

**FACTORS RESPONSIBLE FOR THE POOR PERFORMANCE OF GIRLS IN  
MATHEMATICS. A CASE STUDY OF BARWESSA ZONE  
BARINGO DISTRICT, KENYA.**

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REQUIREMENT FOR AWARD OF DEGREE  
OF BACHELOR OF EDUCATION  
IN EARLY CHILDHOOD.**

**MAY 2013**

### **DECLARATION**

I here by declare that, this is my original work and it has it has never been submitted to any where for any award

**Signature**

.....

**NAWANJAYA OMINA ELIZABETH**

### APPROVAL

This is to certify that this report has been under my submission and with my final approval; it is now ready for submission.

**SUPERVISOR**

 22/09/2013

**OKURUT GODFREY**

## **DEDICATION**

Dedicated to my beloved parents Mr. Wilson Nawanjaya , Mrs Beatrice Nawanjaya for their financial support, material and to all my family members Abraham, Loice, Miriam, Antony, Lawreen. Michelle and Cynthia.

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### **ACKNOWLEDGEMENT**

I wish to highly express my gratitude to all who are in one way or the other assisted me in the production of this research paper (study paper).

I wish to thank my supervisor Mr Okurut Godfrey who devoted most of his time in guiding me in producing a worthy material. I should also remember our head of department, and all other lecturers who kept on encouraging me more so with scholarly advice and I also thank my parents for educating me.

Finally I thank my colleagues, students for giving me encouraging comments towards my research topic and not forgetting the person who typed my work despite in a very short time.

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## ACRONYMS

N.G.O.      Non Governmental Organisation

F.G.M.      Genital Mutilation

## **ABSTRACT**

This study was a description cross sectional design aimed at determined the factors affecting girls poor performance in maths in Barwessa zone as being an illustrative example.

My objectives were;

To determine why the performance of girls in mathematics in primary schools is poor

To determine possible ways for nurturing mathematics solving problem attitude in pupils to improve their performance.

To determine possible ways of developing intellectual abilities and skills in critical thinking among girls.

The exercise was conducted in the month of July 2007 and covered all the schools. A simple random technique was used in data collection and tools deployed were validated questionnaires and interviews. It was to comprise the factors that affect girl's performance in Barwessa division.

Based on the finding the poor performance of maths has greatly affected potentiality of women in the job market. This is because in the present age, we do not find any vocation that does not need the knowledge of maths, eg medicine, engineering etc. so girls in primary schools should be encouraged to have positive attitudes towards maths subject to brighten their future.

In the area of study among the schools girls were performing poorly in the subject compared to boys. I wish to recommend that the teachers should encourage girls to have positive attitude towards the subject. Also the ministry of education should emphasise to teachers to encourage the girls and motivate the especially in maths by rewarding good performance. Both government and NGO's should sensitize and awareness building activities to enable society to do away with cultural beliefs

# CHAPTER ONE

## 1.0 INTRODUCTION

### 1.1 Rationale of the study

Mathematical problem solving is a necessary pre-requisite for the general because the man's future depends on a large extent on calculation and development of the productive activity. In the present world today there is no job or activity done which does not require mathematical skills.

This research report study was based on the continued failure of girls in mathematics and how to curb this problem in Barwessa Zone which lies within Baringo District of Rift Valley Province. The place is entirely semi-arid zone and rains are scarce leading to shortage of foods. Due to this among other economic disparities in the region has led to poor attendance and performance of the girl child.

Although N.G.O's bodies are involved in fighting for the girl child in the area not much success has been witnessed in the area not much successors has been witnessed in the area. The area is still on pressure with early marriage, girls get married immediately they pass 12 years and this has made the place to assure that girls are not of beneficial in the society. And this has made the researcher to research on this area to oppose this since it has contributed to the lack of seriousness on the concern towards the performance on the girl child.

Maths among other sciences subjects have been a threat to most pupils especially the girls in both primary and secondary schools in Barwessa Division, there has been these trends and this research was to find out the extent and ways of control. Most ladies have been affected and majority find themselves having lost hope in life and later engage in bad behaviours.

This has led to early pregnancies, marriages and transmission of the infectious diseases e.g. HIV/AIDS. Idleness and boredom have resulted the youth especially

girls, some undergo sexually harassment and other traditional practices like Female Genital Mutilation (F.G.M) which completely distort the future of the young girls and their performance in school.

