

**MIRAA GROWING PRACTICES INFLUENCE ON KENYA CERTIFICATE OF
SECONDARY EDUCATION EXAMINATION PERFORMANCE AMONG BOYS
IN DAY SECONDARY SCHOOLS IN MERU COUNTY**

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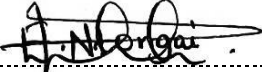
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REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF
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DECLARATION

I declare that this project is my original work and that it has not been submitted to any other university or institution for certification. To enhance this study proposal, referenced sources were employed, and they were all correctly acknowledged. When text, data (including spoken words), pictures, photos, or tables are acquired from other sources, such as the internet, the current APA system and anti-plagiarism guidelines are used to correctly acknowledge and cite them.

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DEDICATION

This work is lovingly dedicated to those who have been the pillars of my strength and the heart of my journey. To my precious children-your love has been my reason to rise every day, even when everything inside me felt like giving up. Your laughter, your hugs, and your quiet presence reminded me of why this path matters. You gave me purpose when I needed it most. I see hope in your eyes, and it has fuelled every step of this journey.

To my wonderful siblings and my father, thank you for your unwavering support, your encouragement, and your belief in me, even when I struggled to believe in myself. Your words, your patience, and your prayers have carried me through more than you know. You have been my steady ground.

And to my dearest mother, who now rests in eternity-your spirit lives on in everything I do. You were the embodiment of resilience and grace, and I carry your strength in my bones. I remember how you never gave up on anything you set your heart and hands to. That memory stayed with me, whispering courage when I felt weak and reminding me to press on when I wanted to stop. Your legacy is my light.

This research is not just a milestone; it reflects your love, sacrifice, and the faith you've all placed in me. I thank God every day for the gift of having you as my family.

With all my heart-this is for you.

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ACRONYMS AND ABBREVIATIONS

ATSL	Attitudes toward School and Learning
CGP	Coordination Group Publications
G&C	Guiding and Counselling
GPA	Grade Point Average
NAEP	National Assessment of Educational Progress
OLS	Ordinary Least Squares
SSS	Student Success Skills
WHO	World Health Organization

ABSTRACT

Miraa which is considered both as a recreational and as a medicinal herb with addiction tendencies among its users is a major cash crop in Meru County. As a herb or substance, people including school going children take and many times get addicted. Miraa growing an economic activity, which requires labour for picking, packing, distribution and selling. Young people, including school going children and students often get involved in these activities. This is likely to affect their school performance. The objectives of this study were: First, to determine if picking, packing, and selling of miraa affects learner's motivation and attitude towards learning amongst boys in day secondary schools; Secondly, to determine if picking, packing, and selling of miraa affects quantity and quality of instruction amongst boys in day secondary schools, and finally, to determine if picking, packing, and selling of miraa affects discipline of boys in day secondary school in Meru County. This study was guided by Walberg's educational productivity theory. A descriptive survey research design was used to conduct the study. The target population was day secondary schools, principals, teachers and students from Igembe Central, Igembe South, and Igembe North sub-counties of Meru County. The study employed stratified sampling and purposive sampling techniques to sample the study respondents. A sample of 360 respondents was obtained which consisted of 30 principals, 30 teachers and 300 students. A questionnaire for students and another questionnaire for the teachers was used in this study. Data from school principals was collected using an interview guide. Descriptive statistics were utilized to analyze quantitative data through use of SPSS version 24 while thematic analysis was used for qualitative data. The quantitative data was presented in form of percentages and frequencies while qualitative data was presented in a narrative form. The study found that: the students utilized tuition time in miraa growing activities during school days make money; many students spent significant time on miraa-related tasks to earn money which reduced their chances of revising for the examinations; bad discipline influences students class attendance and may also make them unruly affecting their performance in KCSE. There are learners who are adversely affected by miraa in the school and thus lose interest in schooling affecting their performance. The study concluded that the involvement of students in miraa growing negatively influenced their performance in KCSE as it gives them less time to participate in learning. The study recommends involvement of relevant stakeholders in the county to ensure adherence to policy on education access and completion. Miraa traders should be discouraged from involving school-going-age children/persons in miraa growing activities so as not to compromise schooling of boys in day secondary school students. Further, the ministry of education and other stakeholders should organise meetings and community conversations to discuss ways to combat the influence of miraa growing on students' performance in KCSE in the county.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter presents the background of the study, the statement of the problem, the purpose of the investigation, the objectives, the research questions, and the significance of the study. The study limitations, delimitations, and assumptions of the study are also presented in this chapter. Finally, the chapter presents the theoretical framework, conceptual framework, and operational definition of key terms.

1.2 Background to the Study

Miraa is an evergreen tropical plant from East Africa with dark green opposite leaves that are chewed fresh for their energizing qualities. Additionally, it is known as khat (Cox & Rampes, 2013). In countries where khat manufacturing is widespread, young people in elementary school, high school, and college are developing the habit of chewing khat at an alarming rate (Carrier, 2015). Students that take khat report that it helps them perform better in class. On the contrary, research shows that chewing khat does not increase a student's exam performance. The miraa business has had negative impacts on both boys and girl's education. Some school going children/persons opt for the business than schooling where the boys are engaged in the sale of miraa while the girls are left home cooking for the boys and their parents who engage in the miraa business (Silva *et al.*, 2017).

These young boys do not attend school, and the enrolment rate continues to decline day after day, and little that can be done because the immediate financial benefits from the Miraa growing activities is very enticing to the young people and appear to be sufficient. These pupils chose miraa business over schooling as they view the business as lucrative as they earn money within a short duration of time. As a result, the cases of school dropout increase as more young persons are lured into the business by their counterparts who have better living standards as a result of Miraa business (Njoroge & Nyabuto, 2014). In Pakistan, khat has a significant negative impact on school-aged children's academic performance. Children that chew khat place a higher value on their khat sessions than time spent studying and revising for their exams (Jamin, 2012).

Ageely (2019) found that 37.7% of Saudi Arabian male students and 3.8% of Saudi female students chewed khat. According to the pupils, khat improved their ability to focus, stay alert in class, and think coherently (Ageely, 2019). Conversely, studies have indicated that khat impairs students' ability to focus in class and hinders their ability to study for exams since it makes it difficult for them to remain attentive for extended periods of time. In Sierra Leone, Johnson Adlyn (2013) discovered a link between student's attitudes toward education and their school performance. The researchers discovered a link between drug use and students' attitudes toward learning. Additionally, the study found that schoolchildren's participation in the miraa business results in a high percentage of indiscipline, poor exam performance, truancy and absenteeism, school dropouts, and a lack of focus in class.

The present study seeks to determine the effect of students' involvement in *miraa* growing, trading and consumption on discipline which affects academic performance in

the national examinations. The study focuses on how miraa business affects learner's motivation and attitude towards learning, quantity and quality of instruction and discipline of boys and KCSE performance. In education, a student's good attitude might have an impact on their academic performance. Awang *et al.*, (2013) did a study on how interested learners were in the curriculum, how engaged they were in class, how early they prepared and revised, what types of pleasurable activities they did, how interested they were in teaching aids, and how well they attended class.

According to the findings, students' perceptions of their professors had a considerable impact on their learning outcomes. According to the findings, teachers should establish outstanding relationships with students and create an appealing and engaging environment in order to encourage students to actively participate in classroom activities and learn happily and efficiently. With regard to quantity and quality of instruction, instructor quality is important. It is, in fact, the most significant school-related factor impacting student achievement and performance in the KCSE. According to research, the selectivity/prestige of the institution where a teacher received his or her education has a beneficial impact on student achievement, especially at the secondary level. This could be due in part to the teacher's cognitive abilities (Darling-Hammond, 2000).

Research indicates that it is not reasonable to remove all certification requirements on a large scale, given the importance of several teacher attributes. Maintaining the status quo is unlikely to result in improvements in the caliber of teachers. Disobedience to rules, tardiness, bullying, cultism, drug and alcohol abuse, sexual harassment, shoplifting, rioting, striking, starting school fires, 'gassing of learners', and failing to show up for class or school are all examples of indiscipline in a school setting (Odebode, 2019).

According to Järvinen *et al.*, (2021), discipline influences the learning system in a school environment where it molds student character and upgrades inspiration, takes into consideration the setting of genuine models, and decidedly adds to better grades.

Meru County's primary source of income is the production of miraa (Carrier, 2005). According to stakeholders, the substance is negatively affecting kids; some use it, while others sell it, and the remainder labor on miraa farms for pay (The Standard Newspaper, Wednesday, November 28th 2012). It has become challenging to keep pupils, particularly boys, away from the substance due to the widespread miraa picking, packing, and sale throughout the county, according to school head teachers (The Standard Newspaper, Wednesday, November 28th, 2012). Although previous studies have highlighted the negative influence of miraa consumption on students' academic performance, several critical gaps remain unaddressed. First, much of the existing literature provides broad associations between miraa use and poor performance but does not specify the mechanisms through which miraa affects learning outcomes such as concentration, class attendance, revision habits, and cognitive functioning.

Second, earlier studies have largely focused on general populations, leaving limited evidence on how miraa consumption specifically affects secondary school students preparing for the KCSE examinations a group that faces unique academic pressures. Third, there is inadequate contextualization of miraa use within school environments in regions where the substance is culturally normalized. Factors such as peer influence, teacher awareness, parental attitudes, and the availability of miraa around schools remain insufficiently explored. Finally, few studies have examined how socio-economic background interacts with miraa use to influence academic performance. These gaps

justify the need for the current study, which sought to examine miraa consumption among secondary school students more comprehensively and to understand its direct and indirect effects on KCSE performance within the specific local context. Consequently, a study in Meru County is required to examine and record the impact of miraa growing practices on the KCSE performance of boys attending day secondary schools.

1.3 Statement of the Problem

The performance of boys in day secondary school in Meru County has been a cause of concern to various stakeholders. Despite the efforts made by educational stakeholders in Meru County to address the issue of poor performance, many boys still perform dismally at national examinations disallowing them to pursue their dreams and aspiration at higher education. The poor performance has been attributed to the booming miraa business where most of the boys feel comfortable to participate in. This study will delve into the role played by miraa growing activities by male students on their academic performance at KCSE. Although many studies have been done on *miraa* growing, few have looked at influence of *miraa* growing on the academic achievement amongst boys in day secondary schools. Some have delved into the socio-economic impacts of miraa. Since involvement in *miraa* affects mostly students who are in day schools, this study observes that they are at higher risks of the effects of *miraa* than other learners in boarding schools. This study, therefore, set to establish the influence of involvement of boys in *miraa* growing on their KCSE performance.

1.4 Purpose of Study

The purpose of this study was to establish how the various miraa growing practices influences the performance of boys in Kenya certificate of secondary education performance in Meru County.

1.5 Objectives of the Study

This study was guided by the following objectives

- i. To determine if picking, packing, and selling of miraa affects learner's motivation and attitude towards learning and KCSE performance among boys in day secondary schools in Meru County.
- ii. To determine if picking, packing, and selling of miraa affects quantity and quality of instruction and KCSE performance among boys in day secondary schools in Meru County.
- iii. To determine if picking, packing, and selling of miraa affects discipline and KCSE performance among boys in day secondary schools in Meru County.

1.6 Research Questions

This study answered the following research questions:

- i. What is the effect of picking, packing, and selling of miraa on learner's motivation and attitude towards learning and KCSE performance among boys in day secondary schools in Meru County?
- ii. What is the effect of picking, packing, and selling of miraa on quantity and quality of instruction and KCSE performance among boys in day secondary schools in Meru County?

- iii. What is the effect of picking, packing, and selling of miraa affects discipline and KCSE performance among boys in day secondary schools in Meru County?

