Influence of Female Teachers on Girls Performance in Biology in KCSE In Public Secondary Schools in Borabu Sub County, Nyamira County, Kenya

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Abstract:- **Globally one single factor that decides the destiny of a nation is the quality of education that its citizens get. The process of education revolves around the teacher and the student. For ages, the teacher-student relationship has been perceived by our forefathers to have a direct impact on the learner's performance. This study aimed at finding find out the influence of female teachers on girls' performance in biology in KCSE in public secondary schools in Borabu Sub County. Generally, the study sought: to find out the influence of the biology teacher' physical characteristics on girl performance in biology, to establish the influence of biology teachers teaching methodology on girl performance in biology and to investigate personal factors female students view in biology teachers that influences their performance in biology in Borabu Sub county. The study employed descriptive research design with both qualitative and quantitative research approaches. Data was collected from 104 respondents using a semi-structured questionnaire.**

The population comprised of female students, and female biology teachers in public secondary schools in this area. The study targeted 20 secondary schools in the sub county. Out of the 20 schools two were purely girls' schools and the rest were mixed schools. This research considered a sample size of 8 schools representing 40% of the entire population (20 schools a sample size of the study was 120 students and 20 teachers. This sample size was arrived at according to Toro Yamane's Formula (1970). From the findings, majority of the respondents agreed that teacher pay attention in explaining details in a topic. Basing on the findings, the study concluded that female teachers influence girls performance in biology in KCSE in public secondary schools in Borabu Sub county and therefore there is need to employ more so as to improve girls performance in biology. The study recommends that the government through the Ministry of Education should employ more biology female teachers in order to encourage girls to work hard in the subject and do better in it and Parents should encourage their daughters to take biology and other sciences at school and consult their teachers in order to encourage them to do well in the subject.

***Key words*:- Biology, Borabu, Sub County, performance, public school, gender, stereotype, grooming, motivation**

I. INTRODUCTION

1.0 Background of the study

Globally one single factor that decides the destiny of a nation is the quality of education that its citizens get (Mpuchane, 2011). The process of education revolves around the teacher and the student. For ages, the teacher-student relationship has been perceived by our forefathers to have a direct impact on the learner's performance (Mpuchane, 2011). The teacher is viewed as the ultimate source of knowledge as the student learns in the most trying environment because of his/her devotion and spirit of enquiry. Despite what the learner goes through, education is viewed by nations as the foundation for development and prosperity.

Recent surveys show that women receive 54 percent of all Bachelor's degrees in the United States but only 30 percent of natural science and engineering degrees and 16 percent of physics degrees. These figures somewhat parallel the statistics of UNC (University of Northern Carolina) women graduates. According to the UNC Office of Institutional Research (1994), 43 percent of degree recipients in chemistry were women; 19 percent of degree recipients in physics were women; and 57 percent of degree recipients in biology were women. In the field of biology, women appear to be achieving parity with men but in chemistry and physics, women continued to be under-represented, particularly when one considers that women constitute more than half of the UNC students' body (58.5 percent) (Hartmann Petersen, 2005).

Female Education in Mathematics and sciences in Africa (FEMSA) is a Non-governmental organization that studies women performance in sciences. It found evidence of poor performance by girls in science, mathematics and technical subjects in four Africans countries that were under its study. They included: Uganda, Cameroon, Ghana and Tanzania. (Holmund & Sund: 2005).

According to the report from the ministry of education which was read by Professor Ongeri in 2009 KCSE results showed that the boys literally took the ten top slots nationally. Out of the top 100 positions there were only 27 girls. And so to an observer, it was a dismal performance for girls. Despite drop in overall students' performance in sciences and mathematics girls still lag behind their male counterparts in these subjects.

According to Nyamira County examination council report of 2013 shows out of 4328 students who registered for KCSE Examination the boys took the first national slots in science subjects like biology, chemistry and physics, out of the 248 students who scored "A" grades in biology there was only 52 girls students and the rest were boys. In Borabu Sub County the 2013 K C S E Examination result was not different, the

performance of boys was better when compared to the performance of girls students in science subjects like biology. This is the reason why the research wants to do the research to find out if there is any influence of female teachers on girls' performance in biology KCSE exams in public secondary schools in Borabu Sub County, Nyamira County Kenya.

1.1 Statement of the Problem

In spite of the efforts the government of Kenya has put in place to boost the girl-child performance in sciences, mathematics and technology (SMT) subjects in order to eliminate gender disparities and enhance gender equity and equality in education, there is still gender imbalance in performance. According to the then Minister for Education, Prof. Sam Ongeri, while releasing the Kenya Certificate of Secondary Education (KCSE) results of 2009 (Daily Nation, 3rd march 2009) gender imbalance still exists in performance. He mentioned that the performance of girls in Biology was poorer than that of boys. Researchers have proposed that if female teachers are brought in to teach the girls, the girls can improve in performance in the sciences. The purpose of this study was to establish the influence of female teachers on girls' performance in biology in public secondary schools. This is because female teachers as part of the teaching force share similar characteristics with the girl-child and have the caring semblance of a mother.

1.2 Research Questions

I. How do female biology teachers' personal characteristics influencing girls' performance in biology in Borabu Sub County?
II. How do female biology teachers' physical characteristics influence girls' performance in Biology in Borabu Sub County?
III. What female biology teachers' teaching methodology influence girls' performance in Biology in Borabu Sub County?

1.3 General Objectives

To find out the influence of female teachers on girls' performance in biology in KCSE in public secondary schools in Borabu Sub County, Nyamira County Kenya

1.3.1 Specific objectives

I. To find out the influence of the female biology teacher' personal characteristics on girl performance in biology in Borabu Sub county.
II. To establish the influence of female biology teachers' physical characteristics on girl performance in biology in Borabu Sub county.
III. To investigate the influence of female biology teachers' teaching methodology on girls' performance in biology in Borabu Sub county.

1.3.2 Hypothesis

There is no significant relationship between female teachers' influence and girls' performance in biology in KCSE in Borabu Sub County.

1.4 Scope of the Study

The study focused on the influence of female teachers on the girls' performance in biology in all public secondary schools in Borabu Sub county, Nyamira County, Kenya. The division is found in Masaba south district which is found in Nyamira County. It is bordered by 3 divisions namely Masimba, Keumbu, and Nyamache. The study dealt with selected public secondary schools in Borabu Sub county. It further confined itself to female students who were the interest of the study. The performance of the girls in sciences was of great concern. The study also assessed the influence of biology female teachers on girls' performance in biology between January and November 2017.