This concept is based on the idea of improving the performance of girls in improving the study area. It will gear towards preventing to the occurrences of the problem. The researcher will encourage a vigorous supervision and closer monitoring of the girls pupils during teaching/training, they need a lot of love and encouragement, also provision of quality services (teaching and good books containing comprehensive information e.g. formula's, examples, steps to follow during calculation).

## **1.2 Statement of the problem**

The tremendous poor performance of maths subject among girls in primary schools both private and public needs urgently to be addressed.

According to National examination results of (2006). It showed an overall improvement in the performance some people said that in maths, students especially girls persistently misunderstood calculations and lack of competence in handling numerical computations of the formulas and these have all contributed to poor performance in mathematics.

Kealing, (1992), explains that many people have lived below the poverty line, a factor which has an effect on all people regardless of ethnic, race or cultural background. Many families lack funds to provide or cater for proper nutrition, health, shelter and clothing.

Therefore learners lack these essential and cannot attend to their studies as expected. Also socio-economic status can be a powerful factor in educational achievement not in an itself, but through the influence on family atmosphere, on choice of neighbourhood and parent's way of rearing children, national research Council (1993) children of poor, uneducated parents are more likely to experience negative family and school atmosphere and stressful events and school atmosphere and stressful events and school atmosphere and stressful events.

The neighbourhood a family can afford generally determines the quality of schooling available, as well as opportunities together with attitudes in the neighbourhood per group since this is beyond control, students suffer from it. And this affects girls mostly because they are being used at home to do a lot of housework and sometimes are married off at an early age for the parents to get rich through dowry.

Thus this has prompted the researcher to investigate further to find out whether this affects students' performance.

### **1.3 Purpose of the Study**

To carry out investigation on factors that leads to poor performance of maths subjects among girls in primary schools.

### **1.4 Objectives of the study**

1. To carry out investigation on factors that lead to poor performance of mathematics among girls in primary school in Barwessa Zone.
2. To suggest possible ways for nurturing mathematical solving problem attitude in pupils to improve their performance.

### **1.5 Research Questions**

1. What are the causes of poor performance in maths subjects among girls in Primary Schools?
2. What are the effects of poor performance in maths subjects among girls in Primary Schools.

### **1.6 Significance of the Study**

The study will be useful to:-

The society at large:

This is because problem solving along with being a content of knowledge is a method of acquiring knowledge. This helps to sharpen our intellect and promotes intellectual honesty. Makes us more systematic in our reasoning. It helps us to develop positive

attitudes for example open mindedness and reasoning. It enhances one on tackling mathematical problems without difficulty.

To the administrator of the school, who can use the findings to help the girls to develop positive in mathematics and science subjects.

To the teacher. To know how to handle girls, pupils so that they can develop positive attitude to the mathematics subject.

To the pupils girls, who will know the importance of mathematics subject and work hard to excel in it and this will improve their lives in future.

## 1.7 Theory

Theory According to Clewell, Beatrice and Anderson Bernice (1992) of Student's attitudes and beliefs. He argues that girls self esteem, confidence in their abilities, expectations for life, interest in challenging courses and rewarding careers, and pursuits in mathematics and science decline as they get older. Teachers may contribute to girl's problems by giving them less attention or a lower quality of attention during class; therefore teachers must be careful not to limit girls potential in mathematic and science by using gender-biased practices. Especially during mathematic instruction, teachers must be sure to call on girls for answers to questions and to give them praise when appropriate.

The barriers middle school girls of colour face in mathematic, science and engineering classes, and these barriers include teachers parents and society's impact on girls attitudes and perceptions, achievement and performance also career interests and aspiration. Its particularly important because women/girls of colour are often studied with regard either to gender or ethnicity, but rarely considering both as in this study. Teachers must help girls of colour bring down barriers they face by encouraging them to have positive attitudes about themselves in mathematics, enroll and participate in mathematics and science classes and explore careers in mathematic and science.

An exploration of girls learning styles, attitudes and behaviors in mathematic classes that also shows the importance of analyzing the curriculum and the attitude of teachers when attempting to understand girls' relation to mathematic. Students about their career aspirations and their feelings about sex stereotypes in certain professional fields, students responded that society accepts many different careers for women and men. However they tended to choose sex stereotyped careers when filling out the survey. Girls felt that they would be capable of becoming doctors or veterinarians, but they did not want to have science related careers as adults. This indicates that girls may not realize that their preferred future careers can require course work in science

and mathematic, it seems prudent for mathematic teachers to discuss with students the many professional fields that require mathematic and science.