1.7 Significance of the Study

The results could be used by the county's schools and other schools around the nation to raise the KCSE scores of boys. The results could potentially raise awareness among policymakers and aid in the development of strategies and policies aimed at counteracting the negative impact of miraa business on boys' KCSE performance. Furthermore, the results might be utilized by the head teachers to reduce the impact of miraa growing on KCSE performance by starting counselling sessions to raise awareness of the impact of miraa growing on both general student performance and boys. The study findings may be important to the learners as they may be able to establish the importance of education as a long-lasting asset to their lives as compared to the miraa business which is seasonal and short lived. The findings of this study may add to the body of knowledge on the impact of miraa on education and particularly the negative impacts. The findings of this study will help learners understand the impact of involvement in miraa growing activities on their academic performance, particularly in KCSE. By highlighting how excessive participation can reduce study time, cause fatigue, or lead to absenteeism, the study will encourage learners to prioritize education, adopt better time management, and make informed choices. It will also motivate them to focus on schoolwork, develop constructive study habits, and pursue higher education opportunities, ultimately enhancing their academic performance and future prospects.

1.8 Limitations of the Study

According to Komba and Tromp (2006), constraints are difficulties that the researcher anticipates or encounters during a study. In this research, some limitations arose from the sensitive nature of the information being investigated. Respondents were aware that the study focused on miraa-related activities, which are economically and socially significant in Meru County. Some participants might have withheld information due to fear that it could be used to impede miraa expansion or affect their social standing. To minimize this, the questionnaire was designed to avoid direct questions on delicate issues, such as personal involvement in miraa labor, income from miraa-related activities, or opinions on controversial practices. This approach reduced the likelihood of biased answers, non-response, or refusal to participate. Furthermore, respondents' identities were kept confidential to encourage openness and ensure that all necessary information was provided. Despite these precautions, the sensitivity of the topic remains a limitation, as some information may still have been withheld or underreported.

1.9 Delimitation's of the Study

This study was conducted in Meru County because it is one of the major miraa-producing regions in Kenya, where the crop plays a significant economic and social role. The county's unique context provides an appropriate setting to investigate how boys' involvement in miraa growing activities may influence their KCSE performance. The study focused on day secondary schools rather than private or boarding schools because day scholars are more likely to participate in miraa-related activities outside school hours, which may affect their study time and academic performance. Private institutions and boarding schools were excluded because students in these settings typically have limited

exposure to miraa activities during school terms, making them less relevant to the study's objectives. Additionally, the study was delimited to teachers and students in day schools who sat for the KCSE between 2017 and 2020. This timeframe and population were selected to provide recent and relevant insights while maintaining a manageable scope for data collection and analysis.

1.10 Study Assumptions

Based on the nature of the present study, the following assumptions were made;

- i. Student involvement in miraa business has a negative influence on academic performance.
- ii. Heads of institutions and the teachers will be willing to take part in the study and provide reliable data.

1.11 Theoretical Framework

This study was guided by educational productivity theory forwarded by Walberg. According to Walberg's theory of educational productivity (Hu, Dong & Peng, 2021), nine factors require optimization to increase student achievement of cognitive and effective outcomes. These are classified into three categories: Student aptitude variables of motivation, age, ability, attitude, discipline, Instructional variables of quantity of instruction, experience in quality of instruction, classroom environment home environment e.g. miraa consumption enabling environment, peer group environment and use of out of school time (like engaging in miraa growing activities). The first factors regarding a student's ability and instruction are necessary for learning in school. They are partly alterable by educators. For instance, breaking down curriculum into small

manageable units, determining the length of time that should be devoted to particular subjects and activities, partly determined by learner abilities, motivation, prior learning, and diverse economic, social and political forces. Prior learning, parents and students can also affect ability and motivation. Therefore, it is unlikely that educators can substantially raise a student's achievement by their own efforts. The subsequent three aspects of school/classroom environment, home environment and peer group environment influence learning in that students directly and indirectly learn from them.

According to Bloom, (1956), the cognitive domain contains objectives that deal with information retention and recognition, as well as the development of intellectual abilities and skills. As a result, a teacher plays a critical role in arranging learning such that it progresses from the most fundamental level (knowledge) to the most complicated level in the taxonomy (evaluation). As a result, if any meaningful progress is to be attained, a student must be present in the classroom and school during the instruction process and actively participating in the learning process. The affective domain includes goals that define changes in interest, attitudes, and values, as well as the growth of appreciation and appropriate adjustment. The manipulative or motor-skill portion of the taxonomy is the psycho-motor domain.

The proponents of the theory of educational productivity, view poor academic achievement and a lack of education as depriving young people of a wealthy and healthy life. Adults with greater education earn more, live longer, save a larger percentage of their earnings, and invest more in their children (Walberg 2010). The theory will be applicable to this study in that it will help guide the researcher into how education productivity which is indicated by performance is influenced by student aptitude

variables of motivation, attitude, discipline, quantity of instruction, as well as quality of the instructional experience. In Igembe South, Igembe Central and Igembe North sub counties, most boys in day secondary schools engage in *miraa* harvesting, buying and selling as well as chewing miraa resulting in high rates of absenteeism from school, poor concentration during the instructional process, failure to do homework, and lack of revision for the exams. This theory was able to explain how the effects of picking, packing and selling of Miraa resulted in poor performance in both the internal and final examinations.

While Walberg's theory explains how student aptitude, instructional quality, and environmental factors influence academic performance, it does not directly account for economic or labor activities like miraa growing, which compete with study time. To address this limitation, the study also draws on the input–process–output framework, which allows a clearer analysis of how external activities influence academic outcomes. In this model, the inputs include student characteristics, teacher instruction, and engagement in miraa activities; the process refers to classroom interactions and learning engagement; and the outputs are the academic results, particularly KCSE performance. By integrating these perspectives, the study provides a comprehensive explanation of how involvement in miraa growing activities impacts the learning process and ultimately contributes to poor performance in both internal and national examinations.

1.12 Conceptual Framework

Better performance in an examination is determined by a number of factors, among them are those identified by Educational Productivity Theory. Student aptitude (motivation) and home environment are key in this study. Accordingly, discipline, attitude and

participation in learning are determined by the learners' motivation while absenteeism among students is commonly a home environment variable. If these factors are not addressed, many students will fall short of their academic goals. The relationship between the variables is presented in figure 1.1.

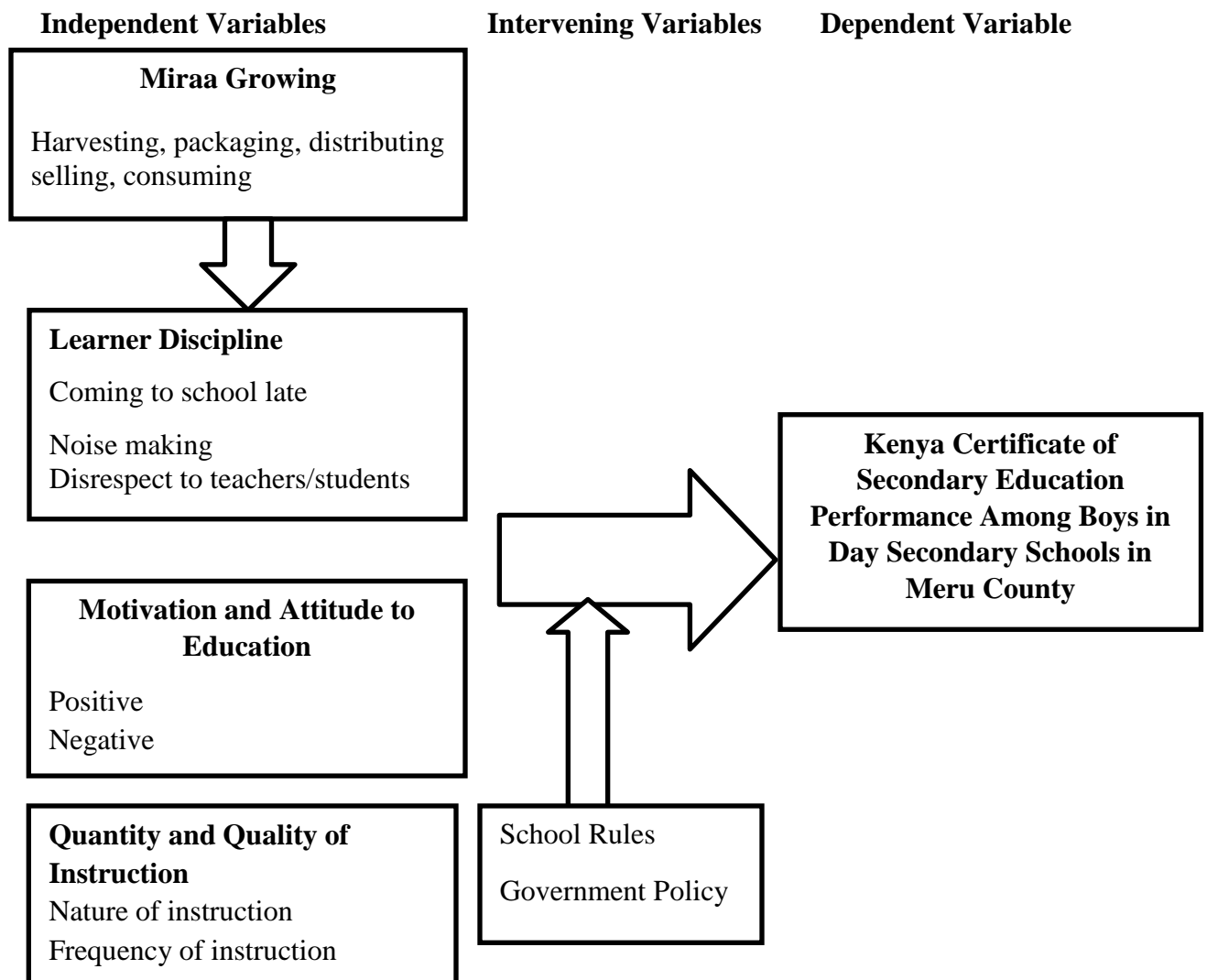


Figure 1.1: Conceptual Framework

Source: Author (2022)

From the figure 1.1., the independent variables in this study picking, packing, and selling of miraa affect KCSE performance by reducing the time and focus students can devote to

academic activities, leading to absenteeism, incomplete homework, limited revision, and poor concentration during lessons. The intervening variables, including student motivation, attitude, discipline, and the home environment, mediate this relationship by influencing how students manage their time and engage with learning despite involvement in miraa activities. For instance, a motivated and disciplined student may still perform well even when involved in miraa work, whereas a lack of support at home or poor attitude towards learning can amplify the negative effects. Thus, the independent variables influence the dependent variable KCSE performance both directly through reduced study engagement and indirectly through the moderating effects of the intervening variables.

1.13 Operational Definition of Key Terms

Academic Performance refers to the meeting of education objectives by the student as well as his or her instructor.

Attitude Emotional response to social cues that reveals a full range of approach or shunning behaviour that can be interpreted as good or negative.

Discipline The practice of strict adherence to rules and regulations or a code of acceptable behaviour in school.

Involvement Taking part in the miraa growing activities.

Miraa Growing Farming, harvesting, distributing, selling and consuming miraa.

Participation Actively getting involved in the educational/academic process in school/class.

Learner's Motivation refers to the emotion or desire to participate in education activities by the student

Quality of Instruction refers to the way a teacher delivers instruction that evokes the learner's interest in learning in a particular manner

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter presents a review of relevant literature related to the area of study. The literature is presented in terms of study objectives. Lastly, this study presents the summary of literature review and gap identification.

2.2 Involvement of Boys in Picking, Packing, and Selling of Miraa and Learner's Motivation and Attitude Towards Learning

Attitude is the belief that one has toward one's people and environment (Ratanasiripong and Chai, 2013). In education, a student's good attitude might have an impact on their academic performance. In Malaysia, Awang *et al.*, (2013) looked into students' views regarding academic accomplishment. The study looked at how interested learners were in the curriculum, how engaged they were in class, how early they prepared and revised, what types of pleasurable activities they did, how interested they were in teaching aids, and how well they attended class. According to the findings, students' perceptions of their professors had a considerable impact on their learning outcomes. According to the findings, teachers should establish outstanding relationships with students and create an appealing and engaging environment in order to encourage students to actively participate in classroom activities and learn happily and efficiently.

