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Onset of Hearing Loss, Gender and Self Concept as Determinants of Academic Achievements in English Language of Students with Hearing Disability in Oyo State, Nigeria.

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Abstract

Since every class of students with hearing disability is always a heterogeneous one, the need for establishing relationship between some intrinsic factors in these students and their academic achievements becomes very imperative. This study therefore examined the influence of onset of hearing loss, gender and self concept on their academic performance in English language. 100 Senior Secondary School class III students with hearing disability were purposively selected to participate in the study. The study also raised 3 hypotheses to ascertain relationships between onset of hearing loss, gender, and self concept and English language achievement. Instruments such as the self concept scale of the Adolescent Personal Data Inventory, Adapted English Language Test and Audiological Reports were used. Findings showed that postlingually hearing disabled students were superior to their prelingually hearing-disabled colleagues, male students did better than female students and student with high self concept outclassed those with low self concept. It was therefore recommended that teachers and curriculum developers should adequately consider these findings in teaching and curriculum development activities.

Introduction

Recent years are witnessing an increasing registration of special needs students in schools. For instance, Hallahan & Kauffman (1994) reported that over 4 million special needs children were identified in various public schools of United States. By 2000, the number has risen to over 5.7 million (Heward, 2000). The same trend exists in some developing countries such as Nigeria, where the prevalence of disability are likely to be higher than what obtains in advanced countries (Meadow-Orlans & Erting, 2000). However, the special needs children and youths have slimmer chances of accessing quality education compared to their colleagues in advanced countries (Mba, 1995).

One key development which increased admission of special needs children and youths into schools has introduced is the need to establish necessary relationships between the demographics of the special needs learners' population and their school performances as an effort towards improving their learning and performances in academic endeavours.

A particular group of special needs schoolchildren is of those whose major disability is hearing loss. As Heward (2000) stated, hearing impairment or hearing loss implies a disability category label of individuals who require special education and related services to function and achieve relative achievement in academic other life endeavours.

Every class of children with hearing disability is a heterogeneous one comprising of diverse intra and interpersonal characteristics (Liben, 1978). For instance, factors such as onset, type and degrees of hearing loss, as well as some home background issues such as parental status (whether the parents are hearing or deaf) wield some influences on the school performance of these school children (Alade, 1992).

Hearing disability exists on a continuum ranging from mild to profound (Abang, 1995). Consequently, the extent of hearing loss in an individual learner would to some extent interfere with his or her school performances (Ademokoya, 1995). Individuals with significant degrees of hearing loss deaf do find it too difficult to understand speech (Heward, 2000). As a result they would depend heavily on their sight to engage in communication for academic and non academic purposes (Okuyibo, 2006). On the other hand, persons with mild or moderate degrees of hearing loss (hard-of-hearing) though having some degree of hearing loss significant hearing disability, however could with some amplification can meaningfully engage in verbal communication (Kark & Gallagher, 1989). The later group has better prospect in school learning than the former school since a great deal of school instructions are done orally than manually (sign language).

Similarly, learners with hearing disability could possibly have other disabilities with some implications for their school performance (Woff & Harkius, 1986). Invariably, hearing-disabled schoolchildren with additional cognitive or physical disabilities do experience greater academic disadvantages than their colleagues having just hearing disability alone to contend with. Parental status also has some bearing on the learning inputs and outputs of the schoolchildren. Schildroth & Hotto (1993) asserted that the majority or minority status of a parent also represents his or her socioeconomic class. As a result, both ethnic and socioeconomic rankings could responsible for notable specific differences in school performance of some hearing disabled schoolchildren.

So far it could be reasonably adduced that academic performance of schoolchildren with hearing disability is not only consequent on their intelligence quotients or the disability they suffer from other factors such as sex, self esteem, achievement motivation and the onset of their hearing loss could in addition to other factors earlier mentioned account for how these children fair in their academic pursuits (Johnson, 1987).

