ANALYSIS OF GENDER EQUITY IN SECONDARY SCHOOLS IN MANDERA EAST DISTRICT, MANDERA COUNTY, KENYA

BY

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A Research Project submitted in partial fulfillment of the requirements for the award of the Degree of Master of Education of the University of Nairobi

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DECLARATION

This research project is my original work and has not been presented for a degree in any other University.

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This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

I dedicate this work to my beloved Husband Francis, and our son Lincon.

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I take this opportunity to give thanks to the Almighty God for seeing me through the completion of this project. I am also sincerely grateful to my beloved parents; Mr. and Mrs. Nelson Motuka and my parents-in-law Mr. and Mrs. Pius Kiprotich Chemase for their tireless efforts to see me to this end.

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ABSTRACT

Gender equity in education has been subject of discussion in many countries for a long time. The Kenyan Government has put numerous efforts to achieve gender equity in education including the introduction of Free Tuition Secondary Education. Despite this, there seems to exist disparities in some regions especially the arid and semi-arid areas and amongst. Mandera East District is an arid district that has been greatly affected by gender disparities in education. Since the introduction of Free Day secondary Education in 2008, no study has been done to establish the gender parity in education in this region. This study analyzed the gender equity in secondary schools in Mandera East District Mandera County. The study was guided by the following objectives: determining the trends in gender parity in performance; determining the trends in gender parity in completion rates and gender parity in transition rates from primary to secondary schools. The independent variable was the gender equity measures while the dependent variables were the completion rates, transition rates and performance. The study used descriptive survey design. The target population for this study was the secondary schools, 11 principals, 148 teachers and 3323 students in Mandera East District. The researcher used both stratified sampling and simple random sampling. The study used questionnaires, interview guides and document analysis for data collection. The reliability of the instruments was tested using the Cronbach's alpha coefficient. The questionnaires were found to have a Cronbach's alpha of 0.78 and 0.86 for students and teachers respectively. The validity was established by review of the instruments by experts in the department. Data collected was analyzed using both qualitative and descriptive methods such as frequencies and percentages and presented in tables and figures. The results showed that there were gender disparities in performance with girls being disadvantaged; gender disparities in completion rates with girls showing lower completion rates and disparities in transition rates from primary to secondary schools in which girls were having significantly lower transition rates for the years 2006-2012. The researcher recommended enforcement of law on early marriage for girls, construction of more girls boarding schools and payment of total school fees for the girls including boarding fees by the government.

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ABBREVIATIONS AND ACRONYMS

FPE	:	Free Primary Education
STSE	:	Subsidized Tuition Secondary Education
GDP	:	Gross Domestic Product
MDGs	:	Millennium Development Goals
PISA	:	Programme for International Student Assessment
SACMEQ	:	Southern and Eastern Africa Consortium for Monitoring Education Quality
STME	:	Science, Technology and Mathematics Education
UNESCO	:	United Nations Educational, Scientific and Cultural Organization
UNICEF	:	United Nations Children Education Fund
UPE	:	Universal Primary Education
USAID	:	United States Agency for International Development
NER	:	Net Enrollment Rate

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This section contains the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, limitations and delimitations of the study, basic assumptions and operational definition of terms.

1.2 Background of the study

The study of comparatives issues in education is important in providing data on critical issues that impact on the educational sector; this data helps in creating awareness of issues like inequality in gender enrolment, retention, transition, completion, and performance in education.

Gender equality means that males and females have equal opportunities to realize their full potential and contribute to and benefit from economic, social, cultural, and political development (USAID, 2008). According to Basic Education Coalition (2004), research has shown that education is “one of the most effective development investment countries and their donor partners can make”. Therefore it is important for countries to invest in education for them to address the issue of gender disparity.

The building blocks of equity in education are parity and equity (UNESCO, 2003). According to UNESCO (2003), parity is attained when the same proportion of boys and girls, relative to their respective age groups, enter the education system, achieve educational goals, and advance through the different cycles. Reaching parity in enrollment is necessary, but not sufficient for achieving equality and should be considered a 'first stage' measure of progress towards gender equality in education (USAID, 2008).

According to USAID (2008), equity is the process of treating girls and boys fairly. To ensure fairness, measures must be available to compensate for historical and social disadvantages that prevent girls and boys from operating on a level playing field. In this context, equity may imply that both boys and girls be treated equally. Gender equity refers to the provision of equal opportunities for boys and girls to enter school, as well as to participate in, and benefit from the range of subjects or other learning experiences offered in the classrooms and school. Through gender sensitive curricula, learning materials and teaching-learning processes, girls and boys become equally capable of coping with life skills and attitudes that they will need to achieve their fullest potential within and outside the education system, regardless of their gender. Therefore, equity entails ensuring environments that can allow boys and girls to compete effectively therefore allowing them to achieve their full potential.

According to ILO (2000), equity in education does not imply treating all learners the same because many factors could disadvantage students in having chances to achieve equitable outcomes. Responses may include “equal treatment or treatment that is different but which is considered equivalent in terms of rights, benefits, obligations and opportunities. However World Bank (2005), states that the underlying principle in equity is that all people should be given equal opportunities so that a person’s life achievements should be determined primarily by his or her talents and efforts, rather than by pre-determined circumstances such as race, gender, social or family background.

In the 1960s, when most African states began to gain their political independence, there was considerable gender disparity in education. Girl’s enrolment figures were very low throughout the continent. In May 1961, the United Nation's universal declaration of human rights and UNESCO’ s educational plans for Africa were announced in a conference held in Addis Ababa, Ethiopia. A target was set to achieve 100% universal primary education in Africa by the year 1980. The implementation in the 1970s of the free and compulsory Universal Primary Education (UPE) scheme in several countries for example, Kenya, Nigeria, Liberia, Zambia and Tanzania, which were signatories of that declaration, were in line with this UN Plan. Ever since, UNICEF and UNESCO among many other bodies have sponsored affirmative moves, research and conferences within Africa on the education of girls. One such conference was the Pan-African one held at Ouagadougou, Burkina Faso, in March/April of 1993. At this conference, it was observed that Africa was still lagging behind other regions of the world in female access to education. More depressing findings on girls' enrolment were reported, for example, by

Marangu 1985 on Kenya, King 1991 on Ethiopia, and Obasi 1997 on Nigeria. It was also noted that gender disparity existed in education generally and that there was need to identify and eliminate all policies that hindered girls' full participation in education.

Several declarations on the quality of education have been made. The Jomtien Declaration of EFA (1990) emphasized that the focus of education must be on actual learning outcomes rather than exclusively on enrolment. In the World Education Forum, Dakar Framework of Action 2000, emphasis on quality of education is included as one of the six goals, "Improving all aspects of the quality of education, and ensuring their excellence of all so that recognized and measurable learning outcomes are achieved by all especially in literacy, numeracy and essential life skills" (UNESCO, 2005, p. 29).

Kenya is a signatory to the UN Human Rights Charter and the Convention on the right of the child, both of which mandate countries to provide quality basic education to children. This obligation was reiterated in 1990, at Jomtien, Thailand, during the World Conference on Education for All (EFA, 2005). The World Education Forum in Dakar, Senegal in 2000 adopted six specific goals: The second of the eight MDGs was for countries to achieve Universal Primary Education (UPE) by 2005, whereby boys and girls gain access and complete a full course of primary education of good quality (UNICEF, 2006).

In key policy documents, the principle of non-discrimination is central and the government stresses its commitment to education for all children irrespective of sex, religion, ethnic, social background, and economic status. The Ministry of Education endeavors to eliminate gender disparities and promote social equity through provision of basic education to all (Onyando & Omondi, 2008). Gender disparities have been addressed in many studies in Kenya (Onyando & Omondi 2008; Sifuna, 2003; Kimalu, Nafula, Manda, Mwabu & Kimenyi, 2001). However, a keen analysis of the studies shows that they seem to look at gender equality in education in terms of access to education i.e. gender parity in enrolments and not equity. This study will address equality in education with emphasis on both equity and parity.

Despite the government's efforts in enhancing gender parity, gender disparities in education still exist (UNESCO, 2010). According to a survey by UNESCO, although gender parity in primary school enrollments is almost being achieved in many parts of the country as shown in the Table below, gender disparities exist at higher levels of education especially in the Arid and Semi-Arid Lands (ASALS). This is evidenced by serious gender disparities in literacy rates as indicated in Table 1.1.

