

The Relationship Between Self-Esteem and Academic Achievement of Girls with Hearing Impairments in Secondary Schools for the Deaf in Kenya

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Abstract

Several factors had been cited as contributing to the perpetually dismal academic achievement of girls with hearing impairment in Kenya. Personal esteem factors had not been adequately explored. The study used Carl Roger's client-centered theory and an Ex-post facto design. Rosenberg self-esteem scale was used to measure self-esteem dimensions. School academic scores were used to measure academic achievement. A sample of fifty-three girls was drawn. Data were collected through questionnaires and interviews. The results: girls with hearing impairment possessed positive/high self-esteem but academic achievement was low. It was concluded that girls with hearing impairment placed more value on relational aspects (grooming), music and dance. They lagged behind due to lack of specialized technological devices. The study recommended: teachers to make deliberate use of positive reinforcement; principals to initiate active collaborations with interested partners; the government to make the curriculum more flexible and curriculum developers to reconsider curricula adaptation. Kenya National Examination Council to focus on practical assessment and/or use of sign language interpreters. The government to increase disability fund and provide opportunities for capacity building for assistive-devices-technicians. Further research in the area of teachers' proficiency in Kenya Sign Language to be conducted.

The Relationship Between Self-Esteem and Academic Achievement of Girls with Hearing Impairments in Secondary Schools for the Deaf in Kenya

Kenya has made concerted effort to bridge the gender gap in education of girls on the understanding that gender disparities lead to more inequalities in meaningful lifelong education. As a country, it recognizes that education is a human right and has put in place

both legislative and long-term policy frameworks to ensure that basic education is available and free for all. To meet the national goals of education, recent policy initiatives have focused on dealing with key challenges such as access, participation, retention, equity, quality, relevance, transition and efficiency that consider gender and geographical disparities. Women are recognized for their crucial role in society, namely, giving birth to children and playing a major role in the implementation of any family planning programmes. They bear the main responsibility for nutrition and health of their families, particularly children. They also play a predominant part as educators for future generation (Juma, 1994).

Numerous studies have shown the impact of maternal education, which plays a major role in determining the level of infant and child mortality. Juma (1994) reveals that educating women to acquire information, knowledge and skills, increases their self-confidence and raises their status as full participating members of the society. In Kenya, women are said to constitute 50 percent of the country's population yet the poorest strata of the society. According to UNESCO estimates, nearly half of the women in developing countries do not know how to read and write (UNESCO, 1988). Nonetheless, it has been established that countries that have the highest rate of women illiteracy have also low enrolment rates for girls at primary to secondary education. But with the introduction of Universal Primary Education (UPE) and Free Primary Education (FPE) in Kenya and in many other countries, some countries have succeeded in reducing their female illiteracy rates significantly.

In spite of the efforts to increase female educational opportunities, enrolment ratio in secondary school and university admissions for girls is lower than for boys in Kenya. It is worse for the girls with hearing impairment. A report by UNICEF (2001) reveals that with only two secondary schools for children with hearing impairment available to graduates of primary schools in Kenya, relatively few move to secondary schools and post-secondary education. Among the few who manage to reach this level, the number of girls is dismal as revealed in Table 1.

Table 1: Enrolment in special needs institutions by category in 1999 and 2003

Category	1999			2003		
	Boys	Girls	Total	Boys	Girls	Total
Special Primary	3,716	2,796	6,512	13,353	10,106	23,459
Special Secondary	492	388	880	6490	536	7,026
Special Tech/Vocational	305	246	551	1,286	1,114	2,400
Primary Units/Integrated	3,323	2,417	5,740	53,112	75,828	128,940
Total	7,836	5,847	13,683	74,241	87,584	162,825

Source: Special Education Section and Statistics Section, MoE (2007)

The table shows the enrolment pattern in Special Needs Education (SNE) institutions by category in 1999 and 2003 in Kenya. Indeed, this table reveals a gap in access of girls with hearing impairment to post-secondary education and likewise to professional training and career upward mobility. In addition, the Kenya National Examination Council (KNEC), which is a body mandated with the responsibility of assessment and evaluation of academic standards (Table 2) shows that the performance of girls with hearing impairment is low in Kenya Certificate of Secondary Education (KCSE) examinations in special sampled schools between 2003 and 2006. Particularly, the reflection on performance for girls with hearing impairment is relatively low as compared to boys with similar impairment or other girls with different disabilities. Table 2 reveals a gap that exists in academic achievement particularly for girls with hearing impairment.