1.5 Significance of the Study

The study will help the schools to improve their teaching techniques on the way toward better performance in the subject based on research. The study will benefit teachers and school administration by getting to know methods in teaching biology for the of improving the academic performance in the subject.

The study will also benefit the ministry of as policy makers to set better policies which may lead to improvement on girls academic performance in biology. The study will also be used as reference by other researchers who will be doing research on related topic.

1..6 Conceptual Framework

Conceptual frame showing the influence of a female teacher on girls' performance in biology KSCE exams in selected secondary schools in Borabu Sub county.

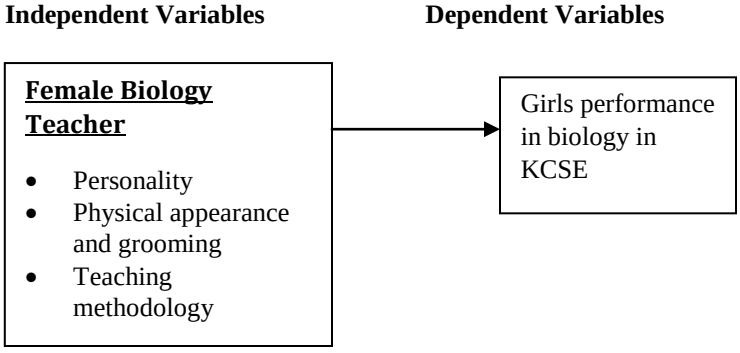

Figure 1: Conceptual framework

1.7 Operational Definition of Terms

Gender: This refers to the fact of being boy or girl.

Stereotypes: This is a fixed idea or image that many people have of a particular type of a person but which is not often true in reality.

Personality: Is the sum total of ones attributes.

Physical appearance: This is ones outlook.

Teaching methodology: Ways of imparting knowledge

Grooming: Is to look clean, neat and pleasing in appearance

Motivation: arousing the interest/sustaining the interest in doing a given activity.

II. LITERATURE REVIEW

2.1 Introduction

This chapter introduces us to what other writers have written in books, newspapers, journals, magazines and reports on the influence of female teachers on girls' performance in biology kcse exams in public secondary schools. The variable investigated is girls' education, gender stereotypes and self concept.

2.2 The Influence of the Female Teacher on the Girls' Performance in Sciences

The influence of the teacher's gender on type of career choice by females is unclear due to some conflicting reports in the literature review. Some studies indicate that female teachers have an influence on female students while others state that the teachers' gender is not an influence. However, there is some evidence that female students relate better to female teachers (Davis & Humphrey, 1985).

According to a research by Bender (2005), it is unclear whether the gender of the science teacher influences female students' career aspirations. All the same, her findings revealed that students talked more about female science teachers than male science teachers. Since the male teachers were 75 to 100 percent of students' high school mathematics and science teachers, it seemed likely that male science teachers should have been mentioned more than female science teachers. The students who were interviewed indicated that they preferred the type of teaching strategies that female teachers tend to use, hence suggesting a liking for the female teachers and a likelihood of them influencing the female students more than the male teachers.

Increasing evidence also shows that the gender gap in school performance is closing in on Mathematics and Science (Holmund & Sund: 2005). One of the possible reasons for this is where teachers are role models for students. If students identify themselves more with same sex role models, it is possible that performance will be enhanced when students have a teacher of their own gender (Holmund & Sund: 2005).

Hartmann –Petersen (2005) says that no society can afford to exclude women from gaining full access to higher education, even though they are handicapped by family responsibilities, financial exploitation and sexism. He suggests that an answer to this problem could be to get more female science teachers who may influence female students in secondary schools and that female scientists should be paid same salary as male scientists.

Wasanga (2004) investigated attitudes towards various aspects of science and also attempted to identify the factors leading to the attitudes held by the female students. The study found that both male and female students have moderately positive attitudes towards science. However, he found differences in two aspects. Perception of science as a male domain and that the sex of the science teachers had more positive attitudes on all aspects of science. He recommends that efforts should be made to increase the number of female teachers.

To curb it all, one Kenyatta University female student Bed (Science) in Lenga & Mwanyky (2004), had this to say about her experiences in chemistry while she was in secondary school:

In my first year (in secondary school), my stream had a wonderful female chemistry teacher, who really had a way of motivating us to like the subject. She was always so calm and confident as she taught us a great deal in whatever demonstrations she did and also encouraged us to participate in the small group practical's

She goes ahead to explain that second term brought them a rather contrasting experience. They received a harsh male chemistry teacher who almost destroyed their good attitude towards chemistry. He instilled a lot of fear in them and by the end of the term; they wondered if what they were doing was the chemistry that they had so much enjoyed earlier.

All the above arguments suggest that indeed female science teachers can influence the girls more positively in science performance than the male science teachers. As a result of this, the researcher seeks to find out if indeed it is true that the female science teacher does influence girl taking science to perform better in the science subject they study.

2.3 Girls Education

Over centuries, education of girls has been at stake. This situation is challenging when thought in the light of education being one single factor that decides the destiny of a nation. In a traditional African context, educating a daughter is likened to watering someone else's lawn. This is because they are widely understood to benefit the family that she marries into. When poverty faces a family to make a choice between sending a son and a daughter to school, they frequently choose to educate a son. Such trends have dogged girls' education in many parts of Africa and the world. With the rise of Women Rights Movements, Children's rights, Gender Equity, Education for All and world targets like the Millennium Development Goals have brought all human on board to work together as equal partners in all spheres.

However despite these efforts, it is clear that there is a gender gap in performance and representation between male

and female. Males and females are not equal in every educational outcome. In some areas, females do better than males and in some other areas, males do better than females. Females lag behind males in two academic areas – mathematics and science achievement (Library.unesco.iicba.org/Eng./SE…).

Findings by FEMSA in their phase II project evaluation revealed a gender problem which constantly worked against the positive image of girls and an in depth analysis showed that problems girls face may lie in the hands of people beyond girls.

2.4 Gender stereotypes

Gender refers to the fact of being male or female (Krystal, 1976). Stereotypes are fixed ideas or images that many people have of a particular type of person which are not true in most cases. The two terms are used in this research to refer to certain fixed ideas that people have of the female in the society which are not true in reality.

Gender stereotypes are presented to citizens of modern society in a variety of situations each day and vary from the obvious to the very subtle. As one of the most prominent symptoms related to the gender gaps in science and mathematics belief, stereotypes should be investigated. These stereotypes can be presented and reinforced by parents or classmates but are difficult to erase once established. Stereotypes can additionally have negative impacts on girls' education when an administration reduces academic requirement in response to stereotype. As shown by Lanken & Dekkers (2006) it is true that parents contribute to the stereotypes that lead to lesser girl performance in science and mathematics than the boys. They report that boys are given more spatial and scientific toys rather than dolls which girls are brought for.