Table 1.1: Secondary Education NER by selected counties

County	Male	Female	Total %	County	Male	Female	Total%
Turkana	3.8	3.1	3.5	Kericho	20.4	22.4	21.4
West Pokot	5.4	6.0	5.7	Meru	19.1	25.3	22.3
Garissa	7.2	6.5	6.9	TaitaTaveta	20.7	25.6	23.1
Wajir	7.5	6.8	7.2	Homa Bay	24.0	22.6	23.3
Tana River	8.2	6.6	7.4	Samburu	7.5	8.1	7.8
Vihiga	22.5	27.8	25.2	Mandera	9.2	8.3	8.9
Uasin Gishu	23.8	29.9	26.9	Kwale	8.7	9.6	9.1
Kajiado	25.0	28.9	27.0	Marsabit	10.0	8.8	9.4
Makueni	24.2	30.4	27.2	Kilifi	10.6	10.4	10.5
Tharaka	23.9	30.6	27.2	Narok	9.9	11.3	10.6
Kisumu	28.1	28.3	28.2	Busia	16.7	15.9	16.3
Machakos	26.2	32.5	29.3	Lamu	15.6	17.3	16.4
Nakuru	29.7	34.9	32.3	Isiolo	16.6	16.9	16.7
Mombasa	33.6	31.5	32.5	Kitui	15.0	19.0	17.0
Laikipia	30.1	35.1	32.5	Bungoma	15.8	19.5	17.7
Embu	28.3	37.0	32.6	Baringo	16.2	21.0	18.5
Nyandarua	31.2	39.4	35.2	Nandi	16.2	21.7	18.9
Kisii	34.4	36.0	35.2	Migori	19.7	18.8	19.2
Kirinyaga	34.0	42.1	38.0	Kakamega	17.5	21.0	19.3
Murang'a	36.0	42.1	39.0	Elgeyo-Marakwet	17.4	22.2	19.8
Nyamira	37.9	43.2	40.5	Siaya	19.1	20.5	19.8
Nyeri	42.5	50.3	46.3	Bomet	17.9	22.1	20.0
Nairobi	49.0	47.2	48.0	Trans Nzoia	18.7	21.9	20.3
Kiambu	47.5	52.4	50.0	**National**	**22.2**	**25.9**	**24.0**

Source: Ministry of Education EMIS (2009).

As observed in Table 1.1 the NER in secondary schools are too low with national average of 22.2% boys, 25.9% girls and an average of 24.0%. Regional disparities are also pronounced with Mandera County showing NER of 9.2% for males and 8.3%.

1.3 Statement of the problem

Gender equity in education has been a subject of debate by educationists and other stakeholders in education for many years (UNESCO, 2003; UNICEF, 2006). It is a phenomenon that has been reported in many parts of the world with the boy child been advantaged over the girl child, Kenya included. Although gender parity in primary school enrolments seems to be almost achieved, disparities may exist in higher levels due to high dropout rates and low transition rates of girls. Secondly, evidence shown by secondary school NER indicate that some regions are more affected than others with Mandera County being one of the most affected (Table 1.1). Although many studies have been done on gender disparity in education, literature on gender parity shows that these studies have emphasized on enrollment rates. There is therefore a gap in knowledge on the gender parity in transition rates, completion rates as well as performance. Mandera East District being an Arid and Semi-Arid Land (ASAL) is expected to be among the most affected areas thus the need for the current study. This study therefore attempted to analyze gender equity in Mandera East district, in Mandera County.

1.4 Purpose of the study

The purpose of this study was to analyze gender equity in public secondary schools in Mandera East District, Mandera County.

1.5 Objectives of the study

The study was guided by the following objectives:

1. To investigate the trend in Gender Parity in performance in secondary schools for the period 2006-2012 in Mandera East District.
2. To establish the trend in Gender Parity in secondary schools completion rates for the period 2006-2012 in Mandera East district.
3. To determine the trend in Gender Parity in transition rates from primary to secondary school for the period 2006-2012 in Mandera East District.

1.6 Research questions

In order to achieve the objectives, the study answered the following research questions:

1. What is the trend in Gender Parity in performance in secondary schools for the period 2006-2012 in Mandera East District?
2. What is the trend in Gender Parity in secondary school completion rates for the period 2006-2012 in Mandera East district?
3. What is the trend in Gender Parity in transition rates from primary to secondary school for the period 2006-2012 in Mandera East District?

1.7 Significance of the study

The study provided relevant information on gender disparities in secondary school education systems in Kenya. Specifically, the study provided good insight on the changes in transition rates, performance and completion rates for both boys and girls. This information is useful to stakeholders in the Ministry of Education in devising intervention measures that could be used to enhance these rates thus reducing educational wastage. Information on transition rates, completion rates from primary to secondary for girls is useful to teachers and education officers in determining ways in which the girl child education can be improved. The findings of this study will give a clear insight on gender disparities in performance which can be used in devising intervention measures that could help reduce gender inequalities in educational outcomes which serve as an eye opener to the parents and other stakeholders on the importance of educating girls in the region.

1.8 Limitations of the study

The validity of the information obtained was largely depended on the objectivity of the respondents in answering the research items. The researcher was however not able to control the attitudes of the respondent as they attempt to answer various research questions. This is because the respondents may at times give socially acceptable answers which may affect the validity of the findings. In order to reduce the effect of subjectivity, document analysis was used to verify the information given by respondents. Similarly information on the same subject was collected from different kinds of respondents.

1.9 Delimitations of the study

The study was delimited to gender equity in secondary education in Mandera East district due to shortage of time and funds, although similar studies are necessary at primary and tertiary levels. The research involved all public secondary schools in Mandera East district.

1.10 Basic Assumptions

In conducting this research it was assumed that;

a) Pupils' transfers into the district and out of the district for each particular cohort are approximately the same.

b) Respondents cooperated and gave honest and reliable information when responding to items in the questionnaire.

c) Number of standard eight graduates from Mandera East District that join secondary schools outside the District are approximately equal to number of pupils from other districts joining secondary schools in Mandera East District.

1.11 Operational definition of terms

Gender Equity: In this study, gender equity refers to the practice of fairness and justice in the distribution of benefits and access to opportunities to both boys and girls. It is essentially, the elimination of all forms of discrimination based on gender.

Gender equality: This refers to equal treatment of boys and girls so that they can enjoy the benefits of development including equal access to and control of opportunities.

Gender parity: This concept refers to equal number of girls and boys relative to their respective numbers in the population.

Gender Parity Index: This refers to the ratio of girls to boys participation based on a certain indicator, namely: performance in KCSE, completion of secondary school education, transition from primary to secondary, enrollment in secondary schools.

Enrollment rates: This refers to the ratio of number of pupils enrolled in secondary school to the population of school age children (14-18 years).

Completion rates: In this study, it refers to the percentage of a given cohort that completes the secondary school system in form four.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter presents a review of literature related to gender equity in education. The chapter consists of number of sections: gender disparities in performance, gender disparities in transition rates, gender disparities in completion rates, summary of literature and conceptual framework.

2.2 Gender disparities in performance

A lot of research has been done in the world to assess gender differences in performance. A study in US on gender disparities in performance in achievement tests revealed that performance of girls was better than boys in grades. As is the case for grades, girls also outperform their male counterparts on achievement tests in stereotypically feminine subject areas (U.S. Department of Education, 2003).

Such a decreased propensity for activity may continue as children enter school, making it easier for girls than for boys to pay attention in class, leading them to engage in less disruptive classroom behavior (Hines & Kaufman, 1994). Much research supports the idea that girls and boys approach school-work differently, with girls being more mastery and less performance oriented than boys and engaging in less disruptive behavior in the classroom than boys.

In Nigeria, gender-achievement studies include Abiam and Odok (2006), who found no significant relationship between gender and achievement in number and numeration, algebraic processes and statistics. They however found the existence of a weak significant relationship in Geometry and Trigonometry. In a study by Opolot-Okurut (2005), it was found that for all the attitudinal variables (anxiety, confidence and motivation); males had higher mean scores than females. That is, differences in student attitude towards Mathematics based on gender were confirmed. Attitudes are known to have positive relationship with student achievement. This may be an indication that males perform better than females Mathematically as a result of their higher attitude scores.

Kenya SACMEQ II report (Onsomu, Nzomo & Obiero, 2005), performed a multilevel analysis of the factors influencing Standard Six pupils' achievement in Kenya. The multilevel analyses were carried out in order to identify the major pupil-level, school-level and province level factors influencing achievement in reading and Mathematics among Standard Six pupils. The study addresses the problems of traditional linear models with assumptions that subjects respond independently to educational programmes. It was found that younger pupils achieved better than their older counterparts, and this is attributed to grade repetition by the less able students. Boys achieved better than girls in Mathematics, but not in reading. On the other hand, girls reported much lower interest in Mathematics, less confidence as Mathematics learners, less motivation to use mathematics in the future, and much greater anxiety when learning Mathematics. Boys performed slightly better than girls, but were much more confident and less anxious learning Mathematics (Schleicher, 2007).

These disparities in performance are perpetuated by stereotypes in the school environment which affects negatively the learning of girls as compared to boys. The National School Health Policy (2009) stipulates that a healthy and hygienic school environment is actualized by safe, adequate water supply, adequate sanitation and appropriate hygiene promotion. According to Nyaegah and Mwango (2012), the socially constructed differences and relations exist and are evidenced in the identities, roles, responsibilities, opportunities and attributes assigned to girls and boys, women and men in society are prime contributors to these disparities. Court (2004), puts it in a case elsewhere in Sub-Sahara Africa that when poor parents are forced to choose between the education of their daughters and that of their sons, they would rather choose to educate boys in the belief that they will support them with their high income derived from their education.

Poor or marginalized children, who are more likely to have illiterate parents and less access to reading materials at home, are more dependent on their teachers for their learning than are better-off children. As a result, poor instruction perpetuates inequities because it is more often the most marginalized children who become school leavers, either through failure or voluntary termination. Research has shown that girls seem to be more sensitive to school quality than boys and that the quality of teachers has a greater impact on the demand for girls' education than for boys' (Kane, 2004).

A Kenyan study by Mensch and Lloyd (2008), concluded that factors considered under opportunities to learn such as chores, homework, tutoring, punishment, sex ratio, and class size, have slightly different effects on girls than boys. In Malawi, researchers found that teacher behavior and the availability of desks affected girls more than boys (Kendall, 2006). The results from the 2006 Programme for International Student Assessment (PISA), illustrate the complexities and the attention required for achieving gender equality. The scores in Mathematics indicated that attitudinal differences between girls and boys were far more pronounced than performance differences.