Factors of Onset of Hearing Loss, Gender and Self-Concept in Language Achievement

Onset of hearing loss refers to when precisely does a significant hearing loss occur. The most single important distinction for delineating person with hearing disability is between prelingual and postlingual occurrences of hearing loss (Congenitally deaf) or lose their hearing prior to acquisition of language (prelingually deaf) differ more in many respects vis-à-vis the hearing world than those who lose their hearing after they have developed spoken language (postlingual). The former cannot nationally acquire speech as usually as the hearing people do. The latter however, having developed speech before sustaining hearing loss can use speech subsequently for learning and social purposes.

When did one sustain hearing loss bears some relevance to his or her learning outcomes in schools (Mba, 1995). Deleterious effects of an hearing loss which occurred very early in life are usually very grivous that many have ranked hearing disability as

one of the most calamities that can befall a human being (Mba, 1981). Invariably losing hearing early in life (either before birth or before speech could be acquired) is more limiting than losing hearing later in life especially after speech has been acquired and personality has developed (Telford & Sawrey, 1987). Effects of early life loss of hearing are felt in the entire personality of the victim, for instance, the prelingually hearing disabled persons have impoverished language skills. They therefore have little opportunity to communicate meaningfully in educational or social contexts (Liben, 1978). Consequently the most handicap of hearing is on communication, since communication is the basis for cognitive and emotional growth, persons with hearing disability will definitely encounter a great deal of difficulty in school learning (Johnson, 1987).

The person who sustained hearing loss later in life must have hitherto acquired some communicative skill (especially verbal signals) for which he or she could function relatively better than the prelingually hearing disabled persons in academic and interactive engagements (Ademokoya, 2006). Such a person has better learning inputs and outputs (Hallahan & Kauffman, 1994).

As a principle, the prelingual and postlingual hearing-disabled learners should be distinctly placed and taught (Bakare, 1988). This is because the two groups possess differing potentials and opportunities to learn just as they require different teaching methods, curricular and facilities (Mba, 1995). Placing and instructing the two in the same class violates the principle of individualization of instruction. Consequently while a group would experience relative success in school learning the other would experience some degree of frustration (Alikali, 1991).

Influence of gender on language use and school learning has become a matter of a considerable debate among some authorities in the fields of psychology and education. It has been observed that various biological differences in human make up such as are differently inherent in male and female students may responsible for some disparities in language use and school performance of the two groups (Okoye, 1987). The argument is that since no two human beings are the same in physical and intellectual attributes, then one should not expect both male and female students to perform uniformly in language use academic endeavours (Biehler, 1981).

Liben (1978) noted that over representation of males has been one of the common characteristics in studies conducted on students with hearing disability. In other words there have been an inconclusive submission on superiority (Mba, 1995).

Abiodun (2006) identified that female children always develop verbal skills faster and better than male children. He also identified that by age eleven male children would catch up with their female counterparts in language skills. On the other hand, Gesell (1954) stated that girls perform better than boys in mathematics until they reach age eleven when the two will begin to perform relatively the same in mathematics. However, Ademokoya (1995) found no significant difference in academic achievements of male and female hearing impaired secondary school students following an eleven week reasoning training on the students.

It appears that the task of understanding the relationships between gender academic performances particularly in language is an ongoing one. More research would be needed to shed more light on this issue.

Hearing loss with its limiting effects does influence an individual behaviour in educational and socioemotional development (Heward, 2000). Self concept is inherently the views one has about himself or herself (Sheridam, 2001). Therefore, it is a function and individual's evaluation of himself or herself in terms who am I? what can I achieve? Or what have I achieved?

Students with hearing disability do experience more ego distorting experiences than their hearing peers (Mba, 1995). This is owing to the feeling of disadvantages which their disability places on them as well as abuses they suffer from the hearing populace (Hallahan & Kauffman, 1994).

As a result, Meadow-Orlans (1995) noted that persons with hearing loss often express feelings of depression, withdrawal and isolation. At times their inadequate feelings of themselves could cause them to engage in some unwholly behaviour. Kluwin, (1985) identified that more than hearing counterparts nonhearing adolescent students with hearing disability are very disruptive in the classrooms. They could unfortunately channel the will and energy they should use for purposeful and positive learning to some undesirable classroom conducts.