## **1.8 Definition Of Terms**

### **Early-Pregnancy**

This refers to a situation where a teenager gets a child before maturity.

### **Performance**

How we are expected to do a task as required.

### **Poor**

It refers to a situation where one cannot perform a task as expected. It does below expectation.

### **Poverty**

A state of being unable to get the essential needs due to lack of money.

### **Research**

It is to investigate into an issue of concern by public or individual by collecting and analyzing the data information.

## CHAPTER TWO

### 2.0 REVIEW OF THE RELATED LITERATURE

Curtis (1992) reported that those pupils who engage themselves in wide reading in science develop scientific attitudes more than those who study only one text book. Therefore, a teacher should encourage his students to read library books and supplementary books on mathematics in addition to the work given in class. For this, it is essential that at least each school have a science corner in its library. The teacher himself must be in a habit of making proper use of mathematics and science library so that the students get encouraged for its use also he should refer some suitable books for these students.

Dr. Robinder (1972) writing about teacher observed a teacher can never truly teach unless he is still learning himself. A lamp can never light another unless it continues to burn its own flame. A teacher who has come to the end of his subject, who has no living traffic with his knowledge but merely repeats his lessons to his students can only load their minds, he can not quicken them-parents can affect their children's educational achievements by becoming involved in their children's schooling acting as advocates for their children and impressing teachers with seriousness of the family's educational goals, Bandura et al (1996).

Schwartz, Wendy and Hanson, Katherine argued that teachers must consider girls' mental and physical development and the effect of their own attitudes and behaviors on girls. When girls begin to physically mature, they focus more on their bodies and less on their intellectual abilities or themselves as people. As a result, their self-esteem decreases. A girl's learning style is more cooperatively based and therefore does not mesh with their independent, non-collaborative thinking encouraged in most classrooms. Finally, this paper states that teachers unconsciously pay more attention to male's students than

to female students. It suggests that teachers must consider girls developmental issues as they interact with them, by drawing female student's attention away from their bodies and focusing it on their intellectual abilities, especially in mathematic. Teachers should pose more cooperative tasks during mathematic instruction in order to support girls' learning style. Finally, teachers must constantly evaluate their behaviour toward male and female students to insure that the attention they give students to insure that the attention they give students is not gender biased.

Daniel, Roberta, argues on how to help gifted girls achieve even greater heights in mathematic. A program was initiated with academically gifted 4-7<sup>th</sup> grade girls that included activities which improved self-esteem, developed positive attitudes in mathematic, dealt with problem-solving skill, encouraged girls to become involved in mathematic activities outside school and explore careers in mathematic. After the program was over, it was found that the girls who had gone through it scored significantly higher on mathematic aptitude tests. The program helps girls deal with emotional and developmental issues as well as improving their attitudes and performance in mathematic. Until such a program is implemented in schools, teachers can improve gifted girls performance in mathematic by working with them on problem solving skill, encouraged girls to become involved in mathematic activities outside schools and explore careers in mathematic. After the program was over, it was found that the girls who had gone through it scored significantly higher on mathematic aptitude tests. The program helps girls deal with emotional and developmental issues as well as improving their attitudes and performance in schools, teachers can improve gifted girls performance in mathematic by working with them on problem solving skills during mathematic instruction, teachers can also encourage girls to participate in mathematic activities after school and discuss with girls their option of choosing careers in mathematics.

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## **2.1 Objectives**

### **2.1.1 General**

To carry out investigation on factors that leads to poor performance of mathematics among girls in primary school in Barwessa zone, Baringo District (Kenya).

### **2.1.2 Specific Objectives**

This study will determine

- 1 Why the performance of girls in mathematic in primary schools is poor.
- 2 Possible ways for nurturing mathematic solving problem attitude in pupils to improve their performance.
- 3 Possible ways of developing intellectual abilities and skills in critical thinking among girls.

## **CHAPTER THREE**

### **3.0 METHODOLOGY**

#### **3.1 Introduction**

The results presented here, were obtained through questionnaires, cross-section and survey.

#### **3.2 Research Design**

This study will be using a cross section survey design.