Njeru and Orodho (2003) study on gender disparities found out that, not only has there been a considerable decline in the gross enrollment rate at secondary institutions, but also wide and severe regional and gender disparities in access to, and participation in secondary school education has also been noted. Secondly, the development of human and physical resources varied from one region to the other. For instance, female teachers were mostly deployed in urban areas, whereas male teachers were deployed in other regions of the country. This situation in essence deprives girls in rural settings from having lady teachers as role models as well as showing that lesser jobs like teaching was suited for girls in urban secondary schools where majority of teachers are women.

Were (2006), argues that in Kenyan schools, it is common to find line ups for boys and girls in the allocation of different chores for boys and for girls e.g. sweeping for girls and slashing for boys. This has negative effect on both boys and girls since they grow to

believe that they are different. The girls' poor performance in Science and Mathematics is also reflected by the low participation in science based courses at University or college.

Nyaegah and Mwango (2012) noted that Kenya does not have a specific policy on gender mainstreaming in Science and Technology apart from some general provisions, which are not strong enough to mainstream gender equity into science and technology. They further noted that, in education, although the policy provides a framework for the planning and implementation of gender responsive education, as well as research and training at all levels, which encompasses gender equity and participation in science, mathematics and technology subjects and courses, the framework is underperforming. For example, in Kenyan universities, women's participation in science subjects is still gloomy although the trends show that there has been an increase, albeit unsteady.

2.3 Completion rates

Data on secondary school completion rates is not very sufficient to draw concrete conclusions because a few studies concerning completion rates have been done. However, available information shows that completion rates in secondary schools are relatively high, an indication of low drop out and repetition rates. About 89.6 percent of students joining secondary school in the year 2001 completed their secondary education in 2004. The completion rates are higher for boys (91.5 percent) than they are for girls (87.5 percent), reflecting a minimal increase in completion rate of about 3 percent from 86.4 percent in 1990. The rates were relatively low in 1993 (68.9 percent) with female students recording a lower completion rate of 66.6 percent compared to the male students (70.7 percent). High completion rates imply efficiency in the system in terms of

progression from Form 1 to 4 and that survival is assured if students manage to enter first grade of secondary education (Government of Kenya, 2005).

Dropout and repetition rates are other indicators of internal efficiency of the education system. On average, the repetition rate decreased from 1.6 percent in 1999 to 1.3 percent in 2003, while dropout rate deteriorated from 5.5 percent in 1999 to 6.6 percent in 2003. Repetition rate was highest in Form 4, both in 1999 (3%) and 2003 (4.72 percent), while the dropout rate was highest in Form 2 at 6.4 percent in 1999 and 5.36 percent in 2003, reflecting the diversity of factors contributing to the two efficiency indicators (Government of Kenya, 2005). In my view, I concur with the findings because I believe that the high drop-out rate in form two is because of the adolescent stage that greatly affects most learners and for those who complete form four and achieve low grades, have already realized that they are the determinants of their future, and they repeat so as to achieve a higher grade.

Kenyan government introduced Free Primary Education (FPE) in 2003 and Subsidized Tuition Secondary Education (STSE) in 2008, moves meant to enhance access and participation of the poor in basic education. The introduction of FPE saw a remarkable increase in enrolment in public primary schools in Kenya. This is witnessed by the tremendous growth rising from 5.8 million pupils in 2002 to around 8.7 million in 2010. The introduction of subsidized secondary education is also expected to improve access and secondary school enrollments owing to the immediate increase in transition rates to 72% in 2011.

2.4 Gender disparities in transition rates

Developing countries that fail to ensure equitable access to basic education pay a high price for doing so (USAID, 2005). According to USAID, the development costs of not achieving gender parity in education will be reflected in reduced economic growth and increase in fertility, child mortality, malnutrition, and poverty. Too many children, especially those from poor families and those living in rural or remote areas, still lack access to a safe, nearby school or other quality learning opportunities. Working children, indigenous children, street children, refugee children, displaced children, orphaned children, trafficked children and those who are physically challenged, living in conflict areas, or are affected by HIV or AIDS are not receiving an adequate education (USAID, 2008). Being female exacerbates an already difficult situation because of the 'African tradition' which is considered as a major constraint.

The 'African tradition' attaches higher value to a man than a woman, whose place is believed to be the kitchen. The patriarchal practices give girls no traditional rights to succession. Therefore, the same patriarchal practices encourages preference to be given to the education of a boy rather than that of a girl, this is because parents or guardians believe that boys will end up assisting them in future while girls will get married elsewhere. This explains the fact that more boys than girls participated in education. In most developing countries, girls are less likely than boys to enroll in school, stay in school or have their educational needs met through non-formal means. The barriers that keep girls out of school are well known, and solutions for lifting them exist. However, governments and donor agencies have focused primarily on increasing female access and

enrollment, with insufficient attention paid to the quality or relevance of education for girls or their retention and achievement rates (Sibbons, et al. 2000).

With most efforts focused on closing the primary school enrollment gap between girls and boys, insufficient attention has been paid to the gender dynamics that affect children's larger participation in school. The relationship between gender and educational inputs, such as curricula, textbooks, pedagogy, and teacher training, are rarely made explicit. Similarly, the links among gender inequities, inputs, and outcomes are not sufficiently acknowledged. An evaluation of a USAID-funded project in Malawi revealed that the focus on getting girls into school, without addressing impediments in the learning process, put girls at a disadvantage. The evaluation revealed that wide perceptions of girls' failure or weaknesses in English hindered girls in upper grades, where English was the medium of instruction. The study also indicated that girls had been regularly characterized as "dull, second-rate students incapable of answering questions" and boys were assigned high status tasks like timekeeping and ringing the school bell, whereas girls were responsible for sweeping and arranging furniture (Kendall, 2006). Although these issues are often overlooked in education program policies and strategies, they contribute to reinforcing the gender gap in education.

However, in terms of enrolment, there are those countries which have shown a marked improvement in the enrolment of girls. For example, females now constitute 50% of the children enrolled in grade one in Kenya, Zimbabwe, Tanzania and Rwanda. There has been a rise from 22% in 1961 to 50 % in 1990, in primary school, and 4% at secondary

level in 1970 to 15% in these countries. In some countries of the south (Botswana, Lesotho, Namibia and Mauritius), female enrolment levels actually exceeded that of males at both primary and secondary levels (FAWE, 1996). This situation may be explained by the affirmative action programmes carried out and the fact that southern countries are richer than those in Sub-Saharan Africa. It is only in Franco-phone countries, and other countries such as Somalia, Mali, Liberia and Ethiopia, where female enrolment is below 30%. This could be attributed to poverty, wars or lack of commitment to affirmative action.

A review of household data in countries which made the biggest gains in expanding net enrolment ratios and overcoming gender gaps in the last decade, shows that the increases in enrolment were largely in the richest, not the poorest, quintiles (Unterhalter, 2010). The literature on gender, education and social division does not take quite such a static approach to education poverty. A number of studies point to the complex juggling poor families engage in when deciding whether to invest scarce resources in the schooling of girls or boys. Fleisch and Shindler's (2009) analysis of birth cohort data over a primary school cycle in South Africa, suggests that boys are more likely than girls to repeat a grade, possibly improving attainment.

Achieving parity in enrollment remains a critical objective and is fundamental to gender equality. However, focusing on access as the primary issue for girls can undervalue the importance of quality and relevance, with the false conclusion that what happens in the classroom need not be analyzed for possible differences in girls' and boys' opportunities

and experiences. Some of the more traditional approaches to increasing parity in enrollment, such as offering parents food or financial incentives to send their daughters to school, treat only the symptoms, not the root causes of inequality. Striking a balance between equitable access, quality, and relevance is one way to ensure a quality education for all learners. A USAID-supported program in Mali, for example, increases demand for education "through improved, more relevant schooling for girls and boys, by addressing their needs through gender-conscious curriculum and teacher training" (USAID, 2007).

Particular features of location and poverty, as well as family dynamics, bear on the question of whether girls or boys go to and stay at school. Gender gaps are also noted in large slum communities that have grown up with very rapid urbanization, and it is suggested for slums in Kenya (Mugisha, 2006) and Mumbai (Kumar, Kumar & Anurag, 2007), the advantage of living in an urban area may not be sustained for slum children, particularly girls.

Significantly, however, is that the problems of girls in education are not just about enrolment figures but the practices on the ground. There has been only limited progress in getting children into school and girls, primarily girls from the poorest households, remain one of the groups most at risk of never attending school. For example, in Pakistan, in 2006 girls accounted for 60% of the children out of school; being a girl from a rural area in one of Cambodia's hill provinces increased the chance of not attending school by a factor of five, while in Nigeria only 12% of poor Hausa girls from rural areas attend school (UNESCO, 2010, p. 152).

In a survey done by UNESCO worrying trends of gender inequalities in different countries were noted. In twelve countries out of 14, girls out of school were less likely than boys to get into school (UNESCO, 2010, p. 65). In Yemen rural girls' enrolment is dramatically lower than boys' in the lowest quintile (UNESCO, 2010, p. 67) and there is a similar picture to be seen in Pakistan when attendance is analyzed (UNESCO, 2010, p. 68). In a number of countries girls in the poorest households are much more likely to have less than four years schooling than boys from the same households (UNESCO, 2010, pp. 140-141).