Some research studies have implicated early interest in science as key factor in pursuing science, mathematics or technology related careers (Phipps, A 2007). This favors the boys rather than the girls. As reported by Lanken & Dekkers (2006), young girls engage in more fantasy and creative plays while boys choose constructive plays like building cars. This gives the boys an early opportunity to develop minds that grasp science concepts than girls. Again, while at home, girls help the mothers in carrying out domestic duties while boys go for the fathers' do-it-yourself duties, which encourage discovery. This adds to the advantage that boys have over the girls.

Stereotypes are also compounded by the expectations of parents later in life. For parents, stereotypes are so engrained that they may consciously or unconsciously hold different expectations for their children depending on gender. The influence of the mother's support was not found to be significant in a study concerning factors affecting pursuit of a technology-related career. However, the support of the father was found to be a key factor in this choice (Adya & Kaiser, 2005).

Level of parental education is also related to the expectations of girls in science. A 2006 study showed that parental education level was a predictor of science grades and activities of girls. The authors speculated that this might be due to "differential expectations" of more educated parents who expect boys to take science courses but allow girls more freedom to choose whether or not to take science courses (Simpkins & Eccles, 2005).

The African traditional culture has stereotyped girls and women by creating a traditional societal picture which portrays them as shy, docile and lacking in creativity, intelligence and a sense of adventure. As a result, their opinions are not important (Daily Nation, 1999). This is argued by Dr. Esther Mwangi who is a former university of Nairobi lecturer. She goes ahead to argue that since science requires an inquisitive mind, creativity and coming up with solutions, this stereotyping of girls and women has affected them negatively. When formal education was introduced, teachers and parents thought the girls were incapable of learning the sciences. Many girls accepted this theory and therefore found sciences difficult. This has been propagated to this date.

Once stereotypes have been established they are difficult to erase. A recent study showed that girls who were more likely to endorse the stereotype of girls being bad at math and science also evaluated themselves more negatively than girls who did not endorse the stereotype. In the same study, researchers found that girls who held the stereotype were more resistant to either negative self-valuations or desires to pursue a science career (Selimbegovic & Chartard, 2007). Believing in stereotypes is clearly a counterproductive characteristic when it comes to increasing girls' success in science because it makes them more resistant to change.

Unfortunately, stereotypes can have negative effects on the quality of girls' education when administrators decide to lower science requirements in response to low performance. Often, school systems present students with two paths of science requirements, and if a student has had previous negative experience with science (as girls often do) they will choose the path with the lowest science requirements. Because girls are often subjected to stereotypes and negative experiences they might be inclined to choose the path of least resistance. Studies show, however, that girls are becoming even with boys in the number of science classes taken, possibly due to college aspirations (Simpkins and Davies-Kean, 2005). Although it may seem counterintuitive, raising the standards that girls are expected to meet might actually lessen their beliefs in stereotypes if they see themselves succeeding.

2.5 Self-concept

A second symptom of the gender gap in science education is that girls lack science self-confidence, which translates to loss of interest in science later in school. Dreda (1998) notes that it is males who assert themselves while females remain passive. This fact has been demonstrated in class where boys are the ones who perform experiments while girls only look on. This makes the boys develop confidence in the sciences as belonging to the boys. It also makes girls internalize beliefs, attitudes and expectations which finally lead to under-achievement in performing them.

Attitudes do play a great role in eroding girls' self-confidence in mathematics and the science. Mohammed and Kwamboka (Kenya Times, 1999) reports that it is deep down in the minds of many girls that sciences are subjects specialized for boys and therefore, a hard task for them to perform well. Such claims are given credence by Eshiwani (1984), (Dr. Mwangi, Daily Nation 1999) and FEMSA (No.7). FEMSA (No.7) also reveals that most of the girls have negative attitudes towards sciences, mathematics and technology due to negative comments and/or severe beatings by either parents or teachers, which leads the girls to suffer low self-esteem and lack of self-confidence in facing challenges in those subjects.

A study by Klahar, Triona and Williams (2006) demonstrated the tendency of girls to under estimate their abilities, signifying low self-confidence in relation to a science laboratory activity. Both boys' and girls' confidence, level increased as a result of a science laboratory activity. The respective levels of absolute level of confidence however, were significantly lower for girls than for boys, both before and after the laboratory activity. The most interesting part of this study was that while the girls and boys did not differ significantly in the amount of effort shown in the laboratory, the girls did not gain the same amount of confidence from a relatively similar amount of effort. This demonstrated that surmounting the initial lower confidence level of girls in relation to boys is not a matter of trying to increase the effort put forth by girls, rather that the solution must come by increasing the overall initial confidence level.

Another study by Britner and Pajares, (2006) investigating the unreasonably low science self-confidence of girls, even when their achievement scores were higher, produced particularly startling results. Although the girls in the sample for the study they did had higher science grades, they still only maintained equal self-confidence with the boys. Despite their higher grades, girls reported higher levels of science-related anxiety and physiological stress but lower levels of mastery experiences. This is disturbing because it shows that even when they are performing at the same or higher levels than their male peers, girls are still less confident in their abilities. This suggests some underlying problem with the perception of the subject as a whole.

III. METHODOLOGY

3.1 Introduction

This chapter presents a detailed description of the research methodology or procedures to be followed to achieve the research objectives. It will include a description of the locale of the study, research design, study population, sample technique, target population, sample size, methods of data collection, research instrument, validity and reliability of instruments.

3.2 Locale of the Study

This research study was carried out in Borabu Sub County in Masaba south District of Nyamira County in Nyanza Province. Borabu Sub County borders Gucha and Kisii central districts to the west and Borabu district to the North West. The reason for choosing Borabu Sub County for the research was because the area is familiar to the researcher and being a stakeholder in this research contributed to the improving of the performance of the girl child in the division in science related subjects.

3.3 Research Design

The study used descriptive and correlation research designs with both qualitative and quantitative methods. The descriptive research design was adopted since it illustrated the information on the existing conditions. Descriptive also described the findings on the variables in relation to the respondents like teachers. The correlation design determined the relationship between the influence of female teachers and girls performance in biology KCSE exams. Qualitative approach was used because of its unique features of allowing the researcher to get closer to the respondents and situation for an in-depth inquiry into the phenomena under investigation. Quantitative was used to summarize the data collected in form of tables, frequency and percentages for better understanding.

3.4 Study Population

The population under study comprised of female students, and female biology teachers in public secondary schools in this area.