Table 2: Kenya Certificate of Secondary Education performances in special schools from 2003 to 2006

Centre Name	Gender	2003		2004		2005		2006	
		Entry	Mean Score						
Rev. Muhoro for the Deaf (HI)	Female	33	2.7	19	2.2	26	2.8	26	2.5
	Male	17	2.0	27	2.7	17	3.4	19	2.6
Joytown (PH)	Female	14	4.9	10	4.9	21	5.0	23	4.7
	Male	14	6.3	10	6.4	20	5.2	9	4.6
Thika Sch. For Blind	Female	13	5.2	20	4.8	25	5.4	18	6.1
	Male	31	5.0	28	5.1	28	6.0	36	5.8
St. Angela Mumias for Deaf girls (HI)	Female	7	3.7	14	2.2	16	1.5	16	1.4
	Male	-	-	8	2.6	9	2.3	-	-

Source: Kenya National Examinations Council (2003-2006).

It was on this premise that the need arose to focus on the individual girls' competencies and experiences. The fact that several factors such as school environment, lack of resources, family status and communication barriers had been observed, little was known concerning personal self-esteem. It was evident that parental socio-economic status, teachers' attitude and lack of learning resources in the school environment affected provision of basic physiological needs (Mwathi, 1998). However, the Kenya government through its initiative to provide free education has enabled parents to send their children to school without much strain. Great sensitization on change of attitude towards persons with disabilities through media, workshops and policy frameworks, had also brought about attitudinal change that had led to the realization of inclusive education, which was a great celebration in the schools. With all these measures in place, performance of girls with hearing impairment was low hence the need to investigate the underlying factors of which the search for individual self-rating was to be considered. Self-esteem was viewed as the affective or evaluated counterpart to cognitive representations of the self (Brown, 1998). It was widely acknowledged as having a strong influence on psychological orientation of the individual, including motivation to engage in efficacious behavior.

According to Brown (1998), the experience of being competent to cope with the basic challenges of life and of being worthy of happiness, results from one's self-esteem. This consists of two components: the first is self-efficacy which is confidence in one's ability to think, learn, choose and make appropriate decisions and self-respect, which is confidence in one's right to be happy and by extension, confidence that achievement, success, friendship, respect, love and fulfillment are appropriate to oneself (Brown, 1998).

Branden (1969) points out that people acquire experience differently and this affects their existence. Their self-evaluation is the basic context in which they act and react, choose their values, set their goals and meet the challenges of life. Their responses to events are shaped in part by who and what they think they are, that is, how competent and worthy they perceive themselves to be. In other words, self-esteem is a basic human need just as other needs mentioned earlier. These differences in how peoples' perceptions are have important implications for other elaborate behaviours including such areas like academic achievement (Cloninger, 2004).

Educational achievement on the other hand has great value to human beings and the society in which they belong. That is the reason for every nation to monitor the progress of its citizens through organizations or bodies like KNEC, to keep track of educational performances or achievements irrespective of gender, disability, colour and religion. For instance, in Kenya, the KNEC records (Table 2) reveal the gap that exists in the performance of girls with hearing impairment, which was the focus for this study. Despite the fact that several studies have been carried out to investigate factors affecting educational development of children with disabilities in general such as social, economical, school factors (resources in terms of materials and personnel), (Murugami, 2002; Mwachhi, 1998; & Oliwa, 1998), no study has investigated the personal or rather the intrinsic factors which the present study focused on, that is the self-evaluation.

