

Quality of Life and Gender on Educational Attainment of Deaf Adolescents

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Abstract

This study looks at the Quality of Life and Gender on the Educational Attainment of Deaf Adolescents. The population of the study consists of 100 adolescents from the school for the deaf in Bassa Local Government Area of Plateau State. Two questionnaires known as Achievement Motivation Inventory Scale (AMIS) and Hearing Related Quality of Life Measurement for Adolescents (HRQLMA) were used to generate data for the study. The purposeful sampling technique was used to access participants in the study. Analysis of Variance (ANOVA) was used to test the hypotheses at 0.05 level of significance. The findings showed that quality of life had a significant effect on the educational attainment of adolescents living with hearing loss, $F(1, 92) = 6.660$, $p = 0.011$, with educational attainment motivation mean score of 39.20; and education attainment motivation

mean score of 42.01. Another outcome of the study revealed that male adolescents with hearing loss did not significantly have lower educational attainment motivation compared to female adolescents, $F(1, 92) = 0.943$, $p = 0.334$, with educational attainment motivation mean score of 40.08 for males; and educational attainment motivation mean score of 41.14 for female participants. This suggests that gender has no significant effect on the educational attainment of deaf adolescents. Without appropriate assessment of the quality of life for adolescents, it should not be assumed that they are receiving appropriate intervention specific to their needs. With suitable assessment tools for adolescents the clinician would be able to effectively evaluate hearing loss and what further involvement may be necessary.

Introduction

Hearing impairment is the most frequent sensory deficit in human populations, affecting more than 250 million people in the world (Mathers, Smith & Concha, 2000). About 1000 babies are born with some form of hearing impairment in Nigeria each year (Federal Ministry of Health, 2011). Approximately 90% of children with hearing loss are born to hearing parents, many of whom have never met or interacted directly with a person with hearing loss. This interfamilial discontinuity creates major dilemmas for children with hearing loss and their hearing families (Mohr, 2002). Sensorineural hearing loss is a chronic condition for which medical or surgical treatment is not commonly available. Hearing loss is usually measured by an audiometer using internationally agreed standards

such as the current internationally standard organization [ISO] (Dev & Bitter 2002). The measurement of hearing loss from slight to profound is determined in Db (decibel). Rehabilitation and voice amplification through hearing aids and/or other assistive devices such as implants is possible (Streufert, 2010). Most children with hearing loss do not have access to professional people who are Deaf, or family members who can introduce them to the minority culture and language of the deaf community which they may eventually adopt (Mar 1995). Meanwhile, family members face unusual challenges in one of the most fundamental aspects of human life, communication with their child (Geers & Schick 1988). Adolescence is a life stage with rapid and major developmental changes in physical, emotional, cognitive, and social aspects, yet little is known about how these changes influence the quality of life of young people who are deaf or hard-of-hearing (Skalicky, Schick, & Patrick 2010). Measuring how youths who are deaf or hard-of-hearing (DHH) feel about their quality of life can

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provide children, parents, and clinicians with important information that can help guide individual and social choices towards optimizing subjective well-being. While hearing tests can provide quantifiable information regarding the status of an individual's hearing loss, they cannot provide information regarding the effect of the hearing loss on a person's everyday function, or the handicap imposed by the hearing loss (Ventry & Weinstein 1982). Preschool children using cochlear implants rate overall quality of life measures similar to hearing peers observed that deaf persons are far from being inferior in language and reading, and that the society fails to take into cognizance the fact that, sign language is a vibrant language with its grammatical rules and structures.

Statement of the Problem

That which necessitated the study of the quality of life and educational attainment of adolescents living with hearing loss has to do with the fact that hearing tests, which is one of the approaches of ascertaining the effects of hearing loss, do not provide a complete picture of the impact of an individual's hearing loss. While hearing tests can provide quantifiable information regarding the status of an individual's hearing loss, they cannot provide information regarding the effect of the hearing loss on a person's everyday function, or the handicap imposed by the hearing loss (Ventry & Weinstein 1982).

The educational attainment of a majority of persons living with hearing loss has been described to be poor. Researchers into the educational attainment of the hearing impaired have revealed that poor performances in academic work is due largely to poor quality of life; well as the level of achievement is related to parental involvement and the quantity, quality, and timing of the support services children receive (American Speech-Language Hearing Association 2015). Other factors are said to include the following: age of onset of deafness, degree of loss, and the educational environment. How true is this assertion? The findings of this study will determine the answer to this question.

Objectives of the Study

The objectives of this study are as follows:

- i) To determine the quality of life and educational attainment among deaf adolescents.
- ii) To add to the existing literature on the influence of hearing impairment on the educational attainment of deaf adolescents.
- iii) To understand gender differences among deaf adolescents and their academic attainment.