3.5 Target Population

The study targeted 20 secondary schools in the division. Out of the 20 schools two were purely girls' schools and the rest were mixed schools.

3.6 Sample Size

How large a sample size should be and its ability to represent the entire population from where it was drawn is addressed in this section. This research considered a sample size of 8 schools representing 40% of the entire population (20 schools a sample size of the study was 120 students and 20 teachers. This sample size was arrived at according to Toro Yamane's Formula (1970)

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

Where,

N=population,

n=total sample size,

e=desired margin of error (0.05)

Therefore,

$$n = \frac{140}{1+140\,(0.05)^2} = \frac{140}{1.35}$$

n= 104

The sample size for the study was 104, and was distributed basing on the number of respondents per school. However, the researcher used 90 students and 14 teachers for the study.

Table1: The Sample Size

Type of School	No. of Schools	Sample size		
		Schools	Teachers	students
Pure Girls	2	2	4	20
Mixed Schools	18	6	10	70
Total	20	8	14	90

Sampling Procedure

Sampling is the act, process or technique of selecting a suitable sample or a representative part of a population for the purpose of determining parameters or characteristics of a whole population. The study employed purposive sampling technique in which the researcher selects samples based on a certain purpose. This sampling technique helped to increase utility of findings. Purposive sampling was used to sample eight public secondary schools out of the 20 in Borabu Sub county. The only two girl schools in the division were automatically sampled. All the sampled respondents were expected to participate in the study since the researcher was involved in the distribution of the questionnaire and the collection of them personally.

Methods of data Collection

Data collection was done though self-administered questionnaires with both close-end and open-end questions. The researcher preferred questionnaire method because it increased the chance of getting valid data. Since the responses were written down at the respondents convenience.

Research Instrument

The researcher used self-administered questionnaires of two types.

The first questionnaire titled: Biology Girls' Female Teacher influence questionnaire (BGFTIQ) was for the girls and the second one titled: Teachers' Biology Female teachers influence questionnaire (TBFTIQ) was for both female and male teachers. The self-administered questionnaires were constructed in such a way that it has 3 sections. **Section A**: biographical data of the respondent. **Section B** sought information in line with the research questions. The respondents were required to answer the questions using a scale of five anchors as follows: **(5)** strongly Agree **(4)** Agree **(3)** Don't Know **(2)** Disagree and **(1)** strongly Disagree. The last section (Section C) was for suggestions.

Pretest: The instruments of data collection needed to be tested before they were administered to the respondents. Pre-testing of these tools was done in the neighboring Masimba divisions where two schools were selected that bear the same characteristics as those in question. Same procedures as those the researcher intended to use in the real research were used. 4 teachers and 16 students were used totaling to 20 respondents. A retest of the instruments was done after one week on the same pilot sample. This piloting helped to identify deficiencies in the questionnaire like sufficient space, clustered questions, unclear question and wrong paraphrasing (Bryman: 2008).

The respondents were asked to make suggestions on the clarity of questions, their flow, content relevance and time taken to answer questions

Reliability

According to Frankel and Wallen (2003), and Mugenda & Mugenda (2003), reliability of an instrument refers to the yielding of consistent results after repeated trials. Frankel and Wallen (2003) further state that reliability gave the researcher confidence that the results actually represent the responses of the individuals involved in the study.

The study instrument was found reliable when the researcher found out how dependable, stable, predictable and accurate the instrument was. Therefore, the pretest was done on 20 respondents, 4 teachers and 16 students respectively. Through use of S.P.S.S. the reliability will be judged in determining the coefficient of reliability. The study reliability of 0.70 and above was considered and reliable after pretest of 20 respondents.

Validity of the Instrument

The instruments were validated using content validity where content validity refers to the content and format of the instrument. It aimed at finding out if the content is appropriate. Whether the sample questions adequately represented the content to be assessed and whether the format was appropriate (Frankel and Wallen, 2003)

Assessing the content validity was done by the researcher's supervisor and research expert. Appropriate judgment to improve on clarity, relevance, and comprehensiveness of the questionnaire was made before the supervisors' approval. Comprehensiveness of the standardized test was made before

the supervisor's approval. The content validity was computed using the formula;

$$C.V.I = \frac{total\ number\ of\ valid\ items}{total\ number\ of\ items}$$

If the C.V.I value got was 0.70 and above, then the instrument was termed valid item.

Data Collection

To ensure acceptability in the field the researcher got an introductory letter from the school of education, Mount Kenya University, which was taken to the place where the study was conducted to seek permission and report building. After the permission was granted by both the division officer and schools principal of the sampled schools, the researcher made official appointments for a day of visit and data collection exercise.

Data Processing

Data processing gives meaning to the collected data. The gathered data was validated, edited and the coded. In the validation process, the questionnaire was checked to determine whether an accurate of acceptable sample was obtained in terms of proportions of issued questionnaires. The data was processed as follows.

Editing

Editing was very vital in this study because it enhanced accurate and complete gathering and recording of data. This was done by continuously examining the raw data given in the questionnaire by the respondents. Through field editing the researcher checked through the questionnaire immediately it was returned and it was done on an assumption that the data was accurate and constant with facts that were gathered and uniformly centered.

Coding

Coding involved assigning symbols to answers so that responses were put into limited number of categories according to similar themes. Categories were assigned to the various items in the questionnaire and coding frames were made. This was for both quantitative and qualitative data and it was analyzed using the **S.P.S.S.** Codes were used to enter data into the computer for analysis.

Tabulation

This was done by arranging in some kind of concise and logical order for the purpose of statistical analysis. It was done by the researcher with the help of satisfaction after sorting out the data and knowing the number. This helped to analyze the findings from quantitative and qualitative data.

Data Analysis

Data in section A was generated into frequency distribution tables and percentages to establish the number of respondents with their listed personal characteristics of age, gender and teaching experience. Section B was analyzed using the scale of 5 anchors, ranging from 5(highly positive) to 1(highly negative). These were done using the Statistical Package for Social Science (SPSS) software

IV. RESULTS AND DISCUSSIONS

4.1 Introduction

This study aimed at finding find out the influence of female teachers on girls performance in biology in KCSE in public secondary schools in Borabu Sub County, Nyamira County Kenya. Specifically, the study sought to: To find out the influence of the biology teacher' physical characteristics on girl performance in biology in Borabu Sub county, to establish the influence of biology teachers teaching methodology on girl performance in biology in Borabu Sub county and to investigate personal factors female students view in biology teachers that influences their performance in biology in Borabu Sub county, Nyamira County Kenya.