Purpose and Objectives of the Study

The purpose of this study was to establish the relationship between self-esteem and academic achievement for girls with hearing impairment in Kenya. Girls with hearing impairment achieve considerably lower in the academic arena compared to hearing girls or even girls with visual or physical impairments. The study set out to establish whether low self-esteem was linked to low academic achievement. The specific objectives of the study were to:

- Determine the relationship between self-esteem level and academic achievement scores of girls with hearing impairment in secondary schools.
- Establish the nature of social relationships among girls with hearing impairment in secondary schools.

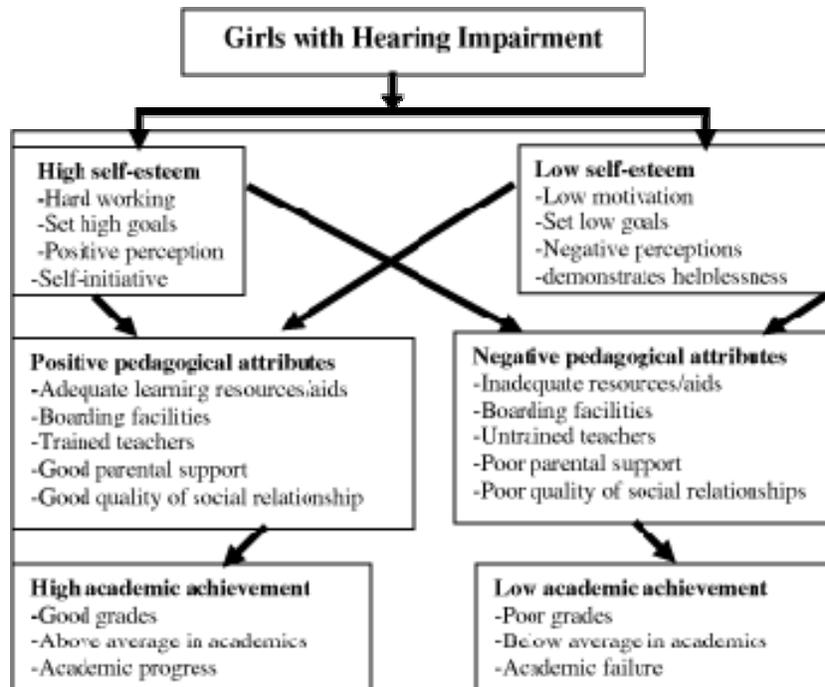
Theoretical Framework

Rogers (1951) developed the person-centered or client-centered theory as it is known to many people. He investigates an internal influence, the child's self-understanding or self-insights that enable an individual to have personal assessment. He also investigates children's behaviour in relation to external factors which include family environment, economic and cultural influences as well as social and educational background. The findings of his study indicate that the factor which most accurately predicted later behaviour is self-understanding. Rogers (1951) states that the basic nature of human being when functioning fully is constructive and trustworthy. When one is freed of defensiveness and is open to experience, his/her reactions are bound to be trusted as positive, forward moving and constructive. He argues that one needs to maintain and enhance the self, in order to become a fully functioning person which is the main goal of all human beings. He adds that a child's self-understanding encompassed the acceptance of self and reality as well as responsibility for the self.

Rogers (1951) posits that each person has a private experiential world, which includes the present experiences and memories of past experiences that actively guide the person's perception of the moment. He suggests that higher levels of development sharpen and define experiential world and they lead to the formation of the self. Rogers further notes that the development of the "self" emerges as the child interacts with other people and learns to distinguish what is direct and immediate to oneself and what is external to oneself. As the self emerges, the child develops a need for positive regard which includes acceptance, love and approval from other people notably the mother or caregiver during infancy. If the mother or caregiver does not bestow positive stimulation, an infant's tendency towards actualization and enhancement of self is hampered. This marks the beginning of internalization of the attitudes and behaviour of others and the feedback received refines the child's self-esteem.

Conceptual Framework of the Study

In developing the conceptual framework of this study, an attempt was made to investigate the possible nature of relationship between self-esteem dimension and school academic achievement of girls with hearing impairment. Figure 1 exhibits the conceptual framework which encompasses the major variables that is self-esteem and the possible pattern of influence on academic achievement for girls with hearing impairment.