As Okoye (1987) opined, one self concepts works hand in hand with his or her will power for achieving whatever he or she wants to achieve. A students self concept will therefore (high or low) and his or her will power (strong or weak) will greatly determine he or she perceives and performs his or her academic pursuits especially in English language which is regarded as a core subject is a "must pass subject" for candidates intending to further their education.

Purpose/Hypotheses

In views of the aforementioned intrinsic factors of the students with hearing disability and their possible on their academic achievements in English language, this study therefore sought to test the following three hypotheses.

- There is no significant difference in the English language achievement of the prelingually hearing-disabled students and postlingually hearing-disabled students.
- There is no significant difference in the English language achievement of male hearing disabled students and female hearing disabled students.
- There is no significant difference in the English language achievement of hearing disabled students with high self concept and low self concept.

Participants

One hundred Senior Secondary School hearing-disabled students were engaged as the study sample. They were purposively selected from 4 secondary schools for students with hearing disability in Oyo state, a state in southwestern region of Nigeria. Their ages ranged between 15 and 19 years with a mean of 16.45 years and a standard deviation of 7.42. They are all Senior Secondary School class III students who are preparing for their secondary school leaving certificate examination.

Eighty-four of them are prelingually hearing-disabled (they lost their hearing either before birth or before they were one year old and as a result could not develop

speech) while 16 of them are postlingually hearing disabled (they lost their hearing between age 3 and 5 after they have acquired some considerable speech). 42 of them are males while 58 are females. Again 63 of them have high self concept while 37 have low self concept following their scores in the self concept scale of the Adolescent Personal Data Inventory (see the instrument below).

All the students have profound hearing loss (7decibelhearing loss and above) as indicated in their audiological reports.

Instrument

The study made use of the following instruments:

- The Self Concept Scale of the Adolescent Personal Data Inventory (APDI)
- Audiological Reports on Students engaged in the Study
- Adapted English Language Achievement Test

Adolescent Personal Data Inventory (APDI) is an adolescent behaviour assessment battery developed by Professor J.O. Akinboye, an educational psychologist of Guidance and Counselling Department, University of Ibadan. This study made use of the self concept scale of the battery. This scale has 30 items generated on issues bordering how adolescents perceive or evaluate themselves. Their self evaluation would result in classifying them as having high or low concepts of themselves. The students were requested to rate themselves by circling the points (1, 2, 3, 4 and 5) against the options that most describe their self perceptions. Their responses were rated by the 5-point likert scale. The reliability value of the self concept scale of APDI is 0.75 arrived at by calculating its co-efficient of alpha.

Adapted English Language Achievement Test was adopted from the past questions on English language set by the West African Examination Council (WAEC). WAEC is the recognized council conducting Secondary school leaving certificate examinations for West African countries like Nigeria, Ghana and Gambia. Those English language questions were set for the final year (SS III) candidates who sat for WAEC in the previous years. The questions were considered suitable for students engaged in this study since they too were preparing for their final year examination in English language and other subjects. WAEC questions are considered as already validated instrument for testing academic achievement of certain students or candidates in secondary school subjects.

Audiological reports: Obtained medical files of students engaged in the study included their audiological reports (information on the type of hearing loss which each student has the onset and degree of such hearing loss). Having being tested by certified audiologists in government approved hospitals and hearing clinics, their reports were used to determine when did each student sustain his or her hearing loss and the extent of his hearing loss in each student.

Results

The data were analyzed by the descriptive statistical package (student t-test). The results also included the means and standard deviation on the scores.

Analysed results are presented below in accordance to the stated hypotheses.

Table 1: Analysis Showing the Mean Achievement Scores of Prelingually Hearing-Disabled and Postlingually Hearing Disabled Students in English Language

Variables	N	- X	SD	DF	t.cal	t.obs	P	Remarks
Prelingual Students	84	20.23	5.39	98	3.456	1.980	0.05	Significant
Postlingual Students	16	18.13	4.69					

Table 1 above showed the mean scores of the prelingual students (X, 20.23, SD. 5.39) and that of postlingual students (X, 18.13, SD 4.69). The calculated t-value is 3.456 while that of critical t is = 1.980.