According to the goals of Education for All (EFA) and Millennium Development Goals (MDGs), many countries are faced with challenges of eliminating gender disparities in primary and secondary education by 2010 and achieving gender equality in education by 2015, with specific focus on ensuring girls' full and equal access to, and achievement, in basic education (UNESCO, 2003). To achieve these targets, informed strategies to improve participation of both male and female citizens in various socioeconomic activities, including education are necessary.

In most developing countries, gender differentials in education are more pronounced in terms of participation and internal efficiency and in cognitive performance, with girls being the most affected. While enrolment rates to some extent do not differ greatly, more boys than girls complete schooling, especially at primary school (IMF, 2005).

Kenya is committed to ensuring quality provision of Education for All by 2015 and Universal Primary Education by 2005. Policy initiatives towards achieving this goal have included abolition of user charges in primary education in 2003. During this year, primary gross enrolment reached 7.2 million pupils (48.6% female) having risen from 5.4 million pupils in 1989 (48% female) (Government of Kenya, 2005a). Interventions aimed at promoting girls education, include taking affirmative action in support of girl-child education; expansion and improvement of classrooms, boarding facilities and water and sanitation facilities to create conducive and gender responsive environments, particularly in Arid and Semi-Arid Lands (ASALs); and providing support to non-formal education institutions (Government of Kenya, 2005b).

Despite the impressive gains in access to education, issues of gender equality in participation, progression and performance in all education levels require further analysis. According to Southern and Eastern Consortium for Monitoring Education Quality (SACMEQ) I policy research survey of 1998, 22.6 percent of female Standard Six pupils achieved desirable competency levels in reading compared to 24.2 percent of their male counterparts (Nzomo, Kariuki & Guantai, 2001). Another challenge is the difference between females and males in learning as measured by internal efficiency indicators, including dropouts, repetition, completion and transition. Therefore, although the Government underscores the role of women and/or gender parity in economic development through poverty reduction, gender differences are apparent in the schooling process. Further, there is a dearth of empirical evidence on implications of gender and socio-economic factors on education outcomes in Kenya.

Although the absolute number of schools had increased by an annual average of 4 percent, the increase was inadequate to cater for the high number of secondary school age population. In 2004, the aggregate secondary school enrolment was 926,149 students compared with 3.12 million youth of secondary school age.

Gender disparity is evident in access to secondary education and more widespread in transition to secondary school level.The transition rate from primary to secondary level recorded an upward trend of 43.3% in 2000 to 50.5% in 2004. The transition rate in 2007, stand at 60.0 up from 46% in 2003. In spite of these efforts, girls' participation, retention, transition and completion at secondary school level are low. In 1990, the Gender Parity Index (GPI) was 0.75, implying that for every 100 boys only 75 girls enrolled in secondary schools. This improved to 93 girls for every 100 boys in 2003, before declining to 89 girls for every 100 boys in 2004. North Eastern province recorded the highest gender disparities (0.42) in gross enrolments in 2004. However, it should be noted that in Central Province, gender disparity was in favour of girls as the GPI for the year 2004 stood at 1.04. As with GER, it will be important to investigate and draw experience from the provinces where gender parities are in favour of girls, who were initially marginalized, without losing sight of what is happening to the boy-child

2.5 Summary of the literature

Gender equality has been an issue of concern to many researchers in different parts of the world. Gender disparities in education have been shown to exist in many forms, namely: access to quality education, equality in teaching /learning environments and educational

outcomes (USAID, 2008; Sibbons, et al. 2000; UNESCO, 2010; Unterhalter, 2010; UNESCO, 2003). In developing countries such as the Sub Saharan Africa, serious gender disparities in education have been reported by researchers with the girl-child being more disadvantaged. With many governments putting emphasis on equality in access some in some parts, gender parity in access has almost been attained but there still exists regional imbalances within states especially in rural areas and low class urban areas (Government of Kenya, 2005; Government of Kenya, 2002; Onsomu et al., 2006a; Nzomo, Kariuki & Guantai, 2001; IMF, 2005; UNESCO, 2003).

Another serious aspect of gender concern is performance. Stereotyping in subjects resulting to gender differences in performance has been reported in many parts of the world. In developed world, girls are seen to perform better than boys in almost all the subjects while in developing countries like Kenya, boys outshine girls in almost all the subjects except English where the performance of girls has consistently been higher for girls (Onsomu, Nzomo & Obiero, 2005; Abiam & Odok, 2006; Ablard & Lipschultz, 2008; Molins & Clopton, 2002; Bumpus, Crouter, & McHale, 2001). The reviewed literature shows that efforts have been done to establish gender equity in education in Kenyan schools. However, a closer look shows that much achievement has been made on equity of access though still with regional imbalances especially in rural settings and in arid and semi-arid areas such as Mandera County. This study therefore seeks to analyze gender equity in secondary schools in the region.

2.6 Conceptual Framework

According to Kombo & Tromp (2006), a conceptual framework can be defined as a set of broad ideas and principles taken from relevant fields of inquiry and used to structure a subsequent presentation. It is a tool intended to assist a researcher to develop awareness and understanding of the situation under scrutiny and to communicate this. The conceptual framework for this study is captured in the Figure 2.1. It shows that gender equity is measured by determining the trends in gender parity index for different equity aspects, namely: performance, completion and retention rates. The gender equity was the independent variable while transition rates and completion rates and performance were the dependent variables. The figure further shows that gender equity is influenced by different equity enhancement measures, namely: culture, societal norms, attitudes and role models.

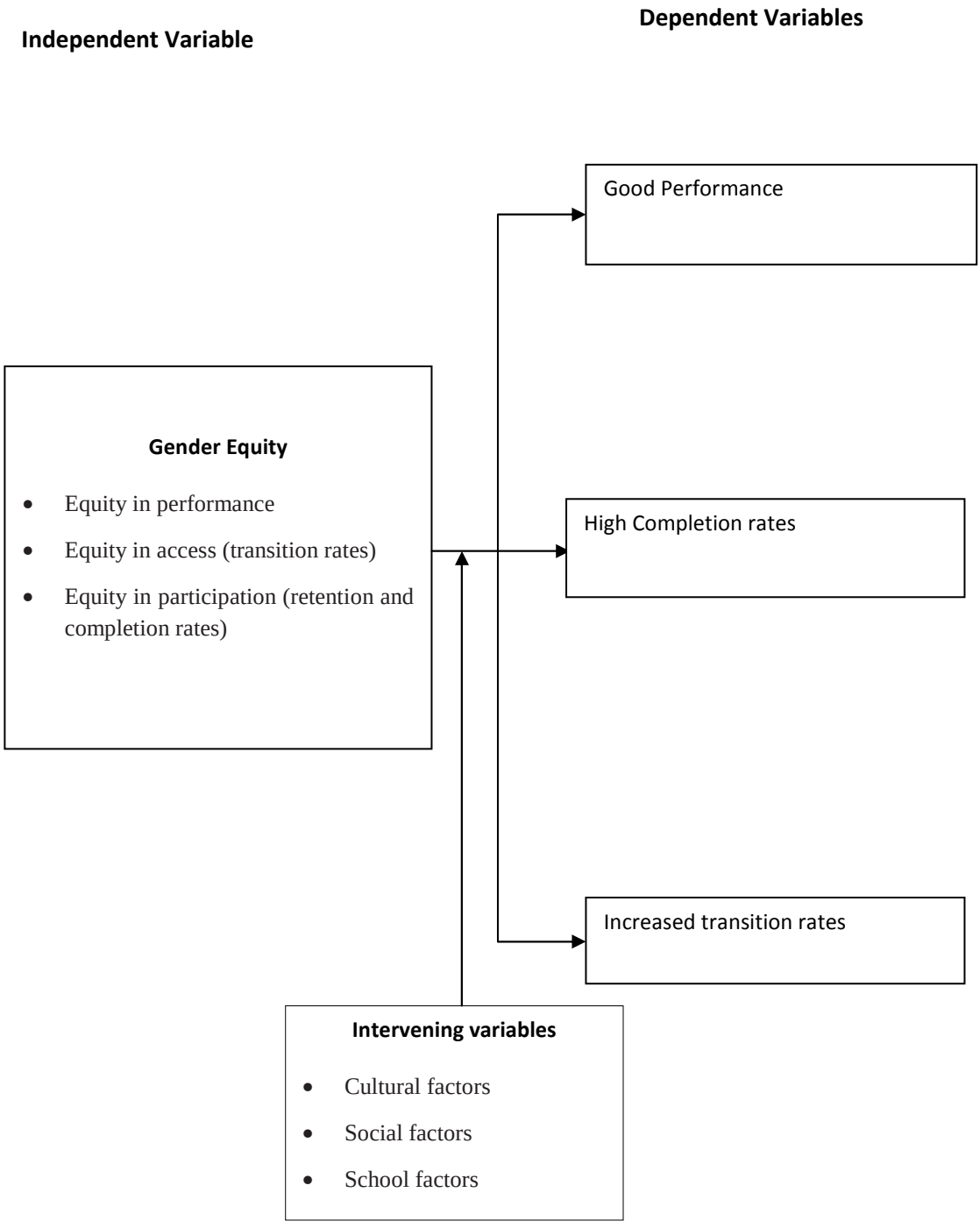

Figure 2.1 Relationship between STSE and Gender equity

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methods which were used to collect data, sample and sampling procedure, research instruments for data collection, pilot study, validity and reliability of the instruments, data collection procedures and data analysis techniques and presentation.