Source: Self adopted conceptual framework of the study

Figure 1: Correlates of self-esteem and its influence on academic achievement

The researcher's own adaptation of the conceptual model shown in Figure 1 demonstrates the influence of self-esteem (independent variable) on academic achievement (dependent variable) or vice versa as shown by the arrows. For instance, self-esteem manifests as high leading to hard-work, setting high goals and having positive perception or as low leading to setting low goals, negative perception and low motivation that will affect academic achievement. The resultant effect is to be either high academic scores or low as shown by the arrows in figure 1. The framework also shows the trend of possible other pedagogical attributes that could as well affect the academic achievement positively such as availability of learning resources, provision of hearing aids, boarding facilities, trained teachers in manual communication or negatively by lack of all those attributes. All these effects have great influence on educational developments of girls with hearing impairment hence the need for investigation.

Research Methodology

The study used a quantitative approach and a correlational design. The decision to use this design was due to the fact that a correlational design enabled the researcher to discover the relationship between variables through the use of correlational statistics (Gall, Borg & Gall 1996; Orodho, 2005). Fraenkel and Wallen (2000) note that in a correlational research, relationships among two or more variables are studied without any attempt to influence them. They contend that a major purpose of correlational research is to clarify our understanding of important phenomena through the identification of relationships among variables. This study attempted to determine the relationships that

occur between self-esteem and academic achievement for girls with hearing impairment in secondary schools for the deaf in Kenya.

Target Population

Target population comprised of all girls with hearing impairment in secondary schools for persons with hearing impairment in Kenya. A total population of about 300 girls with hearing impairment in secondary schools was targeted however only about 140 girls from those schools were found to be covering the academic curriculum. The rest were provided with technical and vocational curriculum.

Rationale for Sample Selection

The two schools were purposively sampled since they were the only secondary schools for girls with hearing impairment that provided an academic secondary school curriculum in Kenya. The other girls' secondary schools with hearing impairment provided an integrated curriculum or technical and vocational training. These were Kambui in Central Province and Nyang'oma and Kuja in Nyanza Province. Karen Technical College in Nairobi Province only provided technical and vocational training for girls and boys with hearing impairment. The two principals of the sampled schools were as well purposively sampled since they were the administrators who would provide necessary rich information for the study.

In every school forms ones being new to the school at the time of study were excluded because they knew very little about the schools. Simple random sampling technique was used to sample girls from forms two, three and four. Unfortunately, the number of girls in every class was not adequate for this technique. Therefore, all girls in every class participated in the study but still they were not the expected number. For instance, at secondary school **B**, the expected number for participants was 32 yet only 30 girls were found who were doing the academic curriculum. Others were taking vocational courses. So the technique was not applicable as it could not work. At secondary school **A**, it was also not possible to find eight girls per class in forms two, three and four as expected. A sample of 23 girls with hearing impairment from school A and 30 girls with hearing impairment from secondary school B participated in the study. In total, a sample of 53 girls with hearing impairment participated in the study constituting a 40% out of the total population of 132 girls with hearing impairment as shown (Table 3). It was hoped that the selected sample from the two schools could provide adequate data for the study. The study only focused on relationship between self-esteem and academic achievement of girls with hearing impairment.

Table 3: Target population and study sample

School	Number of girls	Sample selected	Percentage
Secondary School A	60	23	40%
Secondary School B	72	30	40%
Total	132	53	40%

Research Instruments

The research instruments for the study were three types of questionnaires with an additional complementary interview. One questionnaire was an adaptation from Rosenberg's self-esteem scale to suit the situation on the ground that is, girls with hearing impairment in Kenya. Rosenberg's scale had been used in the United States of America and on different culture hence the need to adapt it. The scale had also been used on regular students without any disabilities. This data-collection instrument typically inquired about the feelings, motivations, attitudes, accomplishments and experiences of individuals (Gall, Borg and Gall, 1996). The other two questionnaires were self-made. One sought for demographic information from the respondents and the other sought for other school attributes from school principals. Such information was quite important since it enabled the researcher to understand various factors that were personal, such as, aspirations for higher learning and pedagogical attributes like learning resources/methods that were being used if they had an effect on the subject coverage. Examination grades for the last four terms for each participating girl were recorded and analyzed. Grade range was as follows: **E** 0-39 (Very poor), **D** 40-49 (Poor), **C** 50-59 (Average), **B** 60-69 (Good) and **A** 70-100 (Very good).

