publications and archiving has been explained to me and that I am convinced	
8	I have understood the risks and the benefits that I may be exposed to in the process of this study	
9	I, along with the Researcher, agree to sign and date this informed consent form.	

Participant:

Name of Participant: _____Signature_____ Date _____

Researcher:

Name of Researcher:_____Signature_____Date_____

APPENDIX D: STUDENT'S PERSONAL, SCHOOL AND PARENTAL INVOLVEMENT SCALES

Dear Respondent,

I am postgraduate student at Moi University pursuing a Doctor of Philosophy Degree in Educational Psychology. I am carrying out a research on 'Personal and Socio-contextual Factors as predictors of Academic Resilience Among Public Secondary School Students: A Case of Turkana County, Kenya'.
I kindly request you to fill in the necessary information in this questionnaire. Be assured that all the information you give me will be treated confidentially and used for academic purposes only. I will appreciate your honest responses.

PART 1
PERSONAL FACTORS SCALE

INSTRUCTIONS

Using the information below, select to what extent each of the following item corresponds to your feelings about yourself and school. Tick/circle your choice.

NOTE: There are no correct or wrong answers and your teacher will not be shown your work

	Statement	**Strongly Disagree 1**	**Disagree 2**	**Not Sure 3**	**Agree 4**	**Strongly Agree 5**
Part 1:Social Competence						
1	I enjoy studying and working with my classmates.					
2	I know who can help me when I have a problem.					
3	I feel bad when others are hurt.					
Part 2:Autonomy and sense of self						
4	I can solve my problems.					
5	I do well in many things if I try.					
6	I know I can go to the university if I work hard.					
Part 3:Sense of meaning and purpose						
7	I plan to join university/college.					

8	I have goals and plans for my future					
9	I have a purpose for my life.					

PART II
SCHOOL FACTORS SCALE

INSTRUCTIONS

Using the information below, select to what extent each of the following items corresponds to your feelings about your life in school. Tick/circle your choice.

NOTE: There are no correct or wrong answers and your teacher will not be shown your work**.**

	Statement	**Strongly Disagree 1**	**Disagree 2**	**Not Sure 3**	**Agree 4**	**Strongly Agree 5**
Part 1: Caring and Supportive relationships in school						
1	I am happy to be at this school.					
2	I have a teacher who always listens to me when I have something to say.					
3	I feel close to people in this school.					
Part 2:Meaningful participation in school						
4	I do interesting activities in school.					
5	I help decide things like class activities or rules in my class.					
6	I do things that make a difference.					
Part 3: High Expectations from the teachers						
7	My teachers believe I will succeed.					
8	My teachers expect me to pass in my exams.					
9	My teachers want me to do my best.					

PART III
PARENTAL INVOLVEMENT SCALE

INSTRUCTIONS
Using the information below, select to what extent each of the following items corresponds to your feelings about your life with your parents/guardians in the sections below. Tick/circle your choice.
NOTE: There are no correct or wrong answers and your teacher will not be shown your work.
A: Parental involvement

	Statement	**Never** **1**	**Rarely** **2**	**Sometimes** **3**	**Often** **4**	**Always** **5**
	Academically					
1	My parents/guardians always study my report form.					
2	My parent/guardian discuss with me about my performance.					
	Physically					
3	My parents/guardians attend all parent-teacher meetings and take the suggestions seriously.					
4	When I am at home my parents/guardian, are there with me.					
	Socially					
5	My parents/guardians want to know who my friends are.					
6	I accompany my parents/guardian to social functions.					
	Emotionally					
7	My parents/guardians talk to me when I am disappointed with my academics.					
8	My parent/guardian encourage me to share my experiences in school.					

	Financially					
9	My parents/guardian buy me books and other school requirements.					
10	My parents /guardians pay my school fee promptly.					
	Expectations					
11	My parents tell me that I can pass my exams.					
12	My parents tell me I will pass in my exams.					

PART IV

ACADEMIC RESILIENCE SCALE

	Statement	**Strongly disagree 1**	**Disagree 2**	**Not Sure 3**	**Agree 4**	**Strongly Agree 5**
1	I believe I am able to perform well in exams.					
2	I know how to deal with too much study pressure.					
3	After failing a test, I work harder.					
4	I am good at dealing with study pressure.					
5	I do not let failure in examinations affect my confidence.					
6	I am good at dealing with setbacks at school like a bad mark or negative comments about my performance.					
7	I believe that these studies are important for my future.					
8	I know where to get help if I am having trouble with my studies.					
9	I plan to get a good grade in KCSE.					

APPENDIX E: TEACHER'S INTERVIEW SCHEDULE

1. What, in your assessment are the factors that promote the academic resilience of the students in your class/school in terms of the personal, school and parental involvement factors?
2. For the parents who are involved and supportive of their student's academics, are their children resilient?
3. In your opinion, do parents play a role in the building of academic resilience? If yes, how?
4. In your opinion, do the factors in school affect academic resilience? If yes, how?
5. In your opinion, do the factors unique to each student in terms of their traits affect academic resilience? If yes, how?
6. What makes students in this location persist through schooling despite the hardships?

APPENDIX F: STUDENT'S INTERVIEW SCHEDULE

1. How does life at home and school influence your education?
2. Describe how you feel about your parents support to you academically, physically, financially, socially, emotionally and communication of expectations?
3. Would you say that your teachers and peers care for you and support you in school?
4. What would you say has brought you this far in education?
5. Do you believe you can do well in my academics?
6. Has the difficulty of life in Turkana County affected your education? How?
7. Do you have future academic plans? What are they?