3.2 Research design

According to Borg and Gall (1989), a research design is defined as the process of creating an empirical test to support or refute a knowledge claim. This study adopted the descriptive survey design. Descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2003). According to Mugenda and Mugenda (2009), survey can be defined as a systematic description of the factors and characteristics of a given population accurately and objectively. It can be used to describe the nature of existing conditions and to determine the relationship between specific event that has been influenced or affected by the present condition. Therefore, the rationale of choosing this design was that it is restricted to fact findings and also results in the formulation of important principles of knowledge and solution to significant problems such as disparity in education. The researcher determined the gender disparities in secondary school education as at a given time in order to give a view of the current situation in relation to the previous years.

3.3 Target population

Population is the entire group of individuals, events or objects having common characteristics (Mugenda & Mugenda, 1999). According to Orodho (2005), a population is the group of interest from which the individual participants or objects for measurement are taken. Target population is the entire population to whom the results of the study would be generalized. The target population for this study was the 11 principals, 148 teachers and 3323 students in public secondary schools in Mandera East District-Mandera County.

3.4 Sample size and sampling techniques

Although researchers want to gather information about the characteristics of populations, they usually study a smaller group (a sample) carefully drawn from the population and then use the findings from the sample to make inferences about the population (Ary, Razavieh and Soorensen, (2006). Sampling is the process of selecting the subject or cases to be included in the study as representative of the target population (Mugenda & Mugenda, 1999). The researcher used both stratified sampling and simple random sampling. Stratified sampling was used to select the schools in order to ensure that the sample covers mixed, boys and girls secondary schools while random sampling was used to select the sample of students and teachers. There were 11 public secondary schools, 3323 students and 148 teachers in Mandera East district.

To determine the sample size, a table designed by Krejcie and Morgan (1970: 608) cited in Mulusa (1988) was used (See appendix IV). This table gave the required sample for various population sizes. The target population of 148 teachers required a sample size of 108 teachers while 3323 students required a sample size of 346 students. Using Krejcie and Morgan table, all the public secondary schools were taken for the study. **(**See appendix IV**).** 10 out of the11 principals of the schools involved participated in the study thus a total of ten head principals.

3.5 Research instruments

The study used structured questionnaires, interviews and document analysis for data collection. Questionnaires were used to collect data on gender equity measures, in the school setting while interviews were used as a follow up on the information given in the questionnaire and finally document analysis was used to calculate the GPI on enrollments, completion rates and performance.

Data was collected using self-administered questionnaires which were structured. Structured questions when well-designed are easy to be administered and a researcher could collect information from a wide section of respondents in a relatively cheap process and over a short duration. The instrument of the questionnaire was chosen because it saves time and since the targeted respondents are literate, they could comfortably respond to the items. Moully (1978) cited in Mulusa (1988), observes that questionnaires allows for greater uniformity in the way questions are asked. However, the researcher is not able to clarify any misunderstanding since there is no direct contact between the researcher

and the respondent. There is also no opportunity for the researcher to ask further information or probe deeper into answers given by the respondents.

This study also utilized interview schedules to collect data from respondents. This helped to enlist cooperation of respondents and establish good rapport with them. The respondents felt part of the team since no rigidity was displayed, they can therefore freely participate in the research. Interviews gave the respondents the freedom to give their true feelings to sensitive questions since there are no pre-defined questions. One disadvantage of unstructured interviews is that they are time consuming since the respondent can dwell on one issue and also irrelevancies can be displayed by the respondent. Questionnaires were used to collect basic descriptive information from a large sample while interviews were used as follow-up, while document analysis was used as a confirmation of the collected data.

3.6 Pilot Study

According to Ary et al., (2006), a pilot study administrates the adequacy of the research procedures and the anticipated problems that may be solved thereby saving time. The researcher conducted a pilot study in one public secondary school from the District which was not included in the final study. The researcher conducted the pilot study in order to determine the reliability of the instruments for use with the target population.

3.8 Reliability of research instruments

Reliability is a measure of the degree to which a research adds consistent results or data after repeated trails (Mugenda & Mugenda, 2009). An instrument is thus reliable when it measures a variable accurately and consistently if used repeatedly under similar conditions. Reliability of a questionnaire is concerned with the consistency of responses to the researcher's questions (Mitchell, 1996). According to him, internal consistency approach should be used to assess reliability. In this approach, responses of each question in the questionnaire are correlated with those of other questions in the questionnaire. The internal consistency was calculated using Cronbach's alpha value for each questionnaire. Mitchell (1996) noted that for an instrument to be reliable it must have a Cronbcah's alpha coefficient 0.7 or above. The questionnaires were found to have Cronbach's alpha values of 0.721 and 0.833 for students and teachers respectively. The questionnaires were therefore deemed to have adequate reliability for use with the designated population without amendments.

3.9 Validity of research instruments

According to Orodho (2005), validity is the degree to which the sample of test items represents content or the test is designed to measure. Mugenda & Mugenda (1999) asserted that the usual procedure in assessing the validity of a measure is to use a professional or expert in the particular field. The validity of the research instruments was established by seeking the opinion of the experts in the field of the study especially the supervisor and experts in the department of Educational Foundations of the University of Nairobi who indicated that the items had content validity.

3.10 Data Collection Procedures

The researcher obtained a research permit from the National Council for Science and Technology before proceeding to the field for data collection. In order to be able to visit the schools for the study, permission was then obtained from the District Education Office who issued an introduction letter to the researcher. The researcher then proceeded to the schools and sought permission from the principals before presenting the instruments to the respondents in person.

3.11 Data analysis techniques

The study obtained both quantitative and qualitative data. The data was analyzed using both descriptive and inferential statistics with aid of Statistical Package for Social Sciences (SPSS). Qualitative data was analyzed thematically as per objectives while quantitative data was converted into averages and percentages. These were then used to show the annual trends in the variables measured. The information was presented in tables and graphs in Chapter Four.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

This chapter presents the findings of the study. It consists of the data analysis and presentation. The results are also discussed in this chapter. The chapter is organized into: instruments return rate; demographic information; trends gender parity in performance; trends in gender parity in completion rates and trends in gender parity in transition rates.

4.2 Instruments Return Rate

This refers to the number of each of the research instruments that were duly filled and returned to the researcher for analysis. According to Ary et al. (2006), for the results to reflect all the characteristics of the population, the instrument return rate should be at least 85.0% so as to allow for a permissible margin of error due to non-response. The return rates for the particular research instruments were as presented in Table 4.1

Table 4.1: Instrument Return Rate

Instrument	Sample Size	Number Returned	Percentage
Teacher Questionnaire	108	102	94.4%
Principals Interview	10	10	100.0%
Students Questionnaire	346	306	88.4%
Total	464	418	90.1%

The results showed that the return rates for the teacher questionnaires was 94.4% while that for the student questionnaires was 88.4%. The percentage of the principals who attended the interview was 100.0%. All these were above the minimum recommended rate of 85.0% thus the findings had allowable levels of non-response errors. The rate of return was perhaps affected by a number of factors, namely: the mood of the respondents, length of the questionnaire and the content of the information required by the researcher.

4.3 Demographic Information

This refers to the individual characteristics of the respondents. For the students the demographic characteristics required was gender while for the teachers were gender, school category. The students sample consisted of 151 boys (49.4%) and 155 girls (50.6%). The teacher sample consisted of 91 (89.2%) males and 11(10.8%) females while only 2 (20.0%) of the principals were females and 8 (80.0%) were men. This suggests serious gender disparities in the teaching fraternity in Mandera East District with females being disadvantaged. This could be attributed to rampant insecurity, the historical low enrolment rates, and participation rates of girls in school coupled with low completion rates that have led to very low literacy rates for women in the region as compared to men. These results are confirmed by the report Ministry of Education and principals on literacy levels that showed that in Mandera County literacy levels for men were higher than for women (Government of Kenya, 2005b).

4.4 Trends in Gender Parity in Performance

This refers to parity in performance in KCSE. The performance was obtained for both boys and girls in all the schools for the period 2006-2012. The mean performance for the boys in two boys and two girl schools was obtained from school records while for the mixed schools the performance of the girls and boys calculated from the overall school performance. The gender parity for each year was calculated as mean percentage score for the boys divided by the percentage mean score for the girls. The results are presented in Table 4.2 and Figure 4.1.