Pilot Study

It was important to conduct a pilot study before embarking on the main study. Robson (1993) argues that piloting provides opportunity for the researcher to test his/her confidence in identifying difficulties and obstacles that could affect the actual collection of useful data. The pilot study helped to evaluate the effectiveness and validity of the instruments. The pilot study was conducted in Kambui Secondary School which had an integrated programme for girls with hearing impairment. Kambui is located in Central Province of Kenya. The school served as a secondary school with an academic programme and also had a technical and vocational section. It was hoped that simple random sampling technique would be applied to sample the girls but unfortunately, the number of girls was quite small. A sample of six girls with hearing impairment who were the only ones integrated in Kambui secondary school participated in the pilot study. The six girls were explained the purpose of the study and then requested to participate. They were provided with questionnaires to fill. With the assistance of one of their class teachers, they filled the questionnaires. The researcher analyzed the data collected with the help of the supervisors. The findings from Kambui School helped to guide the researcher to adjust the instruments where possible. The piloted school was not used in the main study.

Data Collection and Analysis

Data for this study were collected by the researcher herself with assistance of class teachers. The researcher made visits to the schools as a familiarization exercise and was also able to introduce the purpose and nature of the study to the concerned authorities. The visits helped the researcher to understand well the schools' schedules. The researcher then made appropriate appointments with the school administrators to fix the most

appropriate times for the administration of the questionnaires. Finally, the researcher administered the questionnaires and also carried out observations of school academic records for the same participants involved in the study.

The data for this study were computer analyzed using the Statistical Package for Social Sciences (SPSS) programme. The descriptive statistics, that is, frequency distributions and percentages were used to describe and summarize the data in reference to demographic variables such as age, gender, education level, among others. The statistical hypothesis was tested using Pearson's Product Moment Correlation. Qualitative data collected from the two principals through complementary interviews were presented descriptively and analyzed appropriately.

Major Findings of the Study

1. Majority of the respondent (60%) were aged between 17-19 years, 24% were between 20-22 years. Those who were 14-16 and years of age and above 23 years were 4% each. Eight percent were non-committal on revealing their age. The findings revealed that approximately 30% of girls with hearing impairment in the two secondary schools were actually above secondary school age for hearing students which was usually between 15-18 years.
2. It was established that 55% of the respondents came from Secondary School **B** which was a boarding school for the girls, while 45% were from School **A** which was a mixed secondary school.
3. It was found that the two secondary schools offered boarding facilities to the students with hearing impairment. However, one school was open for both boarders and day-scholars on condition that all girls with hearing impairment were boarders.
4. The findings showed that majority of girls with hearing impairment attended girls secondary school which was also a boarding school.
5. The study established that 51% of the students wished to attain university education and 28% wished to train in teacher training colleges. Fifteen percent of the girls wanted to finish secondary education as their highest and perhaps engage into other activities like dressmaking, saloon work and beauty therapy profession.
6. Majority (56%) of girls with hearing impairment felt that they had the ability to do things as well as most other people according to their self-esteem ratings.
7. Majority of girls (86.5%) denied the fact that they were useless.
8. Many girls (93%) expressed the need for self-value and admired to be what they were irrespective of their hearing impairment.
9. Most of girls (98%) wished to be respected by other people.