Data was collected from 90 student respondents and 14 teacher respondents currently teaching in public secondary schools in Borabu Sub County, Nyamira County Kenya. The findings of the study are presented, discussed and analyzed in line with the study objectives. Data attained was presented in the frequency, percentage and tabulation tables from which conclusions were drawn.

4.2 Socio-Demographic Characteristics

The study sought demographic data of the respondents including Age, Parent employment, Nature of school, Sex of biology teacher and Majority of Biology Teachers. The study was carried out in in public secondary schools in Borabu Sub county, Nyamira County Kenya. The study was conducted on 90 students and 14 teachers.

Table 2: Demographic characteristics of the students

Characteristics		Frequency	Percent %
Age	12-14 years	34	37.8
	15-17 years	36	40.0
	18-20 years	20	22.2
Parent employment	Mum	36	40.0
	Dad	54	60.0
Nature of school	Girls	22	24.4
	Mixed	68	75.6
Sex of biology teacher	Female	54	60.0
	Male	36	30.0
Majority of Biology Teachers	Females	40	44.4
	Males	28	31.1
	Both	22	24.4

n=90

Table 2 reveals the study findings on the demographic characteristics of the respondents who

participated in the study. The study established that those who were 12-14 year 34(37.8%), those between 15-17 years were 36(40.0%) while those between 18-20 years were 20(22.2%). The findings reviled that majority of the respondent were those between 15-17 years 36(40.0%) and therefore their views dominates the study. Regarding the employment of the respondents' parents, the findings reviled that employed mums were 36(40.0%) while dads were 54(60.0%). The findings show that dads were the majority of employed parents and therefore their views dominate the study.

Regarding the nature of the school, the findings shows that 68(75.6%) of the respondents were in mixed school while 22(24.4%) of the respondents were in girls school. The findings show that majority were in mixed school. On the other hand, regarding the sex of biology teacher, the findings reviled that majority of the biology teachers were female teachers 54(60.0%) while male teachers were 36(40.0%) and therefore majority of biology teachers were female and therefore their views dominates the study.

Moreover, regarding the majority of biology teachers, from the findings, female teacher were the majority 40(44.4%) followed by male teachers 28(31.1%) while both sexes were 22(24.4%). The study reviles that majority of biology teachers were female and therefore they dominate the study.

4.3 Biology Teacher' Personal Characteristics and Girl Performance in Biology

The first objective was to find out the influence of the biology teacher' physical characteristics on girls' performance in biology in Borabu Sub County. Students were asked to respond to biology teacher's physical characteristics influence on their performance in biology and they gave varying responses towards the same. The results are shown and subsequently discussed table 3.

Table 3: Biology Teacher' Personal Characteristics and Girl Performance in Biology

Effect of Peer Group	SA	**A**	**DN**	**D**	**SD**
Teacher pays attention in explaining details in a topic	29 (32.2%)	25 (27.8%)	15 (17.7%)	12 (13.3%)	9 (10.0%)
Teacher ensures that I do my biology assignment in an orderly way	27 (30.0%)	23 (25.6%)	16 (17.8%)	13 (14.4%)	11 (12.2%)
Teacher shows interest in me and my work	25 (27.8%)	27 (30.0%)	10 (11.1%)	15 (17.7%)	13 (14.4%)
Teacher understands my feelings	26 (28.9%)	28 (31.1%)	8 (8.8%)	16 (17.8%)	12 (13.3%)
Teacher has a soft heart on me	29 (32.2%)	25 (27.8%)	15 (17.7%)	12 (13.3%)	9 (10.0%)
Teacher takes time with me (student)	25 (27.8%)	27 (30.0%)	10 (11.1%)	15 (17.7%)	13 (14.4%)
Teacher does not get irritated easily	27 (30.0%)	23 (25.6%)	16 (17.8%)	13 (14.4%)	11 (12.2%)

n=90

From the findings, 54(60.0%) respondents agreed that teacher pays attention in explaining details in a topic, 15(17.7%) don't know that teacher pays attention in explaining details in a topic, while 21(23.3%) disagreed that teacher pays attention in explaining details in a topic. On the same note, 52(55.6%) respondents agreed that teacher ensures that they do their biology assignment in an orderly way, 16(17.8%) don't know, while 24(26.6%) disagreed that that teacher ensures that they do their biology assignment in an orderly way.

Moreover, 52(55.6%) respondents agreed that the teacher shows interest in them and their work, 10(11.1%) don't know, while 28(32.1%) disagreed that the teacher shows interest in them and their work. On whether teacher understands their feelings, 54(60.0%) disagreed, 15(17.7%) don't know whether teacher understands their feelings, while 21(23.3%) disagreed that teacher understands their feelings.

The findings are in line with the literature according to a research by Bender (2005), it is unclear whether the gender of the science teacher influences female students' career aspirations. All the same, her findings revealed that students talked more about female science teachers than male science teachers.

On the other hand, 54(60.0%) respondents agreed that the teacher has a soft heart on them, 15(17.7%) don't know whether teacher has a soft heart on them, while 21(23.3%) of the respondents disagreed that the teacher has a soft heart on them. Regarding whether teacher takes time with them (student), 52(55.6%) respondents agreed, 10(11.1%) don't know whether teacher takes time with them, while 28(26.6%) of the respondents disagreed that whether teacher takes time with them. On the same note, 50(55.6%) respondents agreed that teacher does not get irritated easily, 16(17.8%) don't know whether teacher does not get irritated easily, while 24(32.1%) of the respondents disagreed that teacher takes time with them

The findings are in line with Holmund & Sund (2005) increasing evidence also shows that the gender gap in school performance is closing in on Mathematics and Science. One of the possible reasons for this is where teachers are role models for students. If students identify themselves more with same sex role models, it is possible that performance will be enhanced when students have a teacher of their own gender.

4.4 Female Biology Teachers' Physical Characteristics and Girl Performance in Biology

The second objective was to establish the influence of female biology teachers' physical characteristics on girl performance in biology in Borabu Sub County. Students were asked to respond the influence of biology teachers teaching methodology on girl performance in biology and they gave varying responses towards the same. The results are shown and subsequently discussed table 4.