In Siera Leone, Johnson Adlyn (2013) aimed to ascertain the attitudes of teenage girls toward education and the degree to which these attitudes influence their academic achievement. A questionnaire was used to gather data from girls in their junior secondary school final year. According to the study, girls and the main participants in the

educational process had a favorable opinion of learning. However, the study discovered no discernible link between girls' school achievement and their attitude toward learning.

In the outgoing review, according to Awang *et al.*, (2013), students' perceptions of their professors had a significant impact on their learning outcomes. Johnson Adlyn (2013), on the other hand, discovered no link between students' attitudes about education and their academic achievement. Due to this contradiction on the influence of perception on academic performance, a study is required to find out the influence of miraa growing on perception of learner on education and its influence on academic performance.

In Tigania Central, Meru County, Japheth (2020) researched the impact of the miraa trade on boys' and girls' engagement in elementary school education. Descriptive research design was utilized to collect and evaluate data from 216 primary school kids, 36 instructors, and 12 head teachers systematically sampled, all of whom were informed by theories of exploitative child labour. According to the survey, 80 percent of head teachers, 62 percent of instructors, 72 percent of boys' pupils, and 77 percent of girl's pupils indicated that the young people who participate in miraa business fail to attend school and they would rather offer labour in miraa farms rather than attend school. The report advised that the entire miraa trade activities be monitored and supervised to ensure that the quality of education is not jeopardized.

Mendezabal (2013) did a study to establish the relationship between the student's study habits and attitude and their academic performance. The findings of the study indicated attitude, and the study habits had a negative influence on their academic performance. The study habits that were found to have negative influence on the student academic

performance included poor reading capabilities, unwillingness to open up to their teachers on the academic problems, lack of or poor preparation for their studies, and inefficient time management. The respondents in the study indicated that they had negative feelings towards teacher activity of demeaning the capabilities.

2.3 Involvement of Boys in Picking, Packing, and Selling of Miraa and Quantity and Quality of Instruction

When it comes to the quantity and quality of instruction, instructor quality is important. It is, in fact, the most significant school-related factor impacting student achievement and performance in the KCSE. According to research, the selectivity/prestige of the institution where a teacher received his or her education has a beneficial impact on student achievement, especially at the secondary level. This could be due in part to the teacher's cognitive abilities (Darling-Hammond, 2000). According to studies, there is no justification for removing all credentialing requirements on a large scale because different aspects of teacher traits are significant. Maintaining the status quo is unlikely to result in improvements in the caliber of teachers.

Instructional quality is crucial. In reality, it is the main school-related factor influencing student achievement. Additionally, teacher compensation is a significant public expenditure, with the US spending \$192 billion on salary and benefits in 2002 alone. Considering the magnitude of this investment, it is surprising how little data exists to inform important choices like who to employ, promote, and retain. Since there isn't a substantial, well-researched body of work in this area, the discussion in it is mostly ideological. Furthermore, it will probably be very expensive to improve teacher quality. Raising the pay of teachers, offering incentives like loan forgiveness, tightening the

criteria for teacher preparation, and taking other steps to train, attract, and keep excellent teachers are all expensive. These expenses could be controlled by focusing on high-need areas where teacher shortages are most noticeable, like certain topic areas (like science and mathematics), classroom types (like special education), and geographical areas (like metropolitan areas). However, given the numerous competing policy alternatives to improve teacher quality and other alluring education policy initiatives, it is imperative that this crucial investment decisions are guided by a comprehensive understanding of which teacher qualities actually contribute to improved educational outcomes. Hard policy decisions must be taken in the context of scarce resources, and such judgments should be supported by strong evidence.

There is no denying the significance of teachers in achieving educational objectives, as evidenced by the willingness of legislators and taxpayers to allocate a substantial amount of school funding to them. Many academics have made the case that a teacher's effectiveness is a strong indicator of a student's performance. According to Darling-Hammond's (2000) analysis of the relationship between teacher preparation and student achievement across states. She argues that compared to other forms of educational investments like smaller class sizes, total spending on education, and teacher compensation, indicators of teacher quality are more closely linked to student accomplishment.

Although these studies seem to corroborate the link between subject matter and teacher effectiveness, other researchers quoted in Darling-Hammond (2000) discover conflicting findings on the relationship between the two factors. There is no evidence to support the hypothesis that there is a connection between teachers' performance as determined by

student outcomes and their results on the subject matter examinations of the National Teacher Examinations (NTE). Byrne conducted thirty linked investigations relating subject matter knowledge to student accomplishment, which are cited in Darling Hammond (2000).

Given that teachers require a lot of resources and that there is empirical evidence showing that competent teachers are crucial to student progress, it appears that teacher policy offers a viable path to better achieving the objectives of efficiency, fairness, and sufficiency in public education. In fact, evaluations that try to improve public education increasingly include recommendations for changing teacher training. For instance, in its call for improved teacher preparation more than 20 years ago, the National Commission on Excellence in Education (1983) stated that courses in educational methods are overly prevalent in teacher preparation programs, at the expense of courses in subjects to be taught. The Carnegie Foundation for the Advancement of Teaching recommended in Boyer's 1983 report that teachers should complete courses in an academic core subject in four years as opposed to five, and that admission to teacher preparation programs should demand a 3.0 grade point average.

Similarly, the Holmes Group (2016) recommended that the four-year liberal arts baccalaureate be made a requirement for admission to teacher education programs at all major universities with sizable preservice teacher enrollments (For example, people who are not yet classroom instructors but are getting ready to become teachers). Ten years later, the National Commission on Teaching and America's Future made important recommendations on teacher training and licensure, arguing that professional organizations, rather than public officials, should take charge of these matters.

According to Darling-Hammond (2000), teacher quality is the most significant school-related factor impacting student performance. Based on a survey of 400,000 students from 3,000 schools, they suggest that teacher quality is the most significant predictor of student performance, even though school quality is a substantial component. However, the effects of class size, teacher training, and teacher experience are negligible. How well a student comprehends what he or she is taught in class is determined by the quality and quantity of teaching provided by the teacher, and this has a significant impact on their performance.

According to Darling-Hammond, (2005) teachers who are qualified are able to deliver the desired results in that they have the appropriate and quality instruction methods. This is in comparison to unqualified teachers who do not have the idea of the appropriate teaching instruction methods. Darling-Hammond (2000) further stated that teacher qualification as well as their adequate training are the main factors that determine the academic achievement of the students. Several criteria at the teacher level were significant in influencing teacher effectiveness. Teacher content-area certification, for example, had a considerable favourable effect on students' gain scores. This means that, to improve students' gain scores, schools should prioritize employing teachers with content-area certification in mathematics. This discovery is also in line with previous research findings (Darling-Hammond *et al.*, 2005).

Furthermore, interactions of content-area certification with students' pretest scores and SES were found to have significant beneficial effects on gain scores. As a result, we can assert that after interacting with student level predictors, content-area certified teachers will be able to boost student performance increases. Although SES had a significant

negative influence (in the level 1 model), after the interaction with content-area certification, it was altered from negative to positive (effect), which has crucial implications. Furthermore, according to the findings of this study, more senior professors are instrumental in improving students' gain scores. Policy makers are avoiding research (or depending only on studies that support their perspectives) in order to proceed with teacher reforms in the face of such obviously inconsistent and inconclusive evidence, frequently without the benefit of research to direct their efforts.

Nonetheless, these choices can and need to be influenced by research. As evidenced, for example, by recruiting practices, pay scales, and teacher reform agendas, many indicators of a teacher's knowledge and abilities have been taken for granted. But there are still unanswered concerns regarding the precise definition of a good instructor. Prior to policy discussions about hiring and recruiting practices, how to distribute teachers across various school types and classrooms to meet equity and adequacy goals, and what qualifications and qualities to encourage in aspiring teachers, this fundamental question must be addressed. To inform policy on investing in teacher quality, this analysis looks at the empirical literature that has already been written about the relationship between a teacher's efficacy and their qualities.

The way miraa is picked, packed, and sold has an impact on how successfully a teacher delivers information in class. According to Gebissa (2014), the majority of people who chew miraa are teenagers and farmers. Approximately 28.5 percent of Ethiopian female students and 71.5 percent of Ethiopian male students chew Miraa. In school, many of them are ineffective. According to Maithya (2019), pupils who use Miraa lose their attention span and interest in schoolwork, which leads to absenteeism and eventually

dropping out of school, and therefore miss out on the teacher's quality instruction. Mohamed, Jibril, and Ibrahim (2012) conducted an academic study that discovered certain effects of miraa on Somali children's schooling. Miraa users, according to their research, spend a significant amount of time looking for and using the substance rather than concentrating on their academics, and consequently do not receive excellent education.

Karega (2013) stated that secondary school boys in Meru County have engaged themselves into the miraa picking, preparation and transportation to the market. They are also employed in the miraa kiosks where they provide manual labour, as well as miraa farms and hawking of miraa in towns. Most of the boys usually skip classes between 6 to 9 am and afterwards spend the rest of the day chewing miraa (Kinoti, 2007). Meru North District Strategic Plan (2005-2010) indicated that most of the schoolboys accounted for 49.7% of the labour force which has led to low school attendance rates and thus they end up missing on the most important classroom instructions. In the year 2012, the permanent secretary for education expressed fear that the low school attendance rate may affect the future regional education success (Sum, 2013).

Miraa harvesting happens at different times of the day depending on where it is being transported to, however, most of it is gathered early in the morning (Waseka & Simatwa, 2016). Young people get up early in the morning to go to the Miraa fields where they participate in harvesting of miraa. Those young people will have earned more money by mid-morning as compared to those in the white-collar jobs. Because Miraa is carried at night, it is still gathered in the middle of the day and late afternoon, particularly in northern Kenya, Somalia, Sudan, and the coast (Reda, Ayalu, Asmamaw & Biadgilign,

2012). As a result, the harvesting business continues, attracting more money to boys, influencing their involvement in secondary education and causing them to miss critical instructions from their teachers.

2.4 Involvement of Boys in Picking, Packing, and Selling of Miraa and Student Discipline

According to Agboola and Tsai (2012), discipline is the deliberate action—or lack thereof—taken to regulate one's behavior. Disobedience to rules, tardiness, bullying, cultism, drug and alcohol abuse, sexual harassment, shoplifting, rioting, striking, starting school fires, 'gassing of learners', and missing class or school are all examples of indiscipline in a school setting (Eshetu, 2014; Silva et al., 2017; Odebode, 2019). According to Järvinen *et al.*, (2021), discipline influences the learning system in a school environment where it moulds student character and upgrades inspiration, takes into consideration the setting of genuine models, and decidedly adds to better grades.

Students' academic progress depends on their ability to maintain discipline (Njoroge & Nyabuto, 2014). Students' attainment of goals, expectations, and responsibilities are all aided by effective discipline (Way, 2011). Good discipline enhances the school's reputation and gets kids ready for the future, claims Amstutz (2015). Disruptive behavior among students is eradicated in schools with strong discipline (Semali & Vumilia, 2016). Drugs are detrimental, yet most common disruptions in teenage brain development. According to Cheng, Annetta, Folta and Holmes (2011) drugs manipulate the wiring and impact the way in which the cerebrum process holds information remembering the way for which they think, learn, review, and concentrate inside and outside of school. This is

an unmistakable antecedent to indiscipline. Njoroge and Nyabuto warn that discipline in public day secondary schools in Kenya has deteriorated to wanting levels.

Kassa, Loha, and Esaiyas (2017) investigated the prevalence, causes, and impact of miraa use on high school students' academic performance in Sidama Ethiopia. The study found that pupils who used miraa were more likely to have low academic achievement. It used a cross-sectional research methodology with 1577 students. Wagate (2015) looked into the effects of drug addiction on discipline and performance in secondary schools in Tetu Sub County. A questionnaire was utilised to collect data using a descriptive survey approach. Drug addiction had a direct influence on discipline and performance in the secondary schools surveyed, according to the findings.

Mutunga (2017) did a study to establish the influence of chewing miraa on student discipline. The data was collected from 10 schools using a descriptive survey approach and simple random sampling. The study gathered data from guiding and counselling (G&C) teachers and school leaders using questionnaires and interview schedules. Miraa has a variety of consequences on discipline management in day schools, according to the findings. More G&C teachers should be trained, according to the study, to improve behaviour modification.