Results and Discussion

Girls with hearing impairment in my study were happy, sociable and no clue to use of drugs was expressed. They were less likely vulnerable to depression yet their academic achievement was low. The correlation between academic achievement and self-esteem was positive although quite insignificant. The information regarding the nature of social

relationships among girls with hearing impairment was provided by the principals of the schools visited. Generally, they indicated a positive cordial relationship between and among teachers and students. One principal remarked, "Our girls are very friendly particularly if you engage them in a conversation." She added, "They become quite inquisitive about the mood you portray to them." That was an illustration how girls with hearing impairment were caring and could take great concern for other people. In addition, students were reported to engage in social activities that fostered their socialization at school such as good grooming, music and movement, dance and drama. For purposes of recreation and entertainment, particularly for girls with hearing impairment, they enjoyed being entertained by other people in activities that they could observe or watch. Since their lead sense is sight, it can be concluded that they benefited or were stimulated most through watching other peoples' plays or theatre acts.

However, at some occasions where music and movement competitions are held and persons with hearing impairment participate, most of them become stimulated through vibro-tactile sensations that they receive from the beats of the drums on the ground. The vibrations stimulate and guide them to make and change steps or advance any necessary movement in accordance to the rhythm of the music. They are enabled to participate in extra-ordinary performances that baffle the hearing audience and leave them unbelieving. The principal of school "B" acknowledged that girls in her school had made outstanding performances in "Scottish dance" and had won several trophies in the National Music Festival competitions for secondary schools. Indeed, she had a display of the trophies in her office as evidence of the girls' participations in social activities. In a complementary interview with the two principals carried out by the researcher as a follow-up activity, one principal revealed that girls with hearing impairment had high value for good-grooming. She said,

Our girls like modeling and fashion show activities where they can demonstrate beauty, fashions and catwalk. In fact we organize for inter-house beauty and fashion shows once in a while to promote their interest in this area as part of recreational activity.

The findings showed that majority of the students, (49%) found the boarding facilities to be good, 30% experienced the facilities as very good while 15% viewed them to be bad with only 6% of students finding the facilities to be very bad. This finding suggests that most girls with hearing impairment in secondary boarding schools found boarding facilities to be adequate for their use. With the understanding that the girls had a safe place to live and learn, there was no doubt that they were psychologically aware of the protection they enjoyed and could forge ahead to embark on academic pursuits to higher levels. It was evident that both secondary schools had permanent infrastructure furnished with beds and mattresses for girls' boarding use. Despite the fact that girls with hearing impairment received good accommodation to enable them to embark on studies uninterrupted, their academic performance was dismal. They were not able to achieve to the expected levels yet they were all boarders with all necessary boarding provisions. The finding of my study is supported by Harter, Whitesell and Junkin (1998); Kloomok and Cosden (1994) who reveal that if a student considers his/her ability to be low in the

particular area of academic functioning (low self-esteem in the domain of academic self-concept), less importance may be attached to academic success in order to preserve overall or global self-esteem.

The findings revealed that the preferred mode of communication by girls with hearing impairment at secondary schools was Total Communication. The current trend in the education of persons with hearing impairment emphasize the use of Total Communication which is a philosophy that encourages incorporation of manual communication, oral communication and component such as gestures, body language, writing, pointing, drawing, pantomime and mimicry.

It was established that school A which had student population of about 240 had 20 teachers. Out of this number, one teacher had a Masters degree in Special Needs Education, 14 had Bachelor of Education degrees, 3 teachers had diploma in Special Needs Education, 1 teacher was S1(secondary one), while only 1 was untrained. From school B which had a population of 189 students, there were 34 teachers. Two teachers had Masters degrees in Special Needs Education, 15 had Bachelor of Education degrees, 9 teachers had diploma in Special Needs Education, 1 was S1, 1 was P1 (primary one), and 4 were untrained. This finding is a proof that teachers for student with disabilities in the two secondary schools that participated in the study were highly qualified and possessed knowledge and skills to work favourably with those students. However, the findings of my study revealed that despite the high qualifications teachers in the two schools possessed, girls' academic achievement was low and self-esteem high. This depicts a situation whereby teachers in the two schools have to search for possibilities that could arouse girl's interest in academic work. The finding of my study corroborates with Ardail (2005) who claims that women lack strong expectations of their own personal efficacy in a number of occupations particularly in natural sciences, engineering and mathematics.