#### **3.2 Area and population of the Study**

The study was conducted among class seven and eight pupils of primary schools in Barwessa zone. The schools are Lawan Primary School, Kapition primary, Barwessa Primary and Lekepchun Primary School.

#### **3.3 Sample Selection and Size**

The four schools in Barwessa Zone were chosen on the basis of the formation bodies' state of being day, boarding or both environmental location. From each of those schools one head teacher, one deputy head teacher, 5 teachers, ten class seven pupils and ten class eight pupils, of whom both girls and boys and girls were selected randomly.

#### **3.4 Instrument of Data Collection**

The instruments that were used in collecting data are the questionnaires, oral interviews, schedules, observation techniques and test.

#### **3.5 Data Collection of data**

Permission for conducting research was obtained from the university and the respective School Administrators were requested to accept the researcher to conduct the study in their school. Questionnaires shall be administered to students and participants will be assured of confidentiality, five head teachers, six deputy head teachers, ten teachers and thirty pupils will be interviewed orally.

### **3.6 Data Analysis**

The results of the study were analyzed and special considerations were the mock results of class eight pupils. And the marks they obtained from the examination of the previous term.

### **3.7 Limitation of the Study**

The following obstacles were faced

1. Financial inadequacy
2. Time
3. Loss of questionnaires
4. Some information got in the questionnaires were biased
5. Bad weather like a lot of rain

The following were done to overcome the obstacles

1. Borrowing money from friends and relatives
2. Giving out more questionnaires
3. Being keen enough to know biased information
4. The researcher should carry out the research when the weather is good

## CHAPTER FOUR

### PRESENTATION AND ANALYSIS OF DATA

Government in many parts of Africa are alone of the benefits of female education. Education of females has a profound effect on national development as lack of their education has been linked to low birth weight, poor health and high mortality rates in children, high fertility rates, poor family nutrition, low life expectancy, poor sanitation and high illiteracy rates. The socio economic importance of female education can thus be over emphasised.

#### 4.1 Introduction

The researcher prepared two questionnaires. Questionnaire for the teachers teaching and the learners, in those sampled schools.

The questionnaires are analysed from question to question. In questionnaire the responses received were out 20 out of 25. As per the percentage the results are as follows.

**Table I**

|                 | <b>Questionnaire</b> | <b>Percentage</b> |
|-----------------|----------------------|-------------------|
| Respondent      | 20                   | 80                |
| Un – respondent | 5                    | 20                |
| Expected        | 25                   | 100               |

According to the above responses from the questionnaires, it shows that the responses received much more than those forwarded. The researcher was very encouraged by the responses received.

**Table II**

| <b>School</b> | <b>Zone</b> | <b>Number of questionnaires</b> |
|---------------|-------------|---------------------------------|
| Lawan         | Barwessa    | 7                               |
| Kaptiong      | Barwessa    | 6                               |
| Barwessa      | Barwessa    | 6                               |
| Lekepahun     | barwessa    | 6                               |
|               |             | <b>25</b>                       |

This questionnaire had a total of six questions which were close ended and thus the teachers were expected to answer accordingly.

**Table III**

| <b>Response</b> | <b>Frequency</b> | <b>Percentage</b> |
|-----------------|------------------|-------------------|
| 4 – 9           | 6                | 30                |
| 9 – 10          | 6                | 30                |
| 10 – 11         | 5                | 25                |
| 11 – 12         | 3                | 15                |
|                 | <b>20</b>        | <b>100</b>        |

From the response given the majority of the learners are at the age of 4 – 10 then followed by the age between 10 – 11 and few learners are of age 11 – 12 and this were the right persons to carry out the research.

## 4.2 Mathematics results in the schools

Table showing distribution of number of girls and boys in mathematics in Kaptiong Primary School

| <b>Scores</b> | <b>Frequency girls</b> | <b>Percentage</b> | <b>Frequency boys</b> | <b>Percentage</b> |
|---------------|------------------------|-------------------|-----------------------|-------------------|
| A             | 0                      | 0                 | 23                    | 41                |
| A -           | 0                      | 0                 | 2                     | 2.7               |
| B +           | 0                      | 0                 | 2                     | 2.7               |
| B             | 0                      | 0                 | 4                     | 4.1               |
| B -           | 0                      | 0                 | 3                     | 5.4               |
| C +           | 0                      | 0                 | 5                     | 6.8               |
| C             | 1                      | 56                | 3                     | 4.1               |
| C -           | 0                      | 0                 | 7                     | 9.4               |
| D +           | 1                      | 56                | 5                     | 6.8               |
| D             | 6                      | 33.3              | 17                    | 22.9              |
| D -           | 4                      | 22.2              | 15                    | 20.3              |
| E             | 6                      | 33.3              | 8                     | 10.7              |
|               | <b>18</b>              | <b>100</b>        | <b>74</b>             | <b>100</b>        |