Nyaga (2014) did a study on the influence of drug abuse on the discipline of students among secondary schools in Nakuru County. In this study, 9 teachers and 371 students were included. Using a descriptive survey approach, the study discovered that teachers noticed students' indiscipline as a result of drug and substance use in their schools. In Kiambu County's Ruiru public day secondary schools. Njoroge and Nyabuto (2014)

investigated the causes of indiscipline and their link with academic achievement. The study found that since the government prohibited the use of the cane, discipline had deteriorated. Despite school attempts, indiscipline was the norm of the day, and it impacted academic performance, according to the report. The analysis indicated that indiscipline was to blame for Ruiru's poor academic achievement.

Waseka and Simatwa (2016) investigated the influence of various factors on academic success in Kakamega County. In order to analyse the data, the study used regression analysis. Student characteristics such as perception and discipline were found to influence student academic performance by 7.56 percent. Irura (2013) evaluated the impact of miraa cultivation on pupil discipline. Using Albert Bandura's social learning theory and a descriptive survey research approach, the study collected data through a questionnaire and interviews. The survey found that students' involvement in miraa farming contributed significantly to high levels of indiscipline in schools, based on a sample of eight head teachers, 26 class teachers, and 134 students. Students were notorious for sneaking out of class to make quick money from miraa and chewing gum.

While Kassa *et al.*, (2017) investigated the impact of miraa on learners' academic performance in Ethiopia, the current study investigates how discipline, a primary determinant of performance, is influenced not only by miraa consumption but also by all other miraa-related behaviours in Meru county. Mutunga (2017) provides literature that can be used to investigate how the various manifestations of indiscipline caused by the use of miraa affect learners' academic achievement.

2.5 Summary of Literature Review

The chapter looked at how students get involved in miraa trading activities and how that affects their studies. According to the literature reviewed, boys in secondary school in many countries across the world are significantly involved in miraa business operations such picking, packing, shipping, purchasing, selling, and providing cheap labor at miraa farms. The research review also demonstrates that boys' participation in miraa business ventures results in bad exam scores, low school attendance, a lack of study time, and difficulty focusing in class (Karega, 2013).

Furthermore, the examined research indicates that more males than girls are involved in the trade, and that the trade has a greater impact on their schooling than that of girls (Kinoti, 2007). Chewing miraa becomes part of a boy's lifestyle when he participates in miraa trading activities, according to the examined literature. They chew Miraa because they believe it helps them focus, think more clearly, and perform better in exams (Carrier, 2005). However, some studies have shown that chewing Miraa leads to poor concentration in class and insufficient time to focus on schoolwork.

It is unclear from the reviewed information whether boys' participation in the miraa trade in areas where miraa grows, like Meru County, has an impact on their performance. Kenya Secondary Education Certificate. Meru County's Igembe East Division is a major producer of miraa, and table 1.1 indicates that boys' KCSE scores have consistently been low over time. Thus, it was necessary to look into the miraa growing practices and how they affected the performance of boys at day secondary schools in Meru County on the Kenya Certificate of Secondary Education.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology that was utilised in the current study. It specifically presented the research design, the area of the study, the target population, sample size and the sampling technique, research instruments, pilot study, data collection as well as data analysis. The ethical considerations are also presented in this chapter.

3.2 Research Design

The research was conducted using a descriptive survey design. A descriptive design, according to Bryman and Bell (2007), aims to obtain information that depicts actual occurrences by asking questions about human perceptions and attitudes. The use of a descriptive survey design was appropriate for this study because it enabled the researcher to systematically gather detailed information about the independent variables miraa growing practices and their influence on the dependent variable, which is the KCSE performance of boys in Meru County Day secondary schools. Descriptive surveys allow for the collection of data on attitudes, perceptions, and practices from a representative sample, providing a clear picture of how these practices are manifested among the population under study. This design is particularly relevant when the goal is to describe relationships rather than manipulate variables, as it facilitates the examination of how variations in miraa growing practices (such as the time spent on cultivation, frequency of involvement, and economic dependence) correspond with variations in academic outcomes.

3.2.1 Study Variables

In this study the study variables are two-fold; independent and dependent variables. The independent variables were picking, packing, and selling of miraa. Dependent variable was students' performance in KCSE in Meru, County, Kenya

3.2.2 Research Methodology and Specific Data Collection Methods

The study employed a mixed research methodology, integrating both quantitative and qualitative research methods. This approach was feasible for gathering findings because it allowed the researcher to combine numerical data analysis with descriptive insights, providing a comprehensive understanding of the research problem. According to Bryman (2007), mixed methods research involves blending aspects of qualitative and quantitative procedures, enabling the researcher to collect, analyze, and interpret data in a manner that captures both breadth and depth of understanding. By using both qualitative and quantitative perspectives, the study was able to contextualize findings, examine the research problem from multiple angles, and corroborate results through triangulation. Creswell (2003) highlights that mixed methods are particularly valuable because they allow researchers to gain a more thorough understanding of complex phenomena, enhance the validity of findings, and provide richer, more nuanced insights. In this study, the use of mixed methodology was therefore highly relevant, as it facilitated a comprehensive analysis of the variables and their impact on the research outcomes.

3.3 Study Locale

The study was conducted in Meru County, a region widely recognized for miraa production, which constitutes a major economic activity. Miraa growing activities have been observed to have potential adverse effects on student academic performance

(Njoroge & Nyabuto, 2014). In this context, some students are involved in picking, packing, and selling miraa, while others chew it or participate in farm-related work. The choice of Meru County as the study locale was motivated by concerns raised by various educational stakeholders regarding the influence of miraa-related activities on students' academic outcomes. Although these concerns have been frequently reported, there is no empirical data to substantiate the claims. This lack of statistical evidence underscores the need for the present study, making the investigation both timely and relevant.

3.4 Target Population

All-day secondary schools in the Kenyan sub-counties of Igembe Central, Igembe South, and Igembe North were the target population. All of the target respondents were male teachers and principals of day secondary schools in Meru County's sampled sub-counties. This comprised 58-day secondary schools, 58 principals, 394 teachers and 10,440 boys. This made a total target population of 10,892 respondents.

3.5 Sampling Techniques and Sample Size

3.5.1 Sampling Technique

Purposive sampling was utilised to select the three selected sub counties in Meru County. The reason for choosing purposive sampling was that the researcher was able to obtain adequate information from the schools in the selected sub counties. It also allowed the researcher to describe the major impact the findings had on the population. Random sampling was utilised to select 30-day secondary schools within the three selected sub counties. This method was appropriate since it guaranteed the chosen sample to represent the entire target population which provided the final information of the study. 30 principals, 30 teachers, and 300 students were sampled using the purposive sampling

technique. Their acceptance was determined by the schools they attend. The researcher believed that by using this strategy to pick the head teachers, teachers, and students, the respondents provided the necessary information for the study.

The researcher employed a purposive sampling strategy for the purposes of ensuring there is gender equality in the case where one gender out numbers the other. The study only selected form three boys since they have more information with regard to miraa picking, packing and selling. In addition, the form three students had a more comprehensive class attendance report which was obtained from the class attendance register under the custody of class teachers. The form four boys were exempted from the study since this would serve as a disturbance to their academic school program.

Although the study focused on KCSE performance, Form Four students were excluded to avoid interfering with their final-year academic program. Form Three students were selected because they are actively involved in miraa picking, packing, and selling, which are the key independent variables under investigation. The rationale is that the experiences, attitudes, and practices of Form Three boys regarding miraa-related activities can predict or influence future KCSE performance, as these habits and engagements are likely to continue into Form Four. Additionally, Form Three students had comprehensive attendance and participation records, allowing for more accurate data on the extent of their involvement in miraa activities and their potential impact on academic outcomes. By analyzing Form Three students, the study could establish a baseline understanding of how miraa-related practices may affect academic performance, which is directly relevant to KCSE performance when they progress to Form Four.

3.5.2 Sample Size

A sample size of 10-15% is suitable for a survey (Mugenda & Mugenda (2003), however Sutter (2011) recommends that in educational studies, a 30 percent to 60 percent sample of the overall population is appropriate, which follows that a sample of at least 10% is adequate. This study sampled three sub-counties; Igembe Central, Igembe South, and Igembe North which have a total of 58-day secondary schools. Thirty percent (30%) of the schools were sampled. The schools were distributed in the three sub-counties equally giving 10 schools per sub-county. From every school sampled, one form three class was sampled. In every class, ten (10) boys will be randomly selected. The principal of the sampled school and the class teacher of the sampled class were selected for the study. This obtained a sample of 204 respondents. Table 3.1 presents the sample grid.

Table 3.1: Sample Grid

Respondents	Target Population	Sample
Students (Boys)	10 440	300
Teachers	394	30
Principals	58	30
Total	10892	360

3.6 Research Instruments

This study used a questionnaire for students and teachers. An interview guide was used to collect data from the school principals.

3.6.1 Questionnaires for Teachers

A self-structured questionnaire was used to collect primary data from teachers. The questionnaire contained both closed and open-ended items. Closed ended items, were easily filled, largely objective, and were simple to tabulate. The questionnaire was important in that it was easy to administer and that it reached many respondents within a stipulated duration. In addition, the questionnaire provided confidence and a sense of security to the respondents (Owens, 2002). The open-ended questions assisted students to express themselves freely without restriction. The questionnaires had five sections: A, B, C, D and E. Section A was used to collect information on demographic characteristics of the students. Section B collected information on discipline, while Section C collected information on student attitudes about schooling. Data on school attendance was collected in Section D, while data on learner participation in learning was collected in Section E.

3.6.2 Students' Questionnaire

This tool had closed items in five sections; A, B, C, D and E. Section A collected demographic details of students while section B collected data on miraa growing. Section C, D and E collected data on learner discipline, school attendance and attitude to schooling respectively. The tools answered in five level Likert scale. The students' questionnaire was presented in appendix IV.

3.6.3 Interview Guides for Principals

The study used interview guides to collect data from the principals. The principals' interview guide was used to collect data on school attendance, discipline and KCSE performance. The principals' interview guide was shown in appendix V. By providing

additional information beyond the figures and an explanation of the figures, interviews enabled the researcher to comprehend the statistical data gathered from quantitative research.

3.7 Pilot Study

Piloting was done in two schools in neighbouring sub counties and were not included in the final study. The reason for choosing two schools was that they are 10% of the sample size. According to Mugenda & Mugenda (1999) a one tenth of the sample size is sufficient for pilot testing. All the three instruments were piloted on two schools with a pilot sample of two principals, two teachers and two students (one from each school). Blair, Czaja, and Blair (2013) states that piloting is necessary in that it helps the researcher to ensure accuracy of the research tools as well as ensuring that they do not have biases in the way the responses are provided. The pre-test also helped the research assistant get experience in administering the questionnaire to the students.

3.7.1 Validity

According to Orodho (2003), validity is concerned with establishing that the content of a research tool and checklist measure what they purport to measure. The study used face validity such that all the instruments were scrutinised based on study objectives, hypotheses, conceptual framework and study variables. The researcher employed the expertise of her supervisor who evaluated the instrument's face value and provided feedback. Before the actual study, the input was integrated into the final instruments. To further ensure validity, the researcher calculated the Content Validity Index (CVI) to measure how relevant each question was. The researcher selected a group of experts to review the items and asked them to rate each question as not relevant, somewhat relevant,

quite relevant, or highly relevant. The researcher then counted how many experts rated each item as quite or highly relevant and divided that number by the total number of experts to get the item-level CVI. After calculating the CVI for all items, the researcher averaged the results to get the scale-level CVI, which showed how valid the whole instrument was. Any items showing low scores were revised or removed to ensure that the instruments were accurate and reliable. By doing this, the researcher ensured that the instruments measured exactly what they were intended to measure and were ready for use in the study.