APPENDIX G: RESILIENCE CONSTRUCTS ON THE HEALTHY KIDS SURVEY

Resilience Constructs on the Healthy Kids Survey

Construct	*Item*
Caring Relationships:	B26. Who is interested in my school work. (Home)
	B28. Who talks with me about my problems. (Home)
	B30 who listens to me when I have something to say. (Home)
	B19. Who really cares about me. (Friends)
	B20. Who talks with me about my problems? (Friends)
	B21. Who helps me when I'm having a hard time.(Friends)
High Expectations:	B25. Who expects me to follow the rules. (Home)
	B27. who believes that I was a success. (Home)
	B29. who always wants me to do my best. (Home)
	B22. who get into a lot of trouble. (Friends)
	B23. try to do what is right. (Friends)
	B24. do well in school.(Friends)
Meaningful Participation:	B31. I do fun things or go fun places with my parents.
	B32. I do things that make a difference.
	B33. I help make decisions with my family
Social Competence:	B12. When I need help, I find someone to talk with.
	B4. I know where to go for help with a problem.
	B5. I try to work out my problems by talking or writing them down.
	B10. I feel bad when someone gets their feelings hurt.
	B11. I try to understand what other people go through
	B15. I try to understand what other people feel and think.
	B8. I can work with someone who has different opinions than mine.
	B13. I enjoy working together with other students my age.
	B14. I stand up for myself without putting others down
Autonomy and sense of self:	B16. There is a purpose in my life
	B17. I understand my mood and feelings
	B18. I understand why I do

	what I do. B6. I can work out my problems. B7. I can do most things that I try. B9. There are many things that I do well.
Sense of Meaning and purpose:	B1. I have goals and plans for the future. B2. I plan to graduate from high school. B3. I plan to go to college or some other school after high school.

APPENDIX H: PHASES OF QUALITATIVE DATA ANALYSIS

Phase/Description of phase	Description of the phase process
1. Familiarizing with your data	Transcription of the data (where necessary), reading and re-reading the data, noting down initial codes.
2. Generating initial codes	Coding interesting features of the data in a particularly systematic fashion across the entire data set, collating data relevant to each code
3. Searching for themes	Collating codes into potential themes that accurately depict the data.
4. Reviewing themes	The researcher checks how the themes work with the coded extracts and the entire data set.
5. Defining and naming the themes	Analysis to refine the specifics of each of the themes while generating clear definitions and names for each theme.
6. Producing the report	Final opportunity involving analysis where the researcher selects vivid extract examples does a final analysis while relating to the research question and literature and hence producing a scholarly report of the analysis.

Source: Extracted from Braun and Clarke (2006)

APPENDIX I: RESILIENCE PROTECTIVE FACTORS

Clusters of Protective Factors and Sub-group Assets Adapted from the CHKS.

External Protective Factor Clusters	**Environments that foster external protective factors**
Caring relationships: Supportive Connections to others in the student's life who model and support healthy development and well-being.	Caring relationships with ... • adults in the home • adults in the school • Peers
High expectations: The consistent communication of direct and indirect messages that the student can and will succeed responsibly.	High expectations from • adults in the school • adults in the school •Peers
Meaningful participation: The involvement of the student in relevant, engaging, and responsible activities with opportunities for community responsibility and contribution.	Meaningful participation in… • the home • the school • peers
Internal Protective Factor Cluster protective	**Sub group assets for internal Factors**
Social competence: Ability to communicate effectively and appropriately, and to demonstrate caring, and responsiveness in social situations.	• Empathy • Problem solving skills • Cooperation flexibility, • Communication skills
Autonomy and sense of Self: Sense of personal identity and power	• Self-efficacy • Self awareness
Sense of meaning and purpose: Belief and understanding that one's life has coherence and makes a difference.	• Goals and aspiration

APPENDIX J: MAP OF TURKANA COUNTY

APPENDIX K: RESEARCH AUTHORIZATION

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 765033

Date of Issue: 21/October/2020

RESEARCH LICENSE

This is to Certify that Ms.. Janet Surum of Moi University, has been licensed to conduct research in Turkana on the topic: PERSONAL AND SOCIO-CONTEXTUAL FACTORS AS PREDICTORS OF ACADEMIC RESILIENCE AMONG PUBLIC SECONDARY SCHOOL STUDENTS: A CASE OF TURKANA COUNTY, KENYA. for the period ending : 21/October/2021.

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APPENDIX L: INTRODUCTORY LETTER

MOI UNIVERSITY
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P.O. Box 3900
Eldoret, Kenya

REF: EDU/D.PHIL.P/1007/16 **DATE:** 15th October, 2020

The Executive Secretary
National Council for Science and Technology
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: **RESEARCH PERMIT IN RESPECT OF SURUM JANET – (EDU/DPHIL.P/1007/16)**

The above named is a 2nd year Postgraduate Higher Degree (PhD) student at Moi University, School of Education, Department of Educational Psychology.

It is a requirement of her PhD Studies that she conducts research and produces a dissertation. Her research is entitled:

"Personal and Socio-contextual Factors as Predictors of Academic Resilience among Public Secondary School Students: A Case of Turkana County, Kenya."

Any assistance given to enable her conduct research successfully will be highly appreciated.

Yours faithfully,

For

PROF. J. K. CHANG'ACH
DEAN, SCHOOL OF EDUCATION

MOI UNIVERSITY SCHOOL OF EDUCATION