Seventy-two percent of the students said that they used hearing aids while 28% did not. There is high possibility that the high percentage of girls were hard-of-hearing since they admitted to possess the aids. However, the percentage that reported failure to use the hearing aids could be as a result of inability to purchase one. Indeed, hearing aids are very expensive equipment and it could be impossible for the ordinary parent to afford. They cost at a tune of between Kenya shillings (Ksh 25,000 – 35,000) and above. Many families/parents however, find it a great financial challenge to acquire one for their daughters. So the girls with hearing impairment may be forced to survive without a hearing aid. Whenever a student has been advised to use a hearing aid and cannot afford to purchase one, she stands to be disadvantaged and miss a lot of information in class. This would result in lack of interaction with the teacher, poor communication with peers in class and generally poor performance as concerns academic achievement. The findings revealed lack of adequate assistive devices for students with hearing impairment in secondary schools thus creating a gap in terms of provision for appropriate learning resources.

However, the two schools depended on donations from well-wishers, churches and Non-Governmental Organizations. The principal of school A admitted that the school received great support as concerns donation of hearing aids from Seaford and Seven Oaks of United Kingdom as Presbyterian Church of East Africa was their major sponsor for the school development. The principal of school B reported to receive great financial help from well-wishers and friends from abroad while the Ministry of Education, Science and Technology gave grants for construction of physical facilities.

It was noted that parents paid fees for their daughters although majority never paid on time and they ran into arrears. The issue was a great setback that led to challenging monetary deficits in school administration budget. One principal revealed that sometimes students took a long time to report back to school from holiday due to lack of school fees and therefore missed quite a lot in their studies. Such a factor could contribute towards low performance in academics because of missing curriculum coverage during her absenteeism and could also lead to low morale towards learning.

Conclusions of the Study

1. It was concluded that self-esteem of girls with hearing impairment was positive but the academic achievement was low.
2. Students performing poorly in academic education approved highly of themselves presenting deviation in literature.
3. Girls with hearing impairment placed more value on rational aspects (grooming) as well as music and dance, much more than the will to score high in academic work despite the help they received from teachers and support from schools.
4. Students with hearing impairment were not catered for adequately as concerns provision of learning and teaching resources in schools.

Recommendations

1. Teachers should make deliberate use of positive reinforcement that will encourage girls' participation and promote their esteem towards academic performance. They should ensure that they put in place all necessary and learning and teaching devices that would support each girl to receive information in the simplest and easy way without many difficulties.
2. The principals of secondary schools for girls with hearing impairment should collaborate with parents, teachers, students and other interested partners in initiating constructive projects that will actively engage girls' participation and bring change in attitude towards their education outcomes. Projects such as beauty therapy, modeling, dance performances, grooming among others would go way ahead in promoting girls' potentials and exposure to the outside world.
3. Educators/teachers, counselors, parents, hearing peers and other stakeholders to encourage girls and give moral support so that they work hard to improve on academic work at school on the understanding that education is key to upward mobility and job security.

4. The government should make curriculum flexible to give girls more time for syllabus coverage since they require proficiency in a skill area before transiting to the next higher level. It was proved from the findings that as level of classes increased, the academic performance decreased. So girls with hearing impairment would require more time in every class to polish up before proceeding to a higher level.
5. The curriculum developers that is, Kenya Institute of Education to reconsider curricula adaptation to suit the potentials and abilities of girls with hearing impairment. Provision for a diversified curriculum that gives alternative choices should be available at all times in schools in order to motivate low achievers in academics who may prove to be higher achievers in other areas of proficiency.
6. The Kenya National Examinations Council should rethink practical assessment whereby candidates with hearing impairment could be exposed to strategies like observations and demonstrations on concrete aspects as opposed to applications and synthesis on theory or abstract work which may require too much reading and cramming notes for purposes of passing examinations.
7. Further intensive research should be carried out to investigate the crucial emerging issues that could contribute to the positive yet weak correlation that occurred because girls with hearing impairment need empowerment to perform adequately in academics.
8. Further research should be carried out in the area of communication proficiency in Kenya Sign Language by teachers who teach in schools for students with hearing impairment to determine the required levels of proficiency and also put in place intervention measures such as constant in-service courses for improvement.

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