3.7.2 Reliability

Reliability refers to the ability of a research instrument to consistently yield comparable results over repeated trials (Orodho, 2003). In this study, the researcher used the Test-Retest method to determine the reliability of the instruments. The researcher first administered the instruments to the selected respondents and then returned to the same schools a week later to give the same instruments to the same respondents. The two sets of responses were then compared for consistency using Pearson's Moment Correlation Coefficient. The reliability coefficient obtained was interpreted such that a value of 0.7 or higher indicated that the instruments were reliable. If any instrument yielded a coefficient below 0.7, the researcher revised the items to ensure alignment with the study objectives, thereby improving consistency and ensuring that the instruments were dependable for the actual study.

3.8 Data Collection Procedure

The data gathering process started after obtaining a research authorization from the National Commission of Science, Technology, and Innovation (NACOSTI) and an

introduction letter from the Graduate School at Kenyatta University. To avoid interfering with classes, the researcher arranged with instructors and school authorities to decide on the study's schedule and date. All the instruments were given out in person by the researcher. First, as the researcher waited, the teachers were allowed 20 minutes to complete the questionnaire. After that, the researcher gathered the questionnaires and distributed them to the students in collaboration with the instructor. Students had forty minutes to complete the surveys and return them. Finally, the principal was interviewed by the researcher in his office. Until every school was covered, this process was repeated. Data sets collected and methods were presented in table appendix IX. Further details on data collection are summarized in table 3.2.

3.9 Data Analysis

The process of data analysis began by sorting the data collected from the field. After sorting, the researcher coded the data and entered it into SPSS version 24 software for analysis. For quantitative data, the researcher used descriptive statistics such as percentages, means, and standard deviations. These statistics were generated from SPSS and presented in tables. Percentages were used to summarize categorical data and show relative frequencies, means were used to indicate the average responses, and standard deviations were used to show the degree of variability in the responses. This approach allowed the researcher to analyze the data in relation to each objective of the study, providing clear and easily interpretable results. For qualitative data, the researcher employed thematic analysis to examine responses from open-ended questions. Following Zina's (2010) guidelines for qualitative data analysis, the researcher processed, sorted, and coded the data to identify patterns and themes. Thematic analysis emphasized

interpreting the data, finding meaning, and drawing conclusions in alignment with the study’s objectives. This method was appropriate because it allowed the researcher to capture in-depth insights and experiences from the participants, complementing the quantitative findings and providing a richer understanding of the influence of miraa-growing activities on students’ performance. By using both quantitative and qualitative analysis, the study was able to triangulate findings, ensuring that the results were robust, comprehensive, and aligned with the research objectives. The data analysis matrix was as shown below.

Table 3.2: Data Analysis Matrix

Objective	Type of data	Method of analysis	Data presentation
To determine if picking, packing, and selling of miraa affects learner’s motivation and attitude towards learning and KCSE performance among boys in day secondary schools in Meru County.	Quantitative Qualitative	Descriptive statistics and Thematic Analysis	Tables and figures
To determine if picking, packing, and selling of miraa affects quantity and quality of instruction and KCSE performance among boys in day secondary schools in Meru County.	Quantitative Qualitative	Descriptive statistics and Thematic Analysis	Tables and figures
To determine if picking, packing, and selling of miraa affects discipline and KCSE performance among boys in day secondary schools in Meru County.	Quantitative Qualitative	Descriptive statistics and Thematic Analysis	Tables and figures

3.10 Logistical and Ethical Considerations

The National Commission of Science, Technology, and Innovation (NACOSTI) subsequently granted the researcher a research permission after the researcher received an introduction letter from the Graduate School at Kenyatta University. Prior to involving the respondents in the study, the researcher obtained their consent. The researcher asked secondary school administrators for permission to collect data from the institutions in order to guarantee the respondents' voluntary involvement and informed consent. Each respondent received a copy of the introductory letter, which explained the study's goal and significance. To maintain anonymity, respondents were assured that their identities would be treated with the highest confidentiality and privacy. On the data collection instruments, they were not asked to write their names or the names of their schools. The researcher made pre-visits during which he introduced himself to the principals, teachers as well as the learners and arranged when and where to meet them with the aim of collecting data. From a logistical standpoint, the researcher prepared a detailed budget covering transportation, research materials, and other necessary expenses, ensuring that the study was conducted efficiently and within available resources. By carefully addressing these ethical and logistical considerations, the researcher ensured that the study upheld the highest standards of integrity while protecting the rights and well-being of all participants.

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION OF RESEARCH FINDINGS AND
DISCUSSION

4.1 Introduction

This chapter presents study findings on how the various miraa growing practices influences the performance of boys in Kenya certificate of secondary education performance in Meru County. The study was guided by the following objectives:

To determine if picking, packing, and selling of miraa affects learner's motivation and attitude towards learning and KCSE performance among boys in day secondary schools in Meru County.

To determine if picking, packing, and selling of miraa affects quantity and quality of instruction and KCSE performance among boys in day secondary schools in Meru County.

To determine if picking, packing, and selling of miraa affects discipline and KCSE performance among boys in day secondary schools in Meru County

The chapter presented the study findings based on the study objectives. First, the chapter presents the response rate, demographic characteristics of the respondents and then the study findings in terms of the study objectives.

4.2 Response Rate

The response rate is shown in table 4.1.

Table 4.1: Response Rate

Tools	Tools issued	Tools returned	Response Rate
Teacher Questionnaire	30	26	86.6%
Students Questionnaire	300	243	81.0%
Principal Interview guides	30	30	100%
Total	360	299	83.1

Source: Researcher, (2023)

There were 360 respondents in the research which consisted of 30 principals, 30 teachers and 300 students. 299 (30 principals, 24 teachers, and 245 students) of these individuals took part in the study by completing the questionnaires and interview guide satisfactorily. The questionnaire response rate was 81.5% while that of the key informants was 100%. A response rate of 70% or higher is regarded as excellent, according Mugenda (2003). As a result, the 81.5% and 100% response rates, respectively, provided a suitable representative sample for additional examination.

4.3 Demographic Characteristics of the Respondents

4.3.1 Cross tabulations of Teachers Age and Gender

The teachers were requested to indicate their age bracket and gender. When analysing research demographics, gender and age should be considered because they are important participant variables that can affect study interpretation and results. Age can affect research outcomes since it is associated with different levels of experience, knowledge, and cognitive aptitude. By including age and gender in their demographics, researchers

can identify potential biases or disparities and better understand how these factors impact their research findings. The findings are shown in table 4.2.

Table 4.2: Cross tabulations of Teachers Age and Gender

		Gender		Total
		Male	Female	
Age	28 – 38 yrs.	2	7	9
	38 –48 yrs.	14	3	17
Total		16	10	26

From the findings, the majority 14/16 (87.5%) of male teachers were aged between 38-48 years, while the majority 7/10 (70%) female teachers were aged between 28-38 years. Additionally, the overall majority (17/26 or 63.4%) of both male and female teachers were aged 38-48 years whereas a minority (9/26 or 34.6%) were aged between 28-38 years. This suggests majority of the teachers mature enough to handle the students and had adequate teaching experience. The young teachers though lacking adequate experience tend to understand the students better since their age gap is narrower.

4.3.2 Age Bracket of the Students

The teachers were requested to indicate their age bracket. The findings are shown in table 4.3.

Table 4.3: Age Bracket of the Students

Age bracket	F	P
Below 16 Years	64	26.3%
16-18 Years	96	39.5%
18-20 Years	83	34.2%
Total	243	100

From the findings most 96 (39.5%) of the students were aged between 16-18 years, 83 (34.2%) were aged between 18-20 years while 64 (26.3%) were aged below 16 years. This depicts that most of the students were aged between 16-18 years which is the expected age of high school students. The 34.2% proportion of students aged between 18-20 years may present a challenge because age 18 is the official age for acquisition of identity card in Kenya and the official age for transition into adulthood. After this age students tend to have indiscipline issues as they seek independence. The implication to the study findings was that it enabled the researcher to understand which bracket of students was greatly affected by miraa picking, packing and selling and how it affected the student's performance.

4.3.3 Cross tabulation of Marital Status and Gender of Teachers

The teachers were requested to indicate their marital status. Compared to single teachers and instructors in the other category (i.e., separated and divorced), married teachers report higher levels of job satisfaction. Research has indicated that the gender of educators has a part in their efficacy. The findings are shown in table 4.4.

Table 4.4: Cross tabulation of Marital Status and Gender of Teachers

		Gender		Total
		Male	Female	
Marital Status	Married	10	4	14
	Single	3	6	9
	Divorced	3	0	3
Total		16	10	26

From the findings, the majority of the teachers 10/16 (62.5%) of the male teachers were married, while 6/10 (60%) of the female teachers were single. Overall, the majority (14/26 or 53.8%) of both the male and female teachers were married. Research has shown that the personal life of a teacher, including marital status, can have an impact on their teaching quality, time management, and overall performance. Married teachers, for example, may have additional family responsibilities that could influence their time and emotional resources, while single teachers might have more flexibility to engage in extra-curricular activities or professional development.

4.3.4 Parents' Occupation

The students were requested to indicate the occupation of their father/mother/guardian. The findings are shown in table 4.5.

Table 4.5: Occupation

Occupation	Frequency	Percentage
Peasant farmer	142	58.4%
Salaried employment	42	17.3%
Trader/small business	59	24.3%
Total	243	100.0

From the findings, the majority 142/243 (58.4%) of the students indicated that their parents were peasant farmers, 59/243 (24.3%) were traders/small business while 42/243 (17.3%) were employed and they had a salary. This depicts that the majority of the parents/guardians were peasant farmers. This may indicate that many of these students might come from lower-income backgrounds. Limited financial resources could impact their access to educational materials, technology, and even basic school necessities like

uniforms, books, or transportation. Parents who are peasant farmers may also face seasonal income fluctuations, which can lead to periods of financial instability, making it harder for them to support their children's education consistently. This could result in lower academic performance due to distractions or lack of essential learning tools.

4.3.5 Highest Academic Level of Parent/Guardian

The students were requested to indicate the highest academic level of parent/guardian. The findings are shown in table 4.6.

Table 4.6: Highest Academic Level of Parent/Guardian

Highest Academic Level of Parent/Guardian	Frequency	Percentage
No formal Education	119	49.0%
KCPE	88	36.2%
KCSE	36	14.8%
Total	243	100.0

From the findings most 119/243 (49%) of the students indicated that their parents had no formal education, 88/243 (36.2%) indicated primary education while 36/243 (14.8%) had secondary education. These findings show that majority of the parents had either no formal education or low formal education. This suggests that the parents may not fully understand the influence of miraa growing activities on their children.

4.3.6 Professional Qualification

The teachers were requested to indicate their professional qualification. Professional qualification acts as both concrete proof of respondents' specialised knowledge and

experience in a certain subject and as accelerators for career growth. The findings are shown in table 4.7.

Table 4.7: Professional Qualification

Professional qualification	F	P
Diploma	3	11.5%
Degree	19	73.1%
Postgraduate	4	15.4%
Total	26	100.0

From the findings, the majority 19/26 (73.1%) of the teachers had a degree level of education. This suggests that the majority of the respondents had adequate training in content and pedagogy and thus could effectively handle high school curriculum with regard to the subject of the study.

4.3.7 Number of Years of Experience in the Current School

The teachers were requested to indicate the number of years of experience in the current school. The findings are as shown in table 4.8.

Table 4.8: Number of Years of Experience in the Current School

Number of Years	Frequency	Percentage
3-6 years	12	46.2%
7-10 years	14	53.8%
Total	26	100.0

From the findings, the majority of the teachers 14/26 (53.8%) indicated they had 7-10 years' experience of teaching in the current school while 12/26 (46.2%) indicated 3-6 years. This depicts that the majority of the respondents had adequate experience in the

current school and thus could offer adequate information with regard to the subject of the study.

4.3.8 Number of Years as a Teacher

The principals were requested to indicate the number of years they have worked as a teacher. The findings are shown in table 4.9.

Table 4.9: Number of Years as a Teacher

Number of Years as a Teacher	Frequency	Percentage
6-10 years	13	43.3%
11-15 years	9	30.0%
16-20 years	5	16.7%
More than 20 years	3	10.0%
Total	30	100.0

From the findings, the majority of the principals 22/30 (73.3%) had been teachers for less than 15 years while 26.7% had been teachers for over 16 years. This depicts that the majority of the principals had served as teachers for less than 15 years. This finding implies that the researcher was able to determine whether the teachers were content with their work in relation to instructing students who participated in Miraa growing activities and how well it affected their productivity. Length of service is important in schools because it influences productivity and job satisfaction. Teachers with longer service records might have more classroom experience and a sense of community and school commitment.