The table above shows that 22 boys scored above average with the leading having an A as compared to girls who 1 scored above average

A table showing distribution of both boys and girls scores in Lawal Primary School, 2006

| Scores | Frequency girls | Percentage | Frequency boys | Percentage |
|--------|-----------------|------------|----------------|------------|
| A      | 0               | 0          | 2              | 10         |
| A -    | 0               | 0          | 2              | 10         |
| B +    | 0               | 0          | 1              | 5          |
| B      | 0               | 0          | 4              | 20         |
| B -    | 1               | 4          | 4              | 20         |
| C +    | 0               | 0          | 3              | 15         |
| C      | 1               | 4          | 2              | 10         |
| C -    | 4               | 16         | 1              | 5          |
| D +    | 3               | 12         | 0              | -          |
| D      | 6               | 24         | 1              | 5          |
| D -    | 5               | 20         | 0              | -          |
| E      | 5               | 20         | 0              | -          |
|        | <b>25</b>       | <b>100</b> | <b>20</b>      | <b>100</b> |

From the above table it is clearly indicated that 16 boys scored above average with 4 boys scoring A – and above while one girl only was above average.

A table showing distribution of both boys and girls scores in Lekepchun Primary mathematics MOCK 2008

| Scores       | Frequency girls | Percentage | Frequency boys | Percentage |
|--------------|-----------------|------------|----------------|------------|
| A            | 0               |            | 1              | 5          |
| A -          | 0               |            | 1              | 5          |
| B +          | 0               |            | 2              | 10         |
| B            | 0               |            | 4              | 20         |
| B -          | 0               |            | 8              | 40         |
| C +          | 1               | 4          | 2              | 10         |
| C            | 2               | 8          | 0              | -          |
| C -          | 5               | 20         | 1              | 5          |
| D +          | 8               | 32         | 1              | 5          |
| D            | 7               | 28         | 0              | -          |
| D -          | 1               | 4          | 0              | -          |
| E            | 2               | 8          | 0              | -          |
| <b>Total</b> | <b>25</b>       | <b>100</b> | <b>20</b>      | <b>100</b> |

The above shows clearly that one girl was above average while the rest 24 were below average. This is not the case with the boys whereby only 2 were below average and 18 were above average.

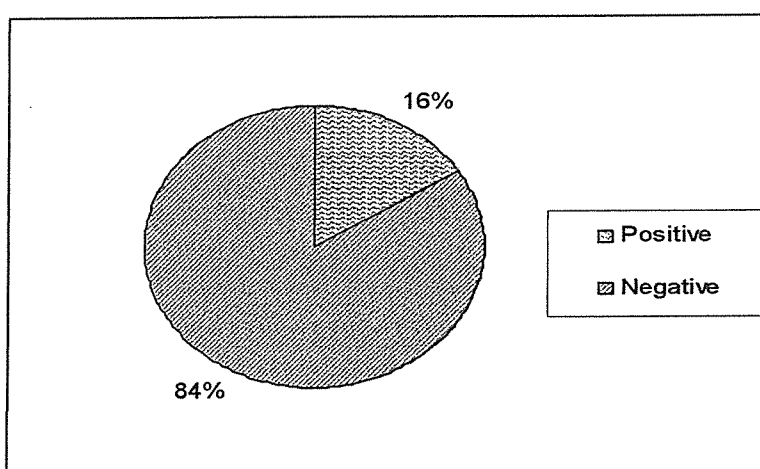
A table showing distribution of both boys and girls scores in Barwessa Primary School

| Scores       | Frequency girls | Percentage | Frequency boys | Percentage |
|--------------|-----------------|------------|----------------|------------|
| A            | 0               | 0          | 0              | 0          |
| A -          | 0               | 0          | 0              | 0          |
| B +          | 0               | 0          | 3              | 4.3        |
| B            | 0               | 0          | 2              | 2.9        |
| B -          | 0               | 0          | 5              | 7.1        |
| C +          | 1               | 5.6        | 4              | 5.7        |
| C            | 0               | 0          | 5              | 7.1        |
| C -          | 3               | 16.7       | 6              | 8.6        |
| D +          | 4               | 22.2       | 14             | 20.0       |
| D            | 6               | 33.3       | 21             | 30.0       |
| D -          | 4               | 22.2       | 9              | 12.9       |
| E            | 0               | 0          | 1              | 1.4        |
| <b>Total</b> | <b>1.8</b>      | <b>100</b> | <b>70</b>      | <b>100</b> |