Table 4: Female Biology Teachers' Physical Characteristics and Girl Performance in Biology

Effect of Peer Group	SA	A	DN	D	SD
Smartly dressed and looking sharp	29(32.2%)	27 (30.0%)	14(15.6%)	11 (12.2%)	9(10.0%)
The style of walking	27(30.0%)	23 (25.6%)	16(17.8%)	13 (14.4%)	11(12.2%)
The style of talking	28(31.1%)	27 (30.0%)	10(11.1%)	12 (13.3%)	13(14.4%)
Use of make-ups (use perfumes, ointments)	26(28.9%)	28 (31.1%)	8(8.8%)	16 (17.8%)	12(13.3%)
The teachers hairstyle	29(32.2%)	25 (27.8%)	15(17.7%)	12 (13.3%)	9(10.0%)

n=90

From the findings, 56(60.0%) respondents agreed that biology teacher is smartly dressed and looking sharp, 14(15.6%) don't know that biology teacher is smartly dressed and looking sharp, while 20(22.2%) disagreed that biology teacher is smartly dressed and looking sharp. On the same note, 50(55.6%) respondents agreed with teacher ensures the style of walking, 16(17.8%) don't know, while 24(26.6%) disagreed that they like teacher style of walking. Moreover, 50(55.6%) respondents agreed with the teacher style of talking, 10(11.1%) don't know whether they like teacher style of talking, while 25(27.7%) disagreed that they like teacher style of talking.

The findings are in line with the literature according to a research by Bender (2005), it is unclear whether the gender of the science teacher influences female students' career aspirations. All the same, her findings revealed that students talked more about female science teachers than male science teachers.

On whether teacher understands their feelings, 54(60.0%) agreed that they like teacher's use of make-ups (use perfumes, ointments), 15(17.7%) don't know whether they like teacher's use of make-ups (use perfumes, ointments), while 21(23.3%) disagreed that they like teacher's use of make-ups (use perfumes, ointments). Moreover, 54(60.0%) respondents agreed that they like the teachers hairstyle, 15(17.7%) don't know whether they like the teachers hairstyle, while 21(23.3%) disagreed that they like the teachers hairstyle.

The findings are in line with Holmund & Sund (2005) increasing evidence also shows that the gender gap in school performance is closing in on Mathematics and Science. One of the possible reasons for this is where teachers are role models for students. If students identify themselves more with same sex role models, it is possible that performance will be enhanced when students have a teacher of their own gender.

4.5 Female Biology Teachers' Teaching Methodologies and Girl Performance in Biology

The third objective was to investigate the influence of female biology teachers' teaching methodologies on girls' performance in biology in Borabu Sub county. Students were asked to respond to personal factors female students view in biology teachers that influences their performance in biology and they gave varying responses towards the same. The results are shown and subsequently discussed table 5.

Table 5: Biology Teachers Teaching Methodology and Girl Performance in Biology

	Great	Moderate	None
Question and answer method	8(57.1%)	6(42.9%)	0(00.0%)
Explanation of procedures	11(78.6%)	3(27.3%)	0(00.0%)
Giving lesson notes	6(42.9%)	8(31.1%)	0(00.0%)
Engage us in practical work	12(85.7%)	2(27.8%)	0(00.0%)
Lecture us in class	0(00.0%)	5(35.7%)	9(32.2%)
Conduct class discussions	10(71.4%)	4(28.6%)	0(00.0%)

n=14

From the findings, 8(57.1%) of the respondents agreed that teacher question and answer method is great, while 6(42.9%) agree it is moderate, while 0(00.0%). On the same note, 11(78.6%) respondents agreed explanation of procedures is great, while 3(27.3%) agreed that explanation of procedures is moderate. Moreover, 6(42.9%) respondents agreed with the teacher giving lesson notes as great, while 8(31.1%) agreed that teacher giving lesson notes is moderate.

The findings are in line with Holmund & Sund (2005) increasing evidence also shows that the gender gap in school performance is closing in on Mathematics and Science. One of the possible reasons for this is where teachers are role models for students. If students identify themselves more with same sex role models, it is possible that performance will be enhanced when students have a teacher of their own gender.

From the findings, 12(85.7%) agreed that engage them in practical work is great, while 2(27.8%) agreed that teacher's engage them in practical work is moderate. On the same note, 5(35.7%) respondents agreed with lecture in class is moderate, while 9(32.2%) agreed that with lecture in class with none. Moreover, 10(71.4%) respondents agreed with the conduct of class discussions is great, while 4(28.6%) agreed that the conduct of class discussions is moderate.

The findings are in line with the literature according to a research by Bender (2005), it is unclear whether the gender of the science teacher influences female students' career aspirations. All the same, her findings revealed that students talked more about female science teachers than male science teachers.

4.6 Socio-Demographic Characteristics of Teachers

The study sought demographic data of the respondents including Age, Parent employment, Nature of school, Sex of biology teacher and Majority of Biology Teachers. The study was carried out in in public secondary schools in Borabu Sub County, Nyamira County Kenya. The study was conducted on 90 students and 14 teachers.

Table 6: Demographic characteristics of the respondents

Characteristics		Frequency	Percent %
Age	25-30 years	3	21.4
	31-35 years	5	35.7
	36-40 years	2	14.3
	41-45 years	2	14.3
	46-50 years	1	7.1
	51 and above	1	7.1
Teaching experience	1-4 years	3	21.4
	5-8 years	5	35.7
	9-12 years	4	28.6
	Above 17 years	3	21.4
Nature of school	Girls	9	64.3
	Mixed	5	35.7
Majority of Biology Teachers	Females	6	42.9
	Males	5	35.7
	Both	3	21.4

n=14

Table 6 reveals the study findings on the demographic characteristics of the teachers who participated in the study. The study established that those who were 25-30 year 3(21.4%), those between 31-35 years were 5(35.7%), those between 36-40 years were 2(14.3%), those between 41-45 years were 2(14.3%), those between 46-50 years were 1(7.1%) while those between 51 and above years were 1(7.1%). The findings show that those between 31-35 years were the majority and therefore their views dominate the study.

Regarding the teaching experience, the findings shows that those with 1-4 teaching experience were 3(21.4%), 5-8 years of experience were 5(35.7%), those with 9-12 teaching experience were 4(28.6%), while those 17 and above teaching experience were 3(21.4%). The findings show that majority the teachers respondents had 5-8 years of teaching experience 5(35.7%) and therefore their views dominates the study.

Moreover, regarding the nature of school (girls or mixed), from the findings, majority of the respondent were in a girls school 9(64.3%) followed by mixed with 5(35.7%). The study reviles that majority of biology teachers were from girls' school and therefore they dominate the study. On the other hand, the study findings shows that majority of the biology teachers 6(42.9%) are females, 5(35.7%) are males while (21.4%) are both sexes. This shows that majority of the biology teachers are females.

4.7 Personal Characteristics of the Biology Teacher and Girls' Performance in Biology

The first objective was to find out the influence of the biology teacher' personal characteristics on girl performance in biology in Borabu Sub County. Students were asked to respond to biology teacher's physical characteristics influence on their performance in biology and they gave varying responses towards the same. The results are shown and subsequently discussed table 7.