This result shows that there is a significant difference between the mean scores of the two groups ($t.cal\ 3.456 > t.obs.\ 1.980$). This shows that the postlingual students performed better than their prelingual mates. The hypothesis which predicted no significant disparity in the mean scores of the two groups is therefore not accepted.

Table 2: Analysis Showing the Mean Achievement Scores of Males and Females Hearing-Disabled Students in English Language

Variables	N	- X	SD	DF	t.cal	t.obs	P	Remarks
Males	48	22.52	5.73	98	3.686	1.980	0.05	Significant
Females	58	18.62	4.82					

Table 2 above showed that the mean scores of male students is 22.52, with standard deviation of 5.73 while the mean scores of female students is 18.62 with standard deviation of 4.82. The calculated t value is 3.686 and critical t is 1.980. Again there is a significant difference in the mean scores of two groups ($t-cal\ 3.686 > t.obs.\ 1.980$). This shows that male hearing disabled students performed better than their female counterparts in English Language. The hypothesis which assumed no significant difference in the mean achievement scores of male and female student in English Language is not accepted.

Table 3: Analysis Showing the Mean Achievement Scores of High Self Concept and Low Self Concept of Hearing-Disabled Students in English Language

Variables	N	- X	SD	DF	t.cal	t.obs	P	Remarks
High self concept students	63	21.13	5.58	98	3.176	1.980	0.05	Significant
Low self concept students	14	17.78	4.12					

From table 3 above, the mean score for high self concept students is 21.13 with standard deviation 5.58 while the mean score for low self concept is 17.78 with standard deviation of 4.12. The calculated t value is 3.176 and critical t value is 1.980. These results therefore show significant difference in the English language achievement of students with high and low self esteems ($t.cal\ 3.686 > t.obs.\ 1.980$). Students with high self concept are superior to those with low self concept in English language achievement.

The hypothesis which presumed no significant difference in the mean achievement scores of the two groups is therefore not accepted.

Discussion and Recommendations

The first finding of this study on prelingual and postlingual factors and language skills indicated that hearing-disabled students who have acquired speech or usable verbal language skills before they sustained hearing loss of will definitely make use of such advantage in their communicative and academic endeavours. What this implies is that teachers of hearing-disabled students should always endeavour to identify in their classes students with residual hearing or verbal skills and develop such hearing or acquired oral language skills so that such students can make use of the skills in their communicative and academic endeavours.

Similarly, the teachers should also provide remedial or compensatory education for those with prelingual hearing disability so that they will not be at great disadvantage compared to their postlingual colleagues. Speech therapy supported by amplification technology can be of greater use in helping such students.

As far as findings of this study is concerned, male students have maintained some superiority over their female counterparts in language skills. It is very difficult to use this finding alone to conclude that male students will forever outclass female students. This study did not explore the roles of family, childrearing and environmental factors initiating and reinforcing language use in young children. This could be a task for another research work. However, it is very likely that those male students who performed better than female students have other factors responsible for their performance than their biological make up.

Whatever the case may be, the classroom teachers would need to identify whatever potentials which male and female students do possess that could be maximized to foster their language skill development and success in other academic endeavours.

Findings on self concept and its relationships with language performance did not come as a surprise. There are always a lot of relationships between self confidence and language usage as well as school achievement. Again, the teachers should identify students with low self concept in their classes and draw out special or individualized training programmes to assist such students. Teachers should endeavour to identify factors responsible for the development of low self esteem in those students and prepare to eliminate such factors.

Furthermore, the teachers would need to apply motivation techniques to help such students. At times counselling plus motivation would be required to build up self confidence and positive self image in those students.

Generally speaking the teachers and curriculum developer would have to take note of the findings of this study and endeavour to explore them in their specific responsibilities as means of helping students with hearing disability to do better in both linguistic and other academic endeavours.

Conclusion

This study has identified that onset of hearing loss, gender and self concept make some significant contributions to English language achievement of students with hearing disability. It is hoped that further studies will be conducted to go beyond establishing relationships and determine patterns of interactions between the aforementioned intrinsic factors and language skill acquisition and use of students with hearing disability. Furthermore, relationships between those intrinsic factors and achievement in other schools subject by the same students could be explored by further studies.

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