The above table shows clearly that out of 18 girls only one girl is above average and 17 are below average. Whereas in boys 19 of them are above average and the rest are below average.

#### 4.3 Attitude of girls to maths subject

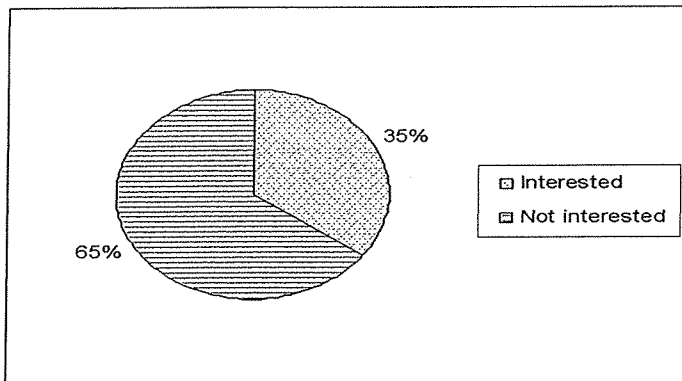
A pie chart showing respondent's attitude towards maths



The figure above shows that more than half the girls (84%) had negative attitude towards maths while only 16% had positive attitude towards maths

### Interest of respondents

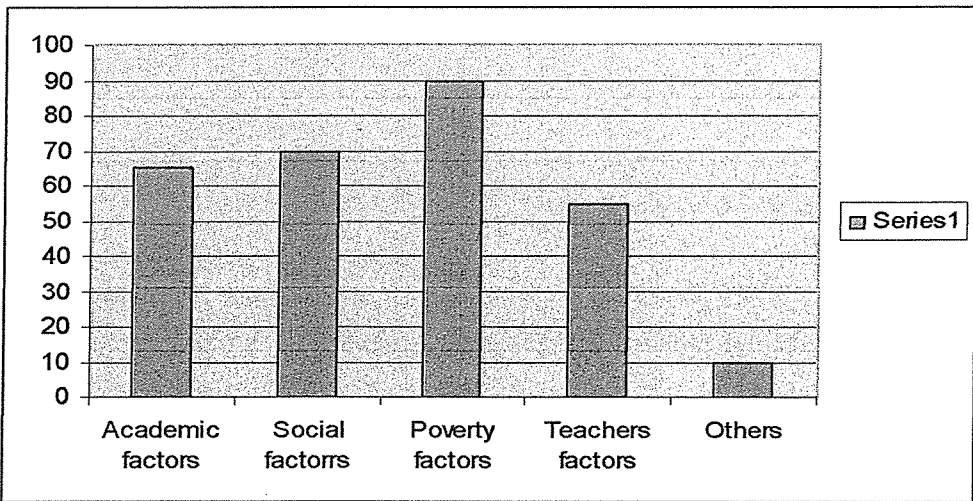
The pie chart below shows the girls interest in maths



The pie chart above shows that a few of the girls (35%) were interested in studying maths subject while 65% of the girls had no interest in maths subject.

### 4.4 View of the respondents on the factors to poor performance of girls in math

A graph showing percentage of number of respondents view on the factors leading to poor performance



The figure above shows that 90% of the respondents were of the opinion that poverty contributes a lot to the poor performance of girls in maths. Peer influence contributes to the poor performance and the respondents were 80%, 70% said social factors also have impact on the performance, 65% said that academic factors affect girls, 55% commented that teachers too play role which 10% were contributed to other factors.

## **4.5 Discussion**

Efforts to boost education in science has been made by government of different states international organizations, non governmental organizations (NGO's) but still the explosion in science as a field still lags behind.