Table 7: Personal Characteristics of the Biology Teacher and Girls' Performance

	SA	A	DN	D	SD
Teacher pays attention in explaining details in a topic	4(28.6%)	9(32.2%)	1(7.1%)	0(00.0%)	0(00.0%)
Teacher ensures that I do my biology assignment in an orderly way	6(28.9%)	7(50.0%)	0(00.0%)	1(7.1%)	0(00.0%)
Teacher shows interest in me and my work	3(27.8%)	9(32.2%)	2(7.1%)	0(00.0%)	0(00.0%)
Teacher understands my feelings	4(28.6%)	6(28.9%)	4(28.6%)	0(00.0%)	0(00.0%)
Teacher has a soft heart on me	6(28.9%)	3(27.8%)	3(7.1%)	1(7.1%)	1(7.1%)
Teacher takes time with me (student)	6(28.9%)	7(50.0%)	1(00.0%)	0(00.0%)	0(00.0%)
Teacher does not get irritated easily	3(27.8%)	9(32.2%)	2(7.1%)	0(00.0%)	0(00.0%)

n=14

From the findings, 13(88.2%) teacher respondents agreed that teacher pays attention in explaining details in a topic, while 1(7.1%) agreed don't know if teacher pays attention in explaining details in a topic. On the same note, 13(88.2%) respondents agreed that teacher ensures that they do their biology assignment in an orderly way, while 1(7.1%) disagreed. Moreover, 12(85.7%) respondents agreed that the teacher shows interest in them and their work, while 2(7.1%) agreed that don't know that the teacher shows interest in them and their work. On whether teacher understands their feelings, 10(71.4%) agreed, while 4(28.6%) don't know whether teacher understands their feelings.

The findings are in line with Holmund & Sund (2005) increasing evidence also shows that the gender gap in school performance is closing in on Mathematics and Science. One of the possible reasons for this is where teachers are role models for students. If students identify themselves more with same sex role models, it is possible that performance will be enhanced when students have a teacher of their own gender.

On the other hand, 9(32.2%) respondents agreed that the teacher has a soft heart on them, 3(7.1%) don't know whether teacher has a soft heart on them, while 2(23.3%) of the respondents disagreed that the teacher has a soft heart on them. Regarding whether teacher takes time with them (student), 13(88.2%) respondents agreed, 1(00.0%) don't know whether teacher takes time with them. On the same note, 12(85.7%) respondents agreed that teacher does not get irritated easily, 2(23.3%) don't know whether teacher does not get irritated easily.

The findings are in line with Holmund & Sund (2005) increasing evidence also shows that the gender gap in school performance is closing in on Mathematics and Science. One of the possible reasons for this is where teachers are role models for students. If students identify themselves more with same sex role models, it is possible that performance will be enhanced when students have a teacher of their own gender.

4.8 Female Biology Teachers' physical characteristics and Girl Performance in Biology

The second objective was to establish the influence of biology teachers' physical characteristics on girl performance in biology in Borabu Sub county. Students were asked to respond the influence of biology teachers teaching methodology on girl performance in biology and they gave varying responses towards the same. The results are shown and subsequently discussed table 8.

Table 8: Biology Teachers' Physical Characteristics and Girl Performance in Biology

	SA	A	DN	D	SD
Smartly dressed and looking sharp	4(28.6%)	9(32.2%)	1(7.1%)	0(00.0%)	0(00.0%)
The style of walking	6(28.9%)	7(50.0%)	0(00.0%)	1(7.1%)	0(00.0%)
The style of talking	3(27.8%)	9(32.2%)	2(7.1%)	0(00.0%)	0(00.0%)
Use of make-ups (use perfumes, ointments)	4(28.6%)	6(28.9%)	4(28.6%)	0(00.0%)	0(00.0%)
The teachers hairstyle	6(28.9%)	3(27.8%)	3(7.1%)	1(7.1%)	1(7.1%)

n=14

From the findings, 13(88.2%) respondents agreed that biology teacher is smartly dressed and looking sharp, 1(7.1%) don't know that biology teacher is smartly dressed and looking sharp. On the same note, 13(88.2%) respondents agreed with teacher ensures the style of walking, while 1(7.1%) disagreed that they like teacher style of walking. Moreover, , 13(88.2%) respondents agreed with the teacher style of talking, while 2(7.1%) agreed that don't know whether they like teacher style of talking.

The findings are in line with Holmund & Sund (2005) increasing evidence also shows that the gender gap in school performance is closing in on Mathematics and Science. One of the possible reasons for this is where teachers are role models for students. If students identify themselves more with same sex role models, it is possible that performance will be enhanced when students have a teacher of their own gender.

On whether they like teacher's use of make-ups (use perfumes, ointments), 10(71.4%) agreed, while 4(28.6%) don't know whether they like teacher's use of make-ups (use perfumes, ointments). Moreover, 9(32.2%) respondents agreed that the teacher has a soft heart on them, 3(7.1%) don't know whether the teacher has a soft heart on them.

The findings are in line with Holmund & Sund (2005) increasing evidence also shows that the gender gap in school performance is closing in on Mathematics and Science. One of the possible reasons for this is where teachers are role models for students. If students identify themselves more with same sex role models, it is possible that performance will be enhanced when students have a teacher of their own gender.

4.9 Biology Female Teachers' Teaching Methodologies and Girl Performance in Biology

The third objective was to investigate female biology teachers' teaching methodology influences on girls' performance in biology in Borabu Sub county. Students were asked to respond to personal factors female students view in biology teachers that influences their performance in biology and they gave varying responses towards the same. The results are shown and subsequently discussed table 9.

Table 9: Biology Teachers Teaching Methodology and Girl Performance in Biology

	Great	Moderate	None
Question and answer method	8(57.1%)	6(42.9%)	0(00.0%)
Explanation of procedures	11(78.6%)	3(27.3%)	0(00.0%)
Giving lesson notes	6(42.9%)	8(31.1%)	0(00.0%)
Engage us in practical work	12(85.7%)	2(27.8%)	0(00.0%)
Lecture us in class	0(00.0%)	5(35.7%)	9(32.2%)
Conduct class discussions	10(71.4%)	4(28.6%)	0(00.0%)

n=14

From the findings, 8(57.1%) of the respondents agreed that teacher question and answer method is great, while 6(42.9%) agree it is moderate, while 0(00.0%). On the same note, 11(78.6%) respondents agreed explanation of procedures is great, while 3(27.3%) agreed that explanation of procedures is moderate. Moreover, 6(42.9%) respondents agreed with the teacher giving lesson notes as great, while 8(31.1%) agreed that teacher giving lesson notes is moderate.