Table 4.2 Gender Parity in Performance

Year	Boys	Girls	Gender Parity index
2006	2.921	1.876	1.56
2007	2.876	1.673	1.71
2008	2.769	1.967	1.41
2009	2.876	1.804	1.59
2010	3.104	2.102	1.48
2011	2.893	1.877	1.54
2012	2.765	1.657	1.67

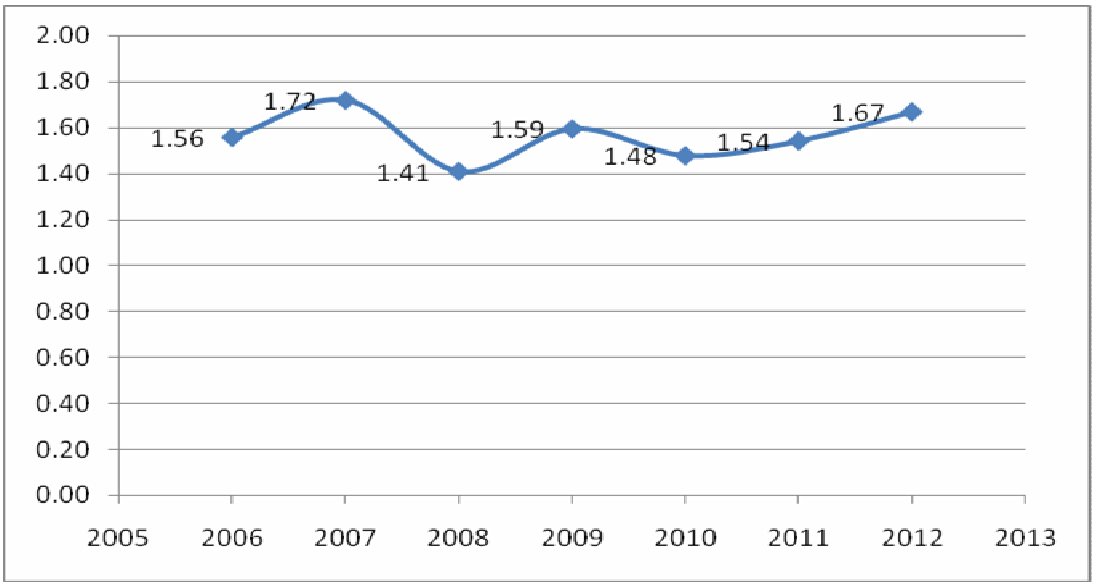

Figure 4.1: Trends in Gender parity in Performance

From Table 4.2 and Figure 4.1, it is evident that there were gender disparities in performance in KCSE for all the years from 2006 to the years 2012 with gender parity index values ranging from 1.41 to 1.72 with girls being disadvantaged. This indicates that boys performed better than girls in all the years. These results concur with the findings of Onsomu, Nzomo and Obiero (2005) who noted that boys performed better than girls in Mathematics. Schleicher (2007) also noted that boys usually perform better than girls in academics. He attributed this to the fact that boys were much more confident and less anxious in learning Mathematics.

A keen analysis shows that there was very small variation in gender parity indexes over the entire period of time with slight positive and negative fluctuations occurring each subsequent year. This implies that despite the introduction of subsidized secondary education there were no great achievements in the girls' participation as compared to boys in secondary schools. These findings were confirmed by teachers, students and principals of the sampled schools. The results are presented in Table 4.3.

Table 4.3 Existence of Gender Disparity in Performance

Respondent	**Yes**		**No**		**Total**	
	F	**P**	**F**	**P**	**F**	**P**
Principals	10	100	0	0	10	100
Teachers	81	79.4	21	20.6	102	100
Students	186	60.7	120	39.3	306	100

The results in Table 4.3 show that a vast majority of teachers 81 (79.4%) felt that there were disparities in performance between boys and girls while all the 10 principals (100%) concurred with this point of view. A large percentage of the students (60.7%) also indicated that there were gender disparities in performance. Similar findings were reported by UNESCO (2010) which reported that despite efforts in making education free or reducing the cost of education gender disparities still exist.

The gender disparities observed in performance is an indication that it is not only lack of school fees that creates the gender disparities in this region but there are other documented factors. Among them are cultural factors such as gender stereotyping that has been reported to negatively affect the participation of girls in education. For instance, female circumcision is practiced in this region as an initiation ceremony of the girls to adulthood. This prepares girls for marriage and not education a fact that could affect the girls' attitude to education. Secondary school girls are in the age bracket of 14 years and above an indication that majority have reached the FGM age and are ready for marriage. Secondly, family chores are differentiated in this region with girls helping their mothers with household duties while boys may not have a lot to do after school. This denies the girl child equal opportunities for self-study thus impacting negatively on their performance.

Investigations into the disparities in performance based on subject were also carried out. In this case respondents were required to indicate which gender they felt performed better in any given subject as compared to the other. The results are summarized in Table 4.4.

Table 4.4: Gender that Performs Better in Particular Subjects

Subject	Teachers		Students		Overall		Overall	
	Boys	Girls	Boys	Girls	Total:	Boys (%)	Total:	Girls (%)
English	69	33	72	234	141	34.6%	267	65.4%
Kiswahili	45	57	69	237	114	27.9%	294	72.1%
Mathematics	101	1	291	7	392	96.1%	16	3.9%
Biology	98	4	286	20	384	94.1%	24	5.9%
Chemistry	95	7	293	13	388	95.1%	20	4.9%
Physics	102	0	301	5	403	98.8%	5	1.2%
Geography	78	24	213	93	291	71.3%	117	28.7%
Religious Edu.	41	61	112	194	153	37.5%	255	62.5%
History	67	35	157	149	224	54.9%	184	45.1%
Computer Studies	71	31	234	72	305	74.8%	103	25.2%
Agriculture	76	26	215	91	291	71.3%	117	28.7%
Home science	22	80	17	289	39	9.6%	369	90.4%

The findings in Table 4.4 show that in overall, a large percentage of respondents felt that boys out performed girls in: Mathematics (392, 96.1%); Biology (384, 94.1%); Chemistry (388, 95.1%); Physics (403, 98.8%); Geography (291, 71.3%); History (224, 54.9%); Computer Studies (305, 74.8%); and Agriculture (291, 71.3%) while girls were

perceived to outperform boys in only four subjects: English (267, 65.4%), Kiswahili (294, 72.1%); Religious Education (255, 62.5%); and Home Science (369, 90.4%).

The above findings indicate gender disparities in performance with boys generally performing better than girls. This confirms the results of the KCSE results in which huge gender parity indexes were obtained. An important observation was that girls performed better in Languages and Humanities and Home Science. This could be attributed to gender stereotyping both at home and in school in which boys are seen to be more science oriented while girls are seen to be able to perform in subjects perceived to be simpler and feminine. Similar findings were also obtained from the school records in document analysis.

The findings concur with the findings reported by a number of researchers. For instance, in the US, girls outperform their male counterparts on achievement tests in stereotypically feminine subject areas (U.S. Department of Education, 2003). In the SACMEQ Report II Onsomu, Nzomo and Obiero (2005) noted that male students perform better than females Mathematically as a result of their higher attitude scores. However, the findings contradict the results obtained in Nigeria by Abiam and Odok (2006) showed that in Mathematics test there was no significant relationship between gender and achievement in number and numeration, Algebraic processes and Statistics. The researcher also concurs with the findings. This implies that in certain circumstances boys outperform girls but not always. It can thus be concluded that with the appropriate equity measures in place both boys and girls may perform the same in all subjects.

4.5 Trends in Gender Parity in Completion Rates

This refers to changes in gender parity indexes in the completion rates of boys and girls for the years 2006-2012. This was calculated from the percentage of boys and girls who enrolled in form one in a given year that completed the secondary education and did the KCSE in the next four years stipulated in Kenya secondary school system. For example

$$\text{Boys completion rate}(2006) = \frac{\text{Boys form one enrollment}(2004)}{\text{Number of boys sitting for KCSE}(2006)} \times 100 \quad \text{.....(1)}$$

$$\text{Girls completion rate}(2006) = \frac{\text{Girls form one enrollment}(2004)}{\text{Number of Girls sitting for KCSE}(2006)} \times 100 \quad \text{.....(2)}$$

$$\text{Gender parity index in completion rates}(2006) = \frac{\text{Boys Completion rates}}{\text{Girls completion rates}} \quad \text{.....(3)}$$

The results of the calculated gender parity indexes in completion rates are displayed in Table 4.5.

Table 4.5 Gender parity indexes in completion rates for years 2006-2012

	Percentage Completion rates		Parity index
Year	**Boys**	**Girls**	**Boys/Girls**
2006	63.5	41.3	1.54
2007	66.1	40.8	1.62
2008	69.4	41.6	1.67
2009	71.4	47.9	1.49
2010	75.3	46.8	1.60
2011	78.3	45.5	1.72
2012	81.4	48.6	1.67

The results in Table 4.5 show high gender parity indexes in completion rates with girls having lower completion rates than girls in all the years. The gender parity indexes ranged from 1.49 in the year 2009 to the highest 1.72 in the year 2007. The trends are presented in Figure 4.2 as well.