### **4.5.1 Root causes of Poor Performance of Mathematics**

It is grouped into the following categories

- i) Environmental factors
- ii) Psychological factors
- iii) Social factors
- iv) Economic factors

#### ***Psychological Factors***

This refers to the factors that are related to the individual's personalities and cognition, the students especially the girls are affected by the personal thinking and perception about maths. Some of these factors are discussed below

#### **Masculine Fallacy of Math Subject**

Society generally believes that maths subject is difficult and a boy domain. Since math subject is compulsory in primary school girls have no alternative but to participate in class. However concentration is poor and participation and performance low. This affects the grades in maths subjects and determines the ability to continue and perform well in math subject in primary school.

#### **Lack of Interest**

This refers to the likes and dislikes of an individual for this case towards mathematics. According to Frankel (1960) an under archive is field but definitely lacking it in the area of learning were he/she is achieving less. Generally girls hate math subject and tend to think that they are incapable in their lives as far as career is concerned.

## **Social Factors**

These are factors that arise due to their individuals' interrelations with other members of the society. For instance what takes place in families' communities or societies will affect the educational process.

### **Family size**

Large families at times face problems in educating their children when faced with economic hardships, a great number of parents even those aware of the importance of girls' education are forced to educate boys at the expense of girls. It is still argued that the man is the "bread winner" and hence boys need more education than girls who will get married and will have a man to take care of them. Some parents send their girls to school later in the school term when they have acquired some money but because the girls have missed out so much by then they do poorly and eventually drop out of school.

### **Parental education**

Most parents are aware of the benefits of sending their daughter to school. However when situations arise which prevent them from educating all their children, girls are usually the ones who are not enrolled.

### **Household chores**

There is greater need for girls rather than boys' labour at home. Many parents keep their daughters at home whenever there are some chores like cooking and taking care of siblings to do.

### **Cultural practices**

Cultural practices in some societies require the girl staying out of school temporarily or permanently and interfere with her education e.g. mutilation of sexual organs which is traumatic to the girl and might stay away from school for some time.

### **Safety for girls**

Sexual harassment is downplayed in most communities. However sexual harassment of girls by males in the community including family members, teachers and boys can have a drastic effect on the girl's education and result in her dropping out of school.

### ***Environmental Factors***

This refers to the physical factors affecting the learner in their surrounding they include;

#### **Role models**

There is a complete absence of female positive role models in academic fields, especially in math careers in many communities in the rural areas.

#### **Jobs and remuneration**

Poor career prospects in science fields do not encourage girls to stay in school. Majority of people who study maths subject end up being a teacher with very low remuneration.

#### **Distance from school**

The number of schools in most African countries has not kept pace with population growth. Pupils and students sometimes have to travel long distances before they get to school. When girls are day students, travelling long distances before arriving in school decreases their productivity since they arrive in school already tired. Participation and performance in the subject is hampered. When lessons are missed it is difficult to joint at a later stage.

Unfortunately most schools are unwilling to change the time table to remedy the situation.

### ***Economic Factors***

These are factors that come as a result of lack of resources and money.

#### **Poverty**

According to Kealing (1992) many people live below the poverty line, a factor which has an effect on all people regardless of ethnic, race or cultural background. Many families lack funds to provide or cater for proper nutrition, health, shelter and clothing, therefore learners lack these essentials and cannot attend to their duties as expected of them.

## **Prostitution**

Mature girls are often tempted by money and goods they receive from older men and slowly turn to prostitution because of poverty. Prostitution interferes with education because the girls do not see the need of continuing with schooling when they earn so much.

### **4.5.2 Possible techniques of nurturing scientific attitudes in students to improve their performance**

Nurturing mathematical attitudes is one of the major objectives of teaching maths. The development of mathematics attitudes makes pupils open minded helps her to make critical observations, develop in her intellectual honesty, curiosity, unbiased and impartial thinking. Therefore it is the role of a teacher to nurture scientific attitudes in his students. The teacher can use the following techniques

#### **Wide reading**

On the basis of the study conducted by Curtis (1992) reported that those pupils who engage themselves in wide reading in maths by looking for more mathematical calculation, develop mathematical attitudes. More than those who study only one text book. Therefore teachers should encourage pupils to use more supplementary books in addition to the work given in class. For this it is essential that at least each school have a maths corner in its library. The teacher should also be doing more exercises.