4.3.9 Number of Years of Experience as a Principal

The principals were requested to indicate the number of years of experience they have as a principal. The findings are shown in table 4.10.

Table 4.10: Number of Years of Experience as a Principal

Number of Years of Experience as a Principal	Frequency	Percentage
0-5 years	9	30.0%
6-10 years	13	43.3%
11-15 years	8	26.7%
Total	30	100.0

From the findings most of the principals 13/30 (43.3%) had been principals for 6-10 years, 9/30 (30%) indicated 0-5 years while 8/30 (26.7%) indicated 11-15 years. This depicts that most of the principals had adequate experience as principals. The implication was that the principal could provide information on how to curb the absenteeism as a result of miraa growing activities. Strong leaders significantly improve the schools they oversee. They support significant results like teacher retention, decreased absenteeism, and student achievement.

4.3.10 Served as a Principal in the Current School

The principals were requested to indicate the number of years they have served as a principal in the current school. The findings are shown in table 4.11.

Table 4.11: Served as a Principal in the Current School

Served as a Principal	Frequency	Percentage
0-5 years	17	56.7%
6-10 years	7	23.3%
11-15 years	6	20.0%
Total	30	100.0

From the findings, the majority 17/30 (56.7%) of the respondents had served as a Principal in the current school for 0-5 years. This depicts that the respondents had served as a Principal in the current school for 0-5 years. The implication was that the researcher was able to understand whether the principal service in the current school could offer adequate information with regard to miraa growing activities and how well they affect the academic performance of the learners.

4.4 Effect of Picking, Packing, and Selling of Miraa on Learner’s Motivation and Attitude towards Learning

The first objective was to determine if picking, packing, and selling of miraa affects learner’s motivation and attitude towards learning and KCSE performance among boys in day secondary schools in Meru County. The findings are shown in the following subsections.

4.4.1 Extent of Agreement on Students’ View about Learning and the School

The respondents were requested to indicate the extent of agreement on students’ view about learning and the school. The findings are shown in table 4.12.

Table 4.12: Extent of Agreement on Students' View about Learning and the School

Extent of Agreement on Students' View	N	Mean	Std. Dev
Our school provides a conducive environment for learning	243	3.922	0.587
Teachers are usually willing to help learners in need	243	3.819	0.716
I prefer being in school to being involved in miraa growing activities	243	3.728	0.656
It is necessary to make money even if it affects my schooling	243	3.967	0.544
Class attendance affects examination results	243	4.111	0.686

From the data the students agreed that class attendance affects examination results (mean=4.111), followed by it is necessary to make money even if it affects my schooling (mean=3.967), our school provides a conducive environment for learning (mean=3.922), teachers are usually willing to help learners in need (mean=3.819), and that I prefer being in school to being involved in miraa growing activities (mean=3.728). This depicts that class attendance affects examination results. The implications of these findings is that when students fail to attend classes they end up losing the precious time they could have used in revising for their examinations hence affecting their performance. The results are consistent with a study by Kithao (2015) that found that students were heavily involved in picking, packing, and transporting miraa for traders, which led to absenteeism, poor homework completion, a failure to study for tests, and a lack of focus in class. Mendezabal (2013) indicated that the attitude and the study habits had a negative influence on their academic performance. The study habits that were found to have negative influence on the student academic performance included poor reading

capabilities, unwillingness to open up to their teachers on the academic problems, lack of or poor preparation for their studies, and inefficient time management.

4.4.2 Class Attendance and Performance

The principals were requested to indicate their view on class attendance and performance.

The findings are as shown in table 4.13.

Table 4.13: Class Attendance and Performance

Class Attendance and Performance	Frequency	Percentage
Poor	15	50.0%
Average	10	33.3%
Good	5	16.7%
Total	30	100.0

From the data majority 15 (50%) of the principals viewed class attendance as poor, 10 (33.3%) viewed that it was average while 5 (16.7%) viewed it as good. The implication of these findings is that when there is poor class attendance the syllabus coverage is affected which has an overall effect on students' performance in their KCSE. Kirby and McElroy (2003) assert that students' exam performance is positively impacted by productive study time and attendance in class.

4.4.3 Average Class Attendance

The principals were requested to indicate the average class attendance in percentage. The findings are shown in table 4.14.

Table 4.14: Average Class Attendance

Average Class Attendance	Frequency	Percentage
below 30%	12	40.0
31-50%	13	43.3
51-70%	5	16.7
Total	30	100.0

From the data 43.3% of the respondents indicated that the average class attendance was between 31-50%, 40% indicated below 30% while 16.7% indicated 51-70%. This shows that the average class attendance was between 31-50%. The implication of these findings is that pupils highly involved in picking, packing, and transporting miraa had high cases of truancy, failure to do homework, failure to revise for examinations and lack of concentration in class and in most cases absenteeism. The findings agree with Kithao (2015) who stated that student class attendance is below average due to engagement in miraa business hence affecting their performance. Walberg (1992) said that the quality of the educational experience, the amount of time pupils spend learning, and the usage of after-school time all affect learning results.

4.4.4 Issues of Class Attendance

The respondents were requested to indicate whether there are issues of class attendance. The findings are shown in table 4.15.

Table 4.15: Issues of Class Attendance

Issues of Class Attendance	Frequency	Percentage
Yes	24	80.0%
No	6	20.0%
Total	30	100.0

From the data majority 24 (80%) of the principals were of the view that there were issues of class attendance while 6 (20%) were of the contrary opinion. This depicts that principals were of the view that there were issues of class attendance. The implication of the findings is that when students fail to attend classes, they lag behind in matters of content cover which affects their overall performance. The study's findings are consistent with those of Karega (2013), who claims that schoolboys who work on miraa farms waste learning time that could be used for revision. Students that participate in Miraa Growing abandon school, don't study for exams, and are completely unfocused on their schoolwork as a result.

4.4.5 Addressing Challenges

The respondents were requested to indicate ways they can address challenges they experience as a result of students engaging in miraa growing activities. The findings are shown in table 4.16.

Table 4.16: Addressing Challenges

Addressing Challenges	Frequency	Percentage
Parental Involvement	14	46.7%
Alternative Economic Activity	2	6.7%
Campaign on Importance of Education	14	46.7%
Total	30	100.0

From the data, 28/30 (46.7%) of the students indicated that parental involvement and campaign on importance of education respectively were remedies to the challenges students experience as a result of student engaging in miraa growing activities while 6.7% indicated alternative economic activity. The implication of the findings is that parental involvement has the capability to shape the students behaviour which helps them to be more dedicated to their education thus improving their performance. Ehiane (2014) agrees with study findings by stating that parents should be involved in maintaining student discipline in school which improves their performance.

4.5 Picking, Packing, and Selling of Miraa

The second objective was to determine if picking, packing, and selling of miraa affects quantity and quality of instruction and KCSE performance among boys in day secondary schools in Meru County. The findings are shown in the following subsections.

4.5.1 Parents Growing Miraa

The students were requested to indicate whether their parents grew miraa. The findings are shown in table 4.17.

Table 4.17: Parents Growing Miraa

Parents Grew Miraa	Frequency	Percentage
Yes	188	77.4%
No	55	22.6%
Total	243	100.0

From the findings, the majority 188/243 (77.4%) of the respondents indicated that their parents grow miraa while 55/288 (22.6%) did not grow miraa. This suggests that the majority of the parents grew miraa which implies that their children are most likely involved in the miraa growing activities. Involvement in the miraa growing would negatively affect student's participation in academic work which will certainly affect their overall school performance. The study's conclusions support UNESCO's (2013) findings that the miraa industry in Meru County has a negative impact on the academic achievement of the area's primary school students.

4.5.2 Approximate Size of Miraa Farm

The respondents were requested to indicate the approximate size of their parent's/guardian's miraa farm. The findings are shown in table 4.18.

Table 4.18: Approximate Size of Miraa Farm

Approximate Size of Miraa Farm	Frequency	Percentage
1 acre	105	56.0%
2-5 acres	69	36.6%
over 6 acres	14	7.4%
Total	188	100.0

From the findings, the majority 105/188 (56%) of the respondents indicated that their parents/guardians had 1 acre of miraa farm, 69/188 (36.6%) indicated 2-5 acres while 14/188 (7.4%) indicated over 6 acres. Considering that miraa growing is a labour-intensive crop when it comes to especially tending to it and picking, one acre of land would certainly require parents to engage their children who would provide cheap labour. Now that 188 indicate they grew miraa it suggests all the learners are most likely

involved in miraa growing activities though at differing degrees. The implication of this findings is that when the students have a land where they can practice miraa growing, they may have most of their time spent on growing miraa rather involving themselves in revising for their exams and thus end up performing poorly. The study's findings are consistent with those of Karega (2013), who claims that schoolboys who work on miraa farms waste time in class that could be used for review. Students that participate in Miraa Growing abandon school, don't study for exams, and are completely unfocused on their schoolwork as a result. The majority of research indicates that students' exam performance is positively and significantly impacted by attending classes or lectures.

4.5.3 Involvement of Learners in Miraa Growing

The respondents were requested to indicate whether they are involved in miraa growing activities. The findings are shown in table 4.19.

Table 4.19: Involvement of Learners in Miraa Growing

Involvement in Miraa Growing	Frequency	Percentage
Yes	183	75.3%
No	60	24.7%
Total	243	100.0

From the findings, the majority 183/243 (75.3%) of the respondents indicated that they were involved in miraa growing while 60/243 (24.7%) indicated they were not. This shows that the majority of the respondents were involved in miraa growing. The results suggest that students choosing, packing, and transporting miraa may cause them to arrive late for class, skip lessons, or even skip school altogether altogether. Additionally,

because they spend the most of their time on miraa growth activities, pupils might not have the time to concentrate on exam revision. Exam performance is likely to suffer for such students. The results corroborate a study by Kithao (2015) that found that students were heavily involved in collecting, packing, and transporting miraa for traders, which led to absenteeism, poor homework completion, a failure to study for tests, and a lack of focus in class. Walberg (1992) said that the quality of the educational experience, the amount of time pupils spend learning, and the usage of after-school time all affect learning results.

4.5.4 Miraa Growing Activities learners are Involved In

The respondents were requested to indicate the activities they get involved in miraa growing. The findings are shown in table 4.20.

Table 4.20: Activities Involved In

Activities Involved In	Frequency	Percentage
Picking	87	47.7%
Packing	56	30.5%
Selling	40	21.8%
Total	183	100.0

From the findings most 87/183 (47.7%) of the respondents were involved in picking of miraa, 56/183 (30.5%) were involved in packing while 40/183 (21.8%) were involved in selling of miraa. This depicts that a majority of the respondents were involved in picking and packing of miraa. This suggests that miraa picking is the activity that draws the majority of students from participating in school work. The implications of the findings are that students involved in picking and packing of miraa ends up losing precious time

which they could have utilised for the purposes of revision and improving their performance. The results of the study are comparable to those of Kinoti (2007), who discovered that pupils in Meru County miss class in order to work for Miraa dealers from 6 to 9 a.m., which has a significant impact on their KCSE scores. Karega (2013) stated that secondary school boys in Meru County have engaged themselves into the miraa picking, preparation and transportation to the market. They are also employed in the miraa kiosks where they provide manual labour, as well as miraa farms and hawking of miraa in towns. As a result, the harvesting business continues, attracting more money to boys, influencing their involvement in secondary education and causing them to miss critical instructions from their teachers. This thus affecting their performance in various examination eventually leading to dropout from school.

4.5.5 Hours Taken in Miraa Growing Activities During School Days

The respondents were requested to indicate the number of hours they take daily in miraa growing activities during school days. The findings are shown in table 4.21.