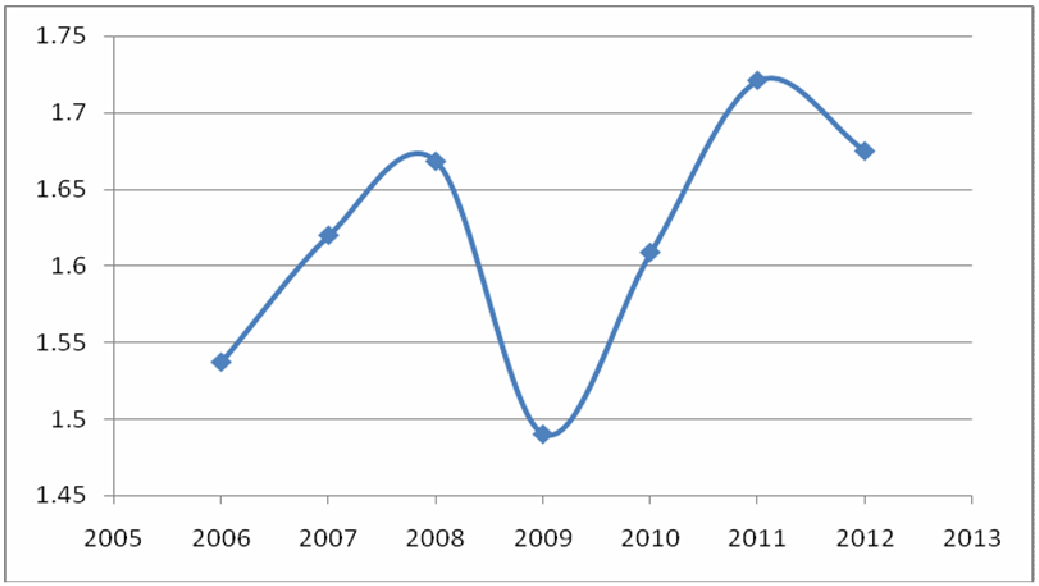

Figure 4.2: Trends in Gender in Completion rate (2006-2012)

The results in Figure 4.2 show that gender parity indexes in completion rates have been high in the period 2006-2012. The disparities slightly increased over the years 2006-2008 from 1.54 reaching 1.67 in 2008. A sharp decline was observed in the year 2009 to the lowest value of 1.49. This could be attributed to the introduction of Free Tuition Secondary Education funds which reduced the fees burden on parents thus girls already enrolled with school fees problems were able complete school. It should be noted that due to the cultural norms in the community that value boys education more than girls, girls drop out of school for many reasons and not only school fees. This explains why despite the introduction of FTSE, girls' completion rates still remained low. Similar findings were reported by Court (2004), who said that parents prefer educating their sons rather than their daughters with the belief that the girls will get married elsewhere while boys will remain in the homestead and assist them with their income.

As indicated by the causes of dropout suggested by the respondents, girls in Mandera East dropped out school because of three major reasons: lack of school; in this case the introduction of FTSE reduced the fees burden by waving the tuition fees leaving the parent to cater for the boarding fees. Though this happened boys still had an advantage over the girls in that parents who are unable to pay for the boarding fees for all the children would prefer to pay for the boys. This idea concurs with Court (2004), who noted that in Sub-Sahara Africa that when poor parents are forced to choose between the education of their daughters and that of their sons, they would rather choose to educate boys in the belief that they will support them with their high income derived from their education.

Secondly, teachers have indicated that secondary schools in Mandera East district are only eleven. This implies that access to school was also a problem. Schools are therefore located far away from one another making it very difficult for girls from families which could not afford paying the boarding fees to access day secondary education unlike boys who are able to commute long distances.

Early marriage was cited as one of the core reasons as to why girls drop out of school by 76.4% of all the teachers. Explaining this, the teachers felt that to most girls the attitude is that once circumcised they were supposed to get married and not to stay in school. It was also cited that even those who remain in school and feel that education is better than marriage, they still do it in preparation for being married to educated men. Similarly, FGM is done during puberty and therefore majority of the girls are circumcised at

secondary school level. Girls therefore spend more time helping their mothers as a way of training for future life than in studies. This leads to poor performance which might consequently lead to drop out.

A number of teachers felt that girls had negative attitude towards education (67.9%) and that other were ignorant to advice in education thus they performed poorly as compared to boys who see education as a way of getting better jobs and ascending to leadership. This among other things makes girls dropout of school even if not to be married or school fees problem but due to lack of interest. These findings support what was reported by Hines and Kaufman, (1994) that girls and boys approach school-work differently, with girls being more partial and less performance oriented than boys and engaging in less disruptive behavior in the classroom than do boys. Nyaegah and Mwango (2012) also noted the socially constructed differences and relations exist and are evidenced in the identities, roles, responsibilities, opportunities and attributes assigned to girls and boys, women and men in society are prime contributors to these disparities. Girls are therefore made to understand that schooling is not their role thus developing ignorance.

4.6 Trends in gender parity in transition rates

Transition rates refer to the percentage of class eight graduates who sit for the Kenya Certificate of Primary Education (KCPE) in a given year that proceed to secondary school level in the following year. This was determined by the number of pupils who sat for KCPE in a year and the form one enrollments in the following year. The following formula was used for calculation: for the year 2006.

$$\text{Transition rate of Boys } (2006) = \frac{\text{No of KCPE Boys candidates } (2006)}{\text{No of Form one Boys in 2007}} \quad \ldots\ldots\ldots\ldots \quad (4)$$

$$\text{Transition rate of Girls } (2006) = \frac{\text{No of KCPE Girls candidates } (2006)}{\text{No of Form one Girls in 2007}} \quad \ldots\ldots\ldots\ldots \quad (5)$$

$$\text{Gender parity index in Transition Rates} = \frac{\text{Boys transition rates}}{\text{Girls transition rates}} \times 100 \quad \ldots\ldots\ldots \quad (6)$$

The calculated transition rates are displayed in Table 4.6.

Table 4.6: Gender Parity Indexes in Transition Rates

Percentage Transition Rates			Parity Index
Year	Boys	Girls	Boys/Girls
2006	55.6	31.5	1.77
2007	61.2	35.7	1.74
2008	76.7	49.8	1.54
2009	79.8	53.6	1.48
2010	76.2	49.5	1.53
2011	73.2	46.9	1.56
2012	71.5	45.6	1.57

The results in Table 4.6 show that there are huge gender disparities in transition from primary school to secondary with girls being disadvantaged. The gender parity indexes ranges from the lowest 1.48 in the year 2012 to the highest 1.77 in 2006. The trends are presented in Figure 4.3.

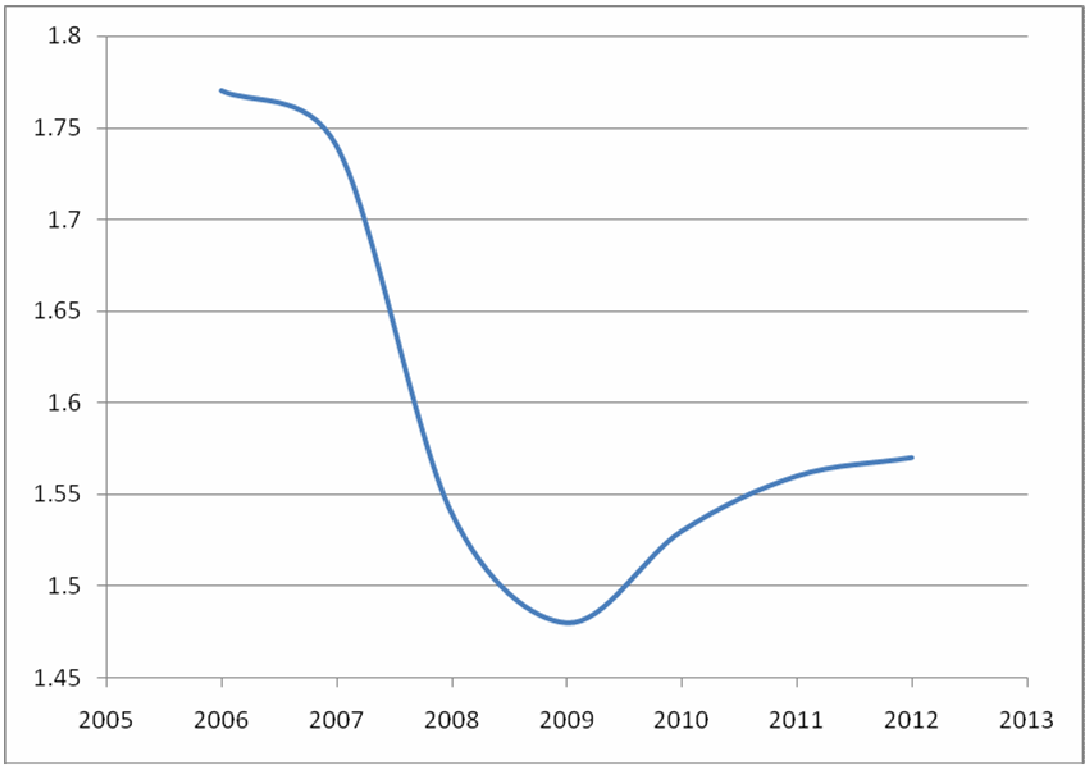

Figure 4.3: Trends in Transition Rates from 2006-2012

The results presented in Figure 4.3 shows that the gender parity indexes were highest in the year 2006 (1.77). The gender parity index dropped in the year 2008 and 2009 reaching the lowest in 2009 (1.48). This could be attributed to the introduction FTSE in the year 2008. This reduced the fees paid by learners by catering for tuition fees. This implies that most parents were able to take their daughters in to Form One due to the low fees needed for admission. For the poor parents who could not afford the boarding fees the pupils could be admitted in day schools where fees were not required.

However, the gender parity indexes show that the transition of girls is still far much lower than that of boys. The transition rates were also found to be too low ranging from 31.5% to 53.3%. This implies that there were some other factors that hinder the transition of girls from primary to secondary school and not school fees only. The transition to secondary school is affected by availability of schools for the girls. The big question is whether the secondary schools available able to accommodate the primary school output. The teachers indicated that in order to reduce dropout and increase girl child participation in secondary education, one remedy is construction of more schools in the region. This is confirmed by the response by the principals in which all the 10 (100%) principals felt that there was need for construction of more girl schools in the area.

The lack of enough schools for the girls also affects transition in another way. It was established that Mandera East District has only two girl schools and six mixed schools. This means that schools are very sparse making it difficult for girls to operate as day scholars. This locks out girls from poor backgrounds whose parents cannot afford the boarding fees out of school thus reducing the transition rates of girls from primary to secondary owing to the fact that primary schools are free and therefore could attended by all. Similar findings have been reported by Nzomo, Kariuki and Guantai (2001) who noted that transition rates in 2007 increased from 42.2% to 60.0% though the girl child transition remained still low. Cultural differences and stereotyping makes girls perform poorly compared to boys thus many may not attain grades that could allow them join secondary schools.