#### **Making use of planned exercises**

The teacher should frequently use exercises for developing certain maths attitude among the pupils. This can be achieved by the use of teaching aids e.g. cutting magazines bulletin boards so that it can be used again and again for direct teaching

#### **Co – curriculum activities in science**

Various co – curriculum activities such as organizing maths club, hobbies club, photographic club, science and excursions should be implemented or encouraged in all primary schools. Such activities should be properly organized by math and science teachers under direct supervision but pupils should be given freedom to plan the activities.

## CHAPTER FIVE

### CONCLUSION AND RECOMMENDATION

#### 5.0 Introduction

This chapter presents the conclusion drawn from the findings and the recommendation

#### 5.1 Recommendations

In view of the results of the study the researcher made the following recommendations.

The ministry of education should emphasize to teachers to encourage girls and motivate them especially in maths by rewarding good performance

Both government and NGO's should do sensitization and awareness building activities to enable society to do away with cultural beliefs which marginalise women for example through seminars, workshops and public companies.

Girls should have more opportunities to observe female role models in maths careers.

#### 5.2 Conclusion

The poor performance of science has greatly hindered potentiality of women in the job market. This is because in the present age, we do not find any vocation that does not need the knowledge of maths. Moreover there are a large number of vocations for which the study of maths is primary requirement, for example medicine engineering, agriculture, Para medicine et al. It thus becomes quite clear that to enter into such vocational courses an individual must have adequate knowledge of maths and so the maths subjects must be perfumed well especially at lower level primary classes by all students to acquire positive attitude. Teachers should improve their teaching methods and make it child centred parents should motivate their children to like mathematical solving problems at home and school.

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# APPENDICES

## Appendix A: Questionnaire

### Set I – Pupils

Please I kindly request you to assist me to complete these research questions. The information will be treated with great confidentiality.

#### 1. Gender

Male ☐  
Female ☐

#### 2. Age of the respondent

4-9 ☐  
9-10 ☐  
10-11 ☐  
11-12 ☐

#### 3. Does your school have material resource?

Yes ☐  
No ☐

#### 4. Choose on of your favorite subjects among the following

Maths ☐  
English ☐

#### 5. Who helps you when you have difficulty in mathematics problems?

Subject teacher ☐  
Classmates ☐  
Self ☐  
Other mathematics teachers ☐

#### 6. What methods are commonly used in your class when teaching mathematic

Explanation ☐  
Discussion ☐  
Peer teaching ☐

#### 7. Please write a number which shows your feeling toward the statement e.g.

4 – Disagree with a lot of doubt.

1 – Agree with no doubt ☐  
2 – Agree with doubt ☐  
3 – Disagree with no doubt ☐  
4 – Disagree with a lot of doubt ☐

## **SET II – TEACHERS**

Please kindly request you to assist me to complete this research questions. The information will be treated with greatest confidentiality.

### **INSTRUCTIONS**

Tick the appropriate bracket or answer as required by the question.

**1. Gender**

Male

☐

Female

☐

**2. Designation**

Head Teacher

☐

Subject Teacher

☐

Assistant Teacher

☐

**3. How long have you taught mathematics subjects?**

.....  
.....  
.....

**4. How was the performance of girls in comparison to boys?**

.....  
.....  
.....

**5. What might be the possible causes of girls poor performance in maths subject?**

.....  
.....  
.....  
.....

## Appendix B: Plan for Data Presentation

The researcher will use the formula indicated below

Formula: 
$$P = \frac{F}{N} \times 100$$

### **KEY:**

P = Percentage

F = Frequency

N = Total number of respondents

## Appendix E: Sample of Time Framework

| No. |                                          | APRIL | MAY | JUNE | JULY | AUGUST | SEPTEMBER |
|-----|------------------------------------------|-------|-----|------|------|--------|-----------|
| 1   | Introduction to Research                 |       |     |      |      |        |           |
| 2   | Literature Review                        |       |     |      |      |        |           |
| 3   | Appraisal of the Study Area              |       |     |      |      |        |           |
| 4   | Designing of Data Tools                  |       |     |      |      |        |           |
| 5   | Pre-Testing Questionnaire                |       |     |      |      |        |           |
| 6   | Visiting Research School                 |       |     |      |      |        |           |
| 7   | Data Collection                          |       |     |      |      |        |           |
| 8   | Analysis of the Data Compilation         |       |     |      |      |        |           |
| 9   | Feedback presentation                    |       |     |      |      |        |           |
| 10  | Final submission of the written research |       |     |      |      |        |           |