Table 4.21: Hours Taken in Miraa Growing Activities During School Days

Hours Taken	Frequency	Percentage
0 -1 hr.	32	17.7%
1-2 hrs.	130	70.8%
2-4 hrs.	21	11.5%
Total	183	100.0

From the findings, majority 130/183 (70.8%) of the respondents indicated that they spend 1-2 hours daily in miraa growing activities during school days, 32/183 (17.7%) indicated 0-1 hours while 21/183 (11.5%) indicated 2-4 hours. This depicts that the respondents utilized at least an hour and above in miraa growing activities during school days. According to the research, students who buy and sell miraa miss class, fail to complete their assignments, and lose school days as a result of their engagement. For pupils to score well on any test, all of these elements are essential. Kirby and McElroy (2003) assert that students' exam performance is positively impacted by spending quality study time.

4.5.6 Reasons for Involvement in Miraa Growing Activities

The respondents were requested to indicate the reasons for involvement in miraa growing. The findings are shown in table 4.22.

Table 4.22: Reasons for Involvement in Miraa Growing

Reasons for Involvement in Miraa Growing	Frequency	Percentage
Family activity	53	28.8%
Make extra cash	110	60.1%
Provide for siblings	20	11.1%
Total	183	100.0

From the findings, majority 110/183 (60.1%) of the respondents indicated that the reason as to why they get involved in miraa growing is to make extra cash, 53/183 (28.2%) indicated it's a family activity, while 20/183 (11.1%) indicated to provide for siblings. This depicts that the respondents participated in miraa growing activities of picking, packing and selling of miraa to make extra cash. The implications of this findings are that when the students earn extra cash from miraa growing they end up failing to see the importance of education which may affect their overall performance in school. According to Maithya (2019), pupils who participate in miraa growing activities lose their attention span and interest in schoolwork, which leads to absenteeism and eventually dropping out of school, and therefore miss out on the teacher's quality instruction. Karega (2013) stated that secondary school boys in Meru County have engaged themselves into the miraa picking, preparation and transportation to the market. They are also employed in the miraa kiosks where they provide manual labour, as well as miraa farm and hawking of miraa in towns

4.5.7 Effects of Miraa Growing on School Work

The learners were requested to indicate whether they think miraa growing affects their school work in any way. The findings are shown in table 4.23.

Table 4.23: Effects of Miraa Growing on School Work

Effects of Miraa Growing on School Work	Frequency	Percentage
Yes	117	63.8%
No	66	36.2%
Total	183	100.0

From the findings, majority 117/183 (63.8%) of the respondents indicated that miraa growing affected their school work while 66/183 (36.2%) were of the contrary opinion. This affects their academic performance as they fail to attend most classes and thus fail to grasp teacher instruction and eventually perform below expectations. The implications of the findings were that students participating in miraa growing activities did not have adequate time for school work leading to most of them not attending their homework and thus leading to poor academic performance.

4.5.8 Student Opinion on Growing of Miraa

The students were requested to indicate their opinion on student's involvement in miraa growing activities. The findings are shown in table 4.24.

Table 4.25: Student Opinion on Growing of Miraa

Student's Involvement in Miraa Growing Activities	N	Mean	Std. Dev
My parents ask me to prune miraa on school days	243	1.572	0.703
I harvest miraa in the morning before going to school	243	1.412	0.592
I sort miraa on school days	243	1.885	0.763
I am involved in packaging of miraa in banana leaves	243	1.510	0.592
I sell miraa on the farm in the morning before school	243	1.407	0.577
I transport miraa to collection centers before going to school	243	1.535	0.717
Sometimes I cook for miraa harvesters	243	1.580	0.690

From the findings obtained from the data the students indicated that they sort miraa on school days (mean=1.885), followed by my parents asking me to prune miraa on school days (mean=1.572). In addition, the respondents indicated that they harvest miraa in the morning before going to school (mean=1.412) and that they sell miraa on the farm in the morning before school (mean=1.407). These results suggest that students were squandering time sorting miraa when they should have been in class, studying for tests, or working on schoolwork at home. The impact in terms of time wasted is unavoidable when the amount of time spent sorting miraa is multiplied by the number of days of the week that miraa sorting occurs (NACADA, 2006).

4.6 Effect of Picking, Packing, and Selling of Miraa on Student Discipline

The third objective was to determine if picking, packing, and selling of miraa affects discipline and KCSE performance among boys in day secondary schools in Meru County. The findings are shown in the following subsections.

4.6.1 Student Opinion on Behavior in School

The students were requested to indicate their opinion on student's behavior in school. The findings are shown in table 4.26.

Table 4.26: Student Opinion on Behavior in School

Student Opinion on Behavior in School	N	Mean	Std. Dev
I come to school late	243	2.905	1.173
My name appears among the class noise makers	243	3.321	0.730
Fatigue from miraa growing activities makes me sleep in class	243	3.231	0.986
Chewing miraa creates an urge in me for taking alcohol	243	3.107	1.180
I am tempted to chew miraa in school/class	243	3.424	0.965
I fight with other students over unresolved issues	243	3.214	0.964
I always seek proper ways of resolving issues with fellow students	243	3.012	1.123
I use strong language normally used in miraa activities to students who irritate me	243	3.103	1.033

From the findings, the students were of the opinion that they were tempted to chew miraa in school/class (mean=3.424), fatigue from miraa growing activities makes me sleep in class (mean=3.231), they fight with other students over unresolved issues (mean=3.214), chewing miraa creates an urge in me for taking alcohol (mean=3.107), they use strong language normally used in miraa activities to students who irritate me (mean=3.103), they always seek proper ways of resolving issues with fellow students (mean=3.012), and that

I come to school late (mean=2.905). These results suggest that students who are enticed to chew miraa may exhibit behaviours such as tardiness, poor focus in class, truancy, forgetting to complete assignments, and difficulty reading for tests and ongoing evaluations. The study's conclusions are consistent with those of UNESCO (2013), which discovered that pupils in Meru County who chew miraa suffer from poor focus in class. Chewing Khat can lead to a variety of negative effects, including weariness, anxiety, worry, and loss of focus, according to studies conducted in Meru County's Kangeta division (Kyalo, 2010; Maithya, 2009). Their academic performance suffered as a result of their practice of chewing miraa in class, according to Mendezabal (2013).

In addition, the teachers were requested to indicate their extent of agreement on whether miraa activities have an effect on learner behaviour. The findings are shown in table 4.27.

Table 4.27: Extent of Agreement on Miraa Effect on Learner's Behaviour

Extent of Agreement on Miraa Effect on Learner's Behaviour	N	Mean	Std. Dev
Student tardiness	26	4.423	0.504
Student absenteeism	26	3.577	0.504
Physical conflicts among students	26	3.962	0.824
Theft of items	26	4.115	0.588
Student alcohol use	26	4.115	0.588
Student drug use	26	3.846	0.834
Sale of drugs on school grounds	26	4.115	0.516
Students chewing miraa in class/school	26	4.269	0.533
Students smoking in school	26	3.846	0.881
Verbal abuse of teachers	26	4.077	0.560
Physical abuse of teachers	26	3.808	0.402
Failure to do or complete assignments	26	4.039	0.720
Low concentration in class	26	3.654	0.485
Poor class attendance	26	4.308	0.471

From the data, the respondents agreed that miraa makes the student to be tardy (mean=4.423), followed by poor class attendance (mean=4.308), students chewing miraa in class/school (mean=4.269), theft of items (mean=4.115), student alcohol use (mean=4.115), Sale of drugs on school grounds (mean=4.115), Verbal abuse of teachers (mean=4.077), Failure to do or complete assignments (mean=4.039), Physical conflicts among students (mean=3.962), Student drug use (mean=3.846), Students smoking in school (mean=3.846), Physical abuse of teachers (mean=3.808), Low concentration in class (mean=3.654), and Student absenteeism (mean=3.577). The results indicate that students who are late or do not pay attention in class learn very little from their teachers, which negatively impacts their performance on tests. This suggests that there might be a

connection between students' poor KCSE performance and their chewing of miraa. According to studies conducted in Meru County's Kangeta division, chewing khat can lead to a variety of negative effects, including weariness, anxiety, tension, and loss of interest (Kyalo, 2010; Maithya, 2009). According to Mendezabal (2013), their academic performance suffered as a result of their practice of chewing miraa in class.

4.6.2 Situation of Discipline in the School

The students were requested to indicate the situation of discipline in the school. The findings are shown in table 4.28.

Table 4.28: Situation of Discipline in the School

Situation of Discipline in the School	Frequency	Percentage
Bad	12	40.0%
Good	6	20.0%
Moderate	12	40.0%
Total	30	100.0

From the findings most 12 (40%) of the principals indicated that the situation of discipline in school was bad while 6 (20%) indicated that it was good. The implications of the findings is that bad discipline influences students' class attendance and may also make them unruly, affecting their performance in KCSE. The findings agree with a study by Järvinen et al., (2021) who stated that discipline influences the learning system in a school environment where it moulds student character and upgrades inspiration, takes into consideration the setting of genuine models, and decidedly adds to better grades. Good discipline enhances the school's reputation and gets kids ready for the future,

claims Amstutz (2015). Disruptive behavior among students is eradicated in schools with strong discipline (Semali & Vumilia, 2016).

4.6.3 Learners Affected by Miraa in School

The principals were requested to indicate whether there are learners who are adversely affected by miraa in the school. The findings are shown in table 4.30.

Table 4.29: Learners Affected by Miraa in School

Learners Affected by Miraa in School	Frequency	Percentage
Yes	24	80.0%
No	6	20.0%
Total	30	100.0

From the findings, majority 24 (80%) of the principals indicated that there are learners who are adversely affected by miraa in the school while 6 (20%) were of the contrary opinion. This depicts that there are learners who are adversely affected by miraa in the school. The implications are that students affected by miraa activities lose interest in schooling affecting their performance. The study findings agree with Irura (2013) who stated that students' involvement in miraa farming contributed significantly to high levels of indiscipline in schools and the general performance in examinations. Njoroge and Nyabuto (2014) stated that since the government prohibited the use of the cane, discipline had deteriorated. Despite school attempts, indiscipline was the norm of the day, and it impacted academic performance.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of findings, conclusions and recommendations on how the various miraa growing practices influences the performance of boys in Kenya certificate of secondary education performance in Meru County.

5.2 Summary of Findings

This section presents the summary of findings as per the study objectives. The summary is as indicated below:

5.2.1 Effect of Picking, Packing, And Selling of Miraa on Learner's Motivation and Attitude towards Learning

The study found that when students fail to attend classes they end up losing the precious time they could have used in revising for their examinations hence affecting their performance. When students participate in the picking, packing, or selling of Miraa, they might be dedicating valuable hours that would otherwise be spent on studying. This results in less time for revision, impacting their academic performance. Lack of time for study can also lead to increased stress levels, which can further demotivate students and reduce their attitude toward learning. These findings contribute new knowledge by showing a direct link between time spent on miraa-related activities and reduced learning engagement, emphasizing how local economic activities can compromise educational outcomes.

5.2.2 Effect of Picking, Packing, and Selling of Miraa on Quantity and Quality of Instruction

According to the study, students who help pick, pack, and transport miraa arrive at school late, miss classes, and miss entire school days. Additionally, because they work for Miraa dealers for the most of their time, students are unable to devote enough time to studying for their exams. The study found that the students participated in miraa growing to make extra cash. When the students earn extra cash from miraa growing they end up failing to see the importance of education which may affect their overall performance in school. The study found that that students sort miraa on school days. Sorting miraa was a waste of time for students who should have been in class, studying for tests, or working on schoolwork at home. The amount of time wasted on sorting miraa is unavoidable when multiplied by the number of days of the week that miraa sorting occurs. This study contributes to knowledge by quantifying how the opportunity cost of engaging in miraa activities lost instructional time negatively affects both the quantity and quality of learning. It highlights the trade-off between economic gain and educational attainment, providing evidence that can inform policy and school interventions in miraa-growing areas.