The findings are in line with Holmund & Sund (2005) increasing evidence also shows that the gender gap in school performance is closing in on Mathematics and Science. One of the possible reasons for this is where teachers are role models for students. If students identify themselves more with same sex role models, it is possible that performance will be enhanced when students have a teacher of their own gender.

From the findings, 12(85.7%) agreed that engage them in practical work is great, while 2(27.8%) agreed that

teacher's engage them in practical work is moderate. On the same note, 5(35.7%) respondents agreed with lecture in class is moderate, while 9(32.2%) agreed that with lecture in class with none. Moreover, 10(71.4%) respondents agreed with the conduct of class discussions is great, while 4(28.6%) agreed that the conduct of class discussions is moderate.

The findings are in line with Holmund & Sund (2005) increasing evidence also shows that the gender gap in school performance is closing in on Mathematics and Science. One of the possible reasons for this is where teachers are role models for students. If students identify themselves more with same sex role models, it is possible that performance will be enhanced when students have a teacher of their own gender.

4.10 Regarding suggestions on what can be done to improve girls performance in girls

Respondents were asked to suggestions on what can be done to improve girls performance in girls in biology in Borabu Sub county. Involve in biology practical work, motivation, make practical apparatus enough, and conduct contests with other schools in order to improve performance, female teachers to teach the girls to break the notion that sciences are well understood by males only, teachers encourage students without ceasing, female teacher should be smartly dressed, looking sharp, explain procedures, integrate practical work and conduct class discussions to improve girls performance and more practical lessons to make girls more familiar with procedures and instructions.

V. SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusion and recommendations of the study findings on the influence of female teachers on girls performance in biology in KCSE in public secondary schools in Borabu Sub County, Nyamira County Kenya.

5.2 Summary

This study aimed at finding find out the influence of female teachers on girls performance in biology in KCSE in public secondary schools in Borabu Sub county, Nyamira County Kenya. Specifically, the study sought to: To find out the influence of the biology teacher' physical characteristics on girl performance in biology in Borabu Sub county, to establish the influence of biology teachers teaching methodology on girl performance in biology in Borabu Sub county and to investigate personal factors female students view in biology teachers that influences their performance in biology in Borabu Sub county, Nyamira County- Kenya. The study employed descriptive research design with both qualitative and quantitative research approaches. Data was collected from 104 teachers using a semi-structured questionnaire.

The first objective was to find out the influence of the biology teacher' physical characteristics on girls' performance in biology in Borabu Sub County. From the findings, majority of the respondents 54(60.0%) agreed that teacher pays attention in explaining details in a topic, 52(55.6%) agreed that teacher ensures that they do their biology assignment in an orderly way, while 24(26.6%) disagreed that that teacher ensures that they do their biology assignment in an orderly way. Moreover, 52(55.6%) respondents agreed that the teacher shows interest in them and their work, 10(11.1%) don't know, 54(60.0%) disagreed, 15(17.7%) don't know whether teacher understands their feelings, 54(60.0%) respondents agreed that the teacher has a soft heart on them, 52(55.6%) respondents agreed, while 50(55.6%) respondents agreed that teacher does not get irritated easily.

The second objective was to establish the influence of biology teachers teaching methodology on girl performance in biology in Borabu Sub County. From the findings, 56(60.0%) respondents agreed that biology teacher is smartly dressed and looking sharp, 50(55.6%) agreed with teacher ensures the style of walking, 50(55.6%) respondents agreed with the teacher style of talking, 10(11.1%) don't know whether they like teacher style of talking, while 25(27.7%) disagreed that they like teacher style of talking. On whether teacher understands their feelings, 54(60.0%) agreed that they like teacher's use of make-ups (use perfumes, ointments), while 54(60.0%) respondents agreed that they like the teachers hairstyle, 15(17.7%) don't know whether they like the teachers hairstyle, while 21(23.3%) disagreed that they like the teachers hairstyle.

The third objective was to investigate personal factors female students view in biology teachers that influences their performance in biology in Borabu Sub County. From the findings, 8(57.1%) of the respondents agreed that teacher question and answer method is great, 11(78.6%) respondents agreed explanation of procedures is great, 6(42.9%) respondents agreed with the teacher giving lesson notes as great, while 8(31.1%) agreed that teacher giving lesson notes is moderate. From the findings, 12(85.7%) agreed that engage them in practical work is great, while 9(32.2%) agreed that with lecture in class with none. Moreover, 10(71.4%) respondents agreed with the conduct of class discussions are great.

Regarding teachers responses, From the findings, majority 13(88.2%) of teacher respondents agreed that teacher pays attention in explaining details in a topic, 13(88.2%) agreed that teacher ensures that they do their biology assignment in an orderly way, 12(85.7%) respondents agreed that the teacher shows interest in them and their work, while 10(71.4%) agreed that teacher understands their feelings. On the other hand, 9(32.2%) respondents agreed that the teacher has a soft heart on them, 13(88.2%) respondents agreed that teacher takes time with them(student), 12(85.7%) agreed that teacher does not get irritated easily, while 13(88.2%) agreed

that biology teacher is smartly dressed and looking sharp. On the same note, 13(88.2%) respondents agreed with teacher ensure the style of walking, and 13(88.2%) respondents agreed with the teacher style of talking. On whether they like teacher's use of make-ups (use perfumes, ointments), majority, 10(71.4%) agreed.

On the same note, 11(78.6%) respondents agreed explanation of procedures is great, 6(42.9%) respondents agreed with the teacher giving lesson notes as great, while 8(31.1%) agreed that teacher giving lesson notes is moderate. Moreover, 12(85.7%) agreed that engage them in practical work is great, 5(35.7%) respondents agreed with lecture in class is moderate, 9(32.2%) agreed that with lecture in class with none, while 10(71.4%) respondents agreed with the conduct of class discussions is great.

5.3 Conclusion

Basing on the findings, the study concluded that female teachers influence girls performance in biology in KCSE in public secondary schools in Borabu Sub county and therefore there is need to employ more so as to improve girls performance in biology.

Recommendation

Based on the study findings, the researcher recommends the following;

The government through the Ministry of Education should employ more biology female teachers in order to encourage girls to work hard in the subject and do better in it.

The schools through the board of management (BOM) should employ more female biology teachers in their schools in order to encourage girls in their schools to do better in the subject like their female teachers.

Parents should encourage their daughters to take biology and other sciences at school and consult their teachers in order to encourage them to do well in the subject.

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