Another challenge noted was early marriage. Girls leaving primary school in this region are at teen age which is the prime age when FGM is done in preparation for the girls to get married. It is in this view that many girls although able to join secondary school owing to their performance in KCPE and availability of school fees opt to be married than to join secondary school a fact that is supported culturally by the community and the parents in most cases thus low transition rates of the girls. These findings concur with the findings of UNESCO (2010) which reported that rural girls in Pakistan and Nigeria attached little value to education and therefore failed to continue with education to get married.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter comprises of a summary of the study, conclusions and recommendations based on the research objectives.

5.1 Summary of the study

The purpose of this study was to analyze gender equity in secondary schools in Mandera East district in Mandera County. The study was guided by three objectives, namely; to investigate the trends in gender parity in performance in secondary schools from 2006-2012 in Mandera East district, to establish the trend in gender parity in secondary school completion rates from 2006-2012 in Mandera East district and finally, to determine the trends in gender parity in transition rates from 2006 -2012 in Mandera East district. Data was collected from 10 principals, 148 teachers and 346 students from the sampled schools. The research design used was the descriptive research design and data was analyzed using the Statistical Package for Social Sciences (SPSS) software programme.

It was established that gender disparities in education exist as manifested in transition, performance and completion rates. The study recommends that the government through the Ministry of Education should promote girl-child education by providing more funds

and building more Girl schools, establishing full free secondary education for girls and also seeking ways of prohibiting early marriages and FGM.

5.2 Summary of Findings

5.2.1 On trends in gender parity in performance in secondary schools in Mandera East district for the period 2006-2012.

The study established that gender disparities existed in performance with boys outperforming girls from the year 2006-2012. Boys were reported to outperform girls in Mathematics, Biology, Chemistry, Physics, Geography, Computer Studies, English, and Agriculture while the girls outperform boys in Kiswahili, Religious Education and Home Science.

The performance of the girls was found be very with gender parity indexes 1.56 for 2006, 1.71 in 2007, 1.41 for 2008, 1.59 in 2009, 1.48 for year 2010, 1.54 in 2011 and reaching 1.67 in 2012.

5.2.2 On trends in gender parity in completion rate in secondary schools in Mandera East district for the period 2006-2012

It was established that boys' completion rate was higher than that of girls. The gender parity indexes were found to remain fairly constant from 2006 to 2012 being lowest in 2009: these were 1.54 in 2006, 1.62 in 2007, 1.67 in 2008, and 1.49 for the year 2009, 1.60 in 2010, 1.72 in 2011 and 1.67 for the year 2012.

5.2.3 On trends in gender parity in transition rate in secondary schools in Mandera East district for the period 2006-2012

The study established that boys transition rate from primary schools to secondary schools was higher than that of their female counterparts. The gender parity indexes in transition rates were as follows: 2006 (1.77), 2007 (1.74), 2008 (1.54), 2009 (1.48), 2010 (1.53), 2011 (1.56) and 2012 (1.57).

5.3 Conclusion

Gender disparity in education is phenomenological. This is manifested by boys performing better than girls in most Science-related disciplines, some parents marrying off girls at an early age and few girls completing secondary school education. This means that the government needs to put more efforts to address this glaring disparity otherwise vision 2030 will not be fully achieved.

5.4 Recommendations

Based on the findings the researcher recommends the following:

1) The government should seek ways of prohibiting early marriage and FGM making them criminal to bring them to an end.
2) Government through the Ministry of Education should establish full free secondary education for all the girls.
3) The government through the Ministry of Education should build adequate schools so as to allow girls from poor families to access day school education.

5.5 Suggestions for Further Studies

The current study looked at gender disparities in performance, transition and completion rates; there is therefore the need for a comprehensive study on girl child participation in education at all levels including primary school, colleges and universities.

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APPENDICES

Appendix 1: Questionnaire for Teachers

A letter to the respondent

Dear respondents,

I am Janet Mong'ina Motuka, a Master of Education student in the department of Educational Foundations at the University of Nairobi. The questionnaire is designed to gather information on gender equity in education. Your response will be valuable and highly appreciated. All the information you provide will be treated with confidentiality and will be used by the researcher for the purpose of this study.

Section A: Demographic information

1. State your gender Male ( ), Female ( )
2. State your age

   Below 25 yrs ( ) 25-35 yrs ( ) 36- 45 yrs ( ) above ( )
3. State your highest academic qualification

   Certificate ( ) Diploma ( ) First degree ( ) Master Degree ( )
4. State your school category

   Mixed ( ) Boys ( ) Girls ( )
5. Have you attended any workshop or seminar on gender equality in education?

   Yes( ) No ( )
6. Are there disparities in performance between boys and girls Yes? ( ), No ( )

7. If yes, which gender performs better in each of the following subjects?

Please indicate by writing **Boys** or **Girls** against each subject in the table below

Subject	**Gender**
English	
Kiswahili	
Mathematics	
Biology	
Chemistry	
Physics	
Agriculture	
History	
Geography	
Religious Education	
Computer Studies	
Home science	

Section B

Kindly provide short answers to the following questions.

1. Give reasons why some students drop out of school.
2. Give your opinion on whether Subsidized Tuition Secondary Education (STSE) has increased enrolment, performance in K.C.S.E and completion rates in schools.
3. Comment on transition in secondary schools.
4. What do you think should be done to improve gender equity in schools in arid and semi-arid areas?

   Thank you for participating in this study.

Appendix 2: Students' Questionnaire

SECTION A

1. Indicate your gender by putting a tick [√] against the appropriate response.

Male [ ] Female [ ]

2. State your school category

Mixed ( ) Boys ( ) Girls ( )

3. How many are you in your class?

(a) Below 20

(b) 20-30

(c) 31-40

(d) 41-50

(e) Any other (specify)……

4. Are there disparities in performance between girls and boys?

Yes ( ) No ( )

b). If yes, kindly indicate which gender performs better in;

a) Sciences……...Boys ( ) Girls ( )

b) Languages……... Boys ( ) Girls ( )

c) Humanities……..... Boys ( ) Girls ( )

Section B

Kindly provide short answers to the following questions

1. What do you understand by the term gender equity?
2. In your opinion, why do you think some students drop out of school?
3. Are there problems you are experiencing that may affect your performance in KCSE?

   Yes [ ] No [ ]

If yes, specify.

……

……

……

……....

4. In your own opinion, what are the factors that influence girls' participation in your school?

……

……

5. In your opinion, what can be done to improve gender equity in education?

……

……

Thank you for participating in this study.

Appendix 3: Interview Schedule for Principals

Dear respondents,

I am Janet Mong'ina Motuka, a Master of Education student in the department of Educational Foundations at the University of Nairobi. The interview is designed to gather information on gender equity in education. Your response will be valuable. All the information you provide will be treated with confidentiality and will be used by the researcher for the purpose of this study.

1. What do you understand by gender equity in education?
2. (i) Are girls disadvantaged in education as compared to their male counterparts?
   (ii) Please explain your answer to the question above.
3. What do you think are the causes of gender inequity in secondary schools in Mandera East District?
4. (i) Are there government policies on gender issues in education?
   (ii) Please explain your answer to the question above.
5. What strategies can the government put in place to promote gender equity in education?

Thank you for participating in this study.

Appendix 4: Document Analysis Guide

Section A: Transition rates

Year	Number that did KCPE		Form one enrollment	
	Boys	Girls	Boys	Girls
2005				
2006				
2007				
2008				
2009				
2010				
2011				
2012				

Source: District Education Office, Mandera East

Section B: Completion rates

Form one enrollment			KCSE Graduates		
Year	Boys	Girls	Year	Boys	Girls
2003			2006		
2004			2007		
2005			2008		
2006			2009		
2007			2010		
2008			2011		
2009			2012		

Source: School records

Section C: Performance

Mean Grade in KCSE		
Year	Boys	Girls
2003		
2004		
2005		
2006		
2007		
2008		
2009		
2010		
2011		
2012		

Appendix 5: Determining a Sample Size from a given Population

N	S	N	S	N	S
10	10	220	104	1,200	291
15	14	230	144	1,300	297
20	19	240	148	1,400	302
25	24	250	152	1,500	306
30	28	260	155	1,600	310
35	32	270	159	1,700	313
40	36	280	162	1,800	317
45	40	290	165	1,900	320
50	44	300	169	2,000	322
55	48	320	175	2,200	327
60	52	340	181	2,400	331
65	56	360	186	2,600	335
70	59	380	191	2,800	338
75	63	400	196	3,000	341
80	66	420	201	3,500	346
85	70	440	205	4,000	351
90	73	460	210	4,500	354
95	76	480	214	5,000	357
100	80	500	217	6,000	361
110	86	550	226	7,000	364
120	92	600	234	8,000	367
130	97	650	242	9,000	368
140	103	700	248	10,000	370
150	108	750	254	15,000	375

160	113	800	260	20,000	377
170	118	850	265	30,000	379
180	123	900	269	40,000	380
190	127	950	274	50,000	381
200	132	1,000	278	50,000	382
210	136	1,000	285	100,000	384

NB:

N is population size

S is sample size

Source: Krejcie and Morgan (1970:608) as quoted in Mulusa (1988:86).