Theoretical Framework

As a basis for theoretical framework, this study employs two but somehow related theories; Critical Theory and Labelling Theory. The critical theory has shown promise in understanding the plights of people with disabilities in other societies. Critical Theory (as articulated by Bereford, 1994; ICIDH, 1991, cited in Oliver, 1997; Rioux, 1994; Roher Institute, 1996; Roth 1983), is based on the notion that disability has social causes and is a result of how society is organized and the relationship of the individual to society at large. This theory focuses on the factors that keep disabled persons from being included as equals in society. This approach, which draws from other disciplines, frames disability issues from the standpoint of human rights doctrine. It posits that public policy and programs should aim at reducing inequalities by addressing issues that undermine inclusivity (Oliver 1997).

Review of Related Literature

Quality of life of adolescents with hearing loss has not been investigated until recent years. Since then a few studies have been reported. For example Skrbic, Milankov, Veselinovic, and Todorovic (2013) studied the impact of hearing impairment on the quality of life of Serbian adolescents, with the PedsQL 4.0 Generic Core Scale. They found that hearing loss affects all aspects of the quality of life of adolescents and suggested that a multidisciplinary approach is required to reach a better function and quality of life (Skrbic et al 2013).

Studies about the educational attainment of deaf persons have been undertaken to examine the attainment of deaf persons in institutions of learning. In a comparative study of language performance of the hearing impaired and hearing children in selected schools in Benue State, Okafor (2001), sampled 40 students made up of 20 hearing impairment used for the study was a test of written English involving syntax, reading comprehension,

written composition and spelling. The result indicated that there was a significant difference between the hearing impaired and hearing students in the overall performance in English language in the two mainstreamed, a subject that is one of the highest areas of achievement for the hearing impaired by age 20, less than half of the students were able to work on eight-grade levels. Okeke (2001) in a correlational study of hearing impaired students in Northern Nigeria found that there is a significant relationship between age, onset of deafness and academic achievement of the hearing impaired. One of the factors that affect academic attainment of deaf persons is chronological age. Any realistic appraisal of academic attainment must give consideration to the age of the child being educated. The office of demographic studies (2009) observed that the age at which a child is educated has adverse effects on his academic attainment. This situation could create emotional problems, thereby resulting in poor academic attainment (Monres, 2001). However, Dev & Bitter (2002) opined that deaf children's academic attainment increases markedly as they become older.

Age of Onset of Deafness - The age at which hearing impairment is sustained by an individual has an effect on academic attainment. Okeke (2001) in a correlation study of hearing impaired students in Northern Nigeria found that there is a significant relationship between age and onset of deafness and academic achievement of the hearing impaired. Researchers such as Jensama (2006) and Adana (2006) frequently divided age of onset of deafness into three categories.

Diseases causing deafness may also affect the brain which could lead to mental retardation. Diseases such as diphtheria, whooping cough, measles, typhoid fever, pneumonia, influenza, meningitis, small pox and other causes including pus in the middle ear, violent blow or slap at the ear cause severe damage of brain (Jatau, 2009).

Ethnic Factors

Another demographic variable which relates to educational attainment is the ethnic origin of the deaf child. Adana (2006) observed that the consistent features that are usually a characteristic of hearing impaired children in terms of ethnic origin is the issue of minority and majority groups.

The author assumes that a country like Nigeria is a multi-ethnic society with diverse racial discrimination unlike developed countries like America, and supporting this view Dabet (2012) observed that cultural deprivation may significantly reduce one's ability to learn cognitive skills.

Nature of Educational Environment

The type of special education received by the hearing impaired children enrolled in schools for the deaf to a great extent influences the educational and rehabilitative possibilities of individual child or group of hearing impaired children. This is because the degree of hearing loss to a large extent determines the child's attainment in school (Sambo, 2004).

In another study Abayomi (2005) carried out research on the performance of deaf versus normal students in the various subjects which the student took in their final examination (WASC). The result revealed that the deaf group scored higher marks in Government, Mathematics while the hearing students had higher marks in Bible Knowledge, English Language and Geography.

The office of demographic studies (2009) observed that the age at which a child is educated has adverse effects on his academic attainment. This is based on the belief that the child could be under-aged and could be given a task that is beyond his chronological age or the child could be older than the level of academic task imposed on him. This situation could create emotional problem thereby, resulting in poor academic attainment (Monres, 2001). However, Dev & Bitter (2002) opined that deaf children's academic attainment increases markedly as they become older.

The analysis of Okoye (2001), Iheanacho (2005) and Abayomi (2005) on variation in the academic performance of the deaf and hearing students fail to state categorically whether the tests were conducted in the mainstream school where both the hearing impaired and the hearing students study together or at a special school for the deaf. In trying to point out the various factors influencing the academic performance of the hearing impaired, Jensama (2006) did not take cognizance of the effect of the socio-cultural environment of the hearing impaired student. No, doubt, the educational environment is very significant but not

considering