5.2.3 Picking, Packing, and Selling of Miraa Affects Discipline

The study found that students are tempted to chew miraa in school/class. Students who are tempted to chew miraa develop behaviour which include lateness, poor focus in class, skipping school, not finishing assignments, and not being able to read for examinations and ongoing evaluations. According to the study, pupils who are late or don't pay attention in class learn very little from their teachers, which leads to subpar exam

outcomes. The study found that bad discipline influences students' class attendance and may also make them unruly, affecting their performance in KCSE. The study also found that there are learners who are adversely affected by miraa in the school and thus lose interest in schooling affecting their performance. This finding contributes new knowledge by linking specific miraa-related behaviors to disruptions in learning and discipline, showing that involvement in these activities not only affects academic outcomes but also social and behavioral aspects of school life.

Overall, the study contributes new empirical evidence on how involvement in miraa-related activities picking, packing, selling, and chewing negatively affects learners' motivation, attitude, discipline, and academic performance in KCSE examinations. By focusing on Meru County, a major miraa-producing region, the research highlights local contextual factors that have not been fully explored in previous studies. These findings can inform educational stakeholders, policymakers, and school administrators in designing interventions aimed at reducing the negative impact of miraa activities on student learning and improving performance outcomes.

5.3 Conclusion of the Study

The study concluded that when students fail to attend classes they end up losing the precious time they could have used in revising for their examinations hence affecting their performance. The study also concluded that students' performance in their KCSE was generally impacted by their negative attitude toward attending class, which in turn affected the syllabus covering. The study concluded that students who were heavily involved in picking, packing, and shipping miraa had high rates of absenteeism, truancy, and inability to complete assignments, study for tests, and pay attention in class.

The study concluded that students who help select, pack, and transport miraa arrive to school late and skip classes and entire school days. Additionally, because they spend the majority of their time working for Miraa dealers, students are unable to devote enough time to studying for their exams. The study concluded that the students participated in miraa growing to make extra cash. When the students earn extra cash from miraa growing they end up failing to see the importance of education which may affect their overall performance in school.

The study concluded that the respondents are tempted to chew miraa in school/class and that miraa makes the student tardy. The study concluded that the situation of discipline in school was bad and moderate due to students involving themselves in miraa growing. The study concluded that bad discipline influences students' class attendance and may also make them unruly, affecting their performance in KCSE. The study also concluded that there are learners who are adversely affected by miraa in the school and thus lose interest in schooling affecting their performance.

5.4 Recommendations of the Study

5.4.1 Recommendations on Policy

With recommendation to policy the study recommends that in order to protect the education of boys attending day secondary schools, there must be tight and rigorous oversight of Miraa trade activities. To address how to counteract the impact of miraa growth on kids' performance in the KCSE, school administrators and education officers should plan community discussions and gatherings. Mentorship programs and role modelling by well-known locals who have achieved academic success should also be a part of this approach.

In order to better monitor parents and miraa traders who are assisting students in collecting, packing, and shipping miraa, local authorities like the chief and the county education secretary should be given more authority. Second, in order to prevent students from skipping class to engage in the purchasing and selling of miraa, school administrators had to get in close contact with parents. Additionally, government officials should collaborate with interested parties to educate parents about the value of education and achieving high scores on the KCSE, which serves as a benchmark for determining admission to postsecondary institutions.

Additionally, starting student-to-student clubs can help spread knowledge about how miraa trade affects students' KCSE scores and how to address the issue. In conclusion, all educational institutions must establish counselling programs with qualified staff to offer guidance and distribute pertinent information regarding the detrimental effects of miraa growing activities on secondary school students.

5.4.2 Recommendation for Further Research

This study investigated how the various miraa growing practices influences the performance of boys in Kenya certificate of secondary education performance in Meru County. Thus, future research should focus on other Counties where miraa is grown to establish how it influences students' performance in KCSE. Lastly, it is reasonable to state that even though a lot has been written about the effects of miraa growing on academic achievement, there are still some topics that need more research in terms of mindset, consciousness, and the underlying causes that lead secondary school students to form the habit of both chewing the drug and engaging in miraa growing.

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APPENDICES

Appendix I: Introduction letter

From Edna Ntongai

To

Kenyatta University

P.O. Box 7549

Nairobi.

Dear Sir/ Madam,

RE: REQUEST FOR PARTICIPATION IN THE RESEARCH STUDY

I am a Kenyatta University master's student working on a study titled "Miraa growing practices and their influence on Kenya Certificate of Secondary Education performance among boys in Day Secondary Schools in Meru County"

I'd appreciate it if you could devote some time to completing the accompanying research instrument (s). Please keep in mind that all information will be used solely for academic purposes and will be kept with the highest confidentiality. Please do not write your name or any personal information on this instrument.

Thank you for your cooperation.

Yours faithfully,

Edna Ntongai

Appendix II: Informed Consent Form

I am a master student for Kenyatta University. I am conducting a study on “*Miraa Growing Practices and their Influence on Kenya Certificate of Secondary Education Performance among Boys in Day Secondary Schools in Meru County*”

Procedures to be followed

Participation in this study will require you to fill a questionnaire or/and be interviewed. You have the right to refuse participation in this study. Please remember that participation is voluntary. You may ask questions related to the study at any time. You may refuse to respond to any questions at any time. You may also stop participation at any time without any consequences.

Discomforts and risks

Some questions asked may be embarrassing or uncomfortable. If this happens, you may refuse to answer the particular question(s). The process may take approximately an hour for which you take part.

Benefits

If you participate in this study you will help the education sector and all its stakeholders to identify school-based factors influencing learner attendance in preschool in Meru County. This will in turn help the ministry of education, the local community and teachers to address issues that may impede our children from attending preschool.

Reward

If you agree to participate in this study, I will highly appreciate you by saying thank you.

Confidentiality

Data confidentiality and respondent anonymity will be guaranteed since the information will only be used for academic purpose.

Contact information

If you have any questions you may contact

Dr. Ephantus Kaugi

Department of Educational Management Policy & Curriculum Studies

Kenyatta University

Or

The Kenyatta University Ethical Review Committee Secretariat on chairman.kuerc@ku.ac.ke.

Participant's statement

The above information regarding my participation in this study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction.

Code of participant _____ Signature: _____ Date: _____

Investigator's statement

I, the undersigned, I have explained to the volunteer in a language she/he understand, the procedures to be followed in the study and the risks and benefit involved.

Name of researcher: _____ Sign: _____ Date: _____

Appendix III: Students' Questionnaire

SECTION A: DEMOGRAPHIC DATA

1. Indicate with a tick the box within which your age falls.

below 16 16 – 18

18 - 20 above 20

2. Indicate the occupation of:

Father/Guardian

Peasant farmer Salaried employment

Trader/small business

If employed indicate the type of employment.....

Mother/ Guardian

Peasant farmer Salaried employment

Trader/small business

If employed indicate the type of employment.....

3. Indicate the highest academic level of parent/guardian

No formal Education KCPE KCSE

d. Certificate/Diploma Graduate

SECTION B: MIRAA GROWING ACTIVITIES

4. Do your parents grow miraa? Yes No

5. What is the approximate size of your parent's/guardian's miraa farm?

6. Are you involved in miraa growing activities? Yes No

If Yes, outline the activities you get involved in

- i.
- ii.
- iii.
- iv.
- v.
- vi.

7. On average, how many hours do you take daily in miraa growing activities during school days? Tick against the appropriate time in the box.

- 0-1 1-2
 2-4 More than 4

8. What are your reasons for involvement in miraa growing?

- Family activity Make extra cash
 Provide for siblings

9. Do you think miraa growing affects your school work in any way

- Yes No

10. The statements below are related to student's involvement in miraa growing activities. Kindly tick accordingly. Yes = 1, Sometimes = 2 No = 3

	Activities	1	2	3
a.	My parents ask me to prune miraa on school days			
b.	I harvest miraa in the morning before going to school			
c.	I sort miraa on school days			
d.	I am involved in packaging of miraa in banana leaves			

e.	I sell miraa on the farm in the morning before school			
f.	I transport miraa to collection centers before going to school			
g.	Sometimes I cook for miraa harvesters			

SECTION B: LEARNER BEHAVIOUR

11. The statements below are related to student's Behaviour in school. Kindly tick accordingly. Never = 1, Sometimes = 2 Often = 3 Always = 4

	Indicator	1	2	3	4
a.	I come to school late				
b.	My name appears among the class noise makers				
c.	Fatigue from miraa growing activities makes me sleep in class				
d.	Chewing miraa creates an urge in me for taking alcohol				
e.	I am tempted to chew miraa in school/class				
f.	I fight with other students over unresolved issues				
g.	I always seek proper ways of resolving issues with fellow students				
h.	I use strong language normally used in miraa activities to students who irritate me				

SECTION D: ATTITUDE TO EDUCATION

12. The following statements are related to students' view about learning and the school.

Kindly tick appropriately.

Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5

	Indicator	1	2	3	4	5
a.	Our school provides a conducive environment for learning					
b.	Teachers are usually willing to help learners in need					
c.	I prefer being in school to being involved in miraa growing activities					
d.	It is necessary to make money even if it affects my schooling					
e.	Class attendance affects examination results					

Appendix IV: Teachers' Questionnaire

SECTION A: DEMOGRAPHIC DATA

1. Tick the box within which your age (in years) falls.

below 28 28 – 38 38 –48
above 48

2. Indicate your gender with a tick.

Female Male

3. Indicate your marital status

Married Single Divorced
Separated . Widowed

4. Tick the number of years of experience in the current school.

Below 3 3 – 6 7 – 10
11 and above

5. Indicate your professional qualification

Diploma B. Ed Masters
PhD

SECTION B: LEARNER BEHAVIOUR

1. The following are actions displayed in school by learners who engage in miraa growing activities. Kindly tick accordingly to indicate whether miraa activities has an effect on learner behaviour. Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5

Learner's action	1	2	3	4	5
a. Student tardiness					
b. Student absenteeism					
c. Physical conflicts among students					
d. Theft of items					
e. Student alcohol use					
f. Student drug use					
g. Sale of drugs on school grounds					
h. Students chewing miraa in class/school					
i. Students smoking in school					
j. Verbal abuse of teachers					
k. Physical abuse of teachers					
l. Failure to do or complete assignments					
m. Low concentration in class					
n. Poor class attendance					

2. In what ways do you think miraa growing affects learner attendance?
3. What is the general attitude to education of learners who are associated with miraa growing?

Appendix V: Interview Schedule for Principals





1. Gender
2. How old are you?
3. What is your marital status?
4. What is your professional qualification?
5. For how many years have you worked as a teacher?
0 -5 [] 6-10 [] 11-15 []
16-20 [] More than 20 []
6. How many years of experience do you have as a principal?
0 -5 [] 6-10 [] 11-15 []
16-20 [] More than 20 []
7. How many years of have you served as a principal in the current school?
0 -5 [] 6-10 [] 11-15 []
16-20 [] More than 20 []
8. How is the situation of discipline in your school?
9. What is your view on class attendance and performance?
10. Do you have learners who are adversely affected by miraa in the school?
11. What are some of the ways students get involved in miraa growing?
12. What is the average class attendance in percentage in;
Form One:
Form Two:
Form Three:
Form Four:

13. Are there issues of class attendance for boys?
14. What are the issues of class attendance?
15. How do you address the challenges?
16. What else do you think can be done?
17. As a Principal, do you see a relationship between miraa and discipline, class attendance and attitude of students towards education?

Appendix VI: Best 20 Students in KCSE (2020)

SCHOOL	GENDER	GRADE	POINTS
A	M	A	83
B	M	A	82
C	M	A	82
D	F	A	82
E	M	A	82
F	M	A	82
G	M	A	82
H	M	A	82
I	M	A	82
J	M	A	81
K	M	A	81
L	F	A	81
M	F	A	81
N	F	A	81
O	M	A	81
P	M	A	81
Q	M	A	81
R	M	A	81
S	M	A	81
T	M	A	81

Appendix VII: Research Permit

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Ref No: 605092	Date of Issue: 23/August/2023
RESEARCH LICENSE	
	
<p>This is to Certify that Ms.. Edna Ntongai of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Meru on the topic: Miraa Growing Practices and their influence on Kenya Certificate of Secondary Education performance of Boys in Day secondary Schools in Meru County for the period ending : 23/August/2024.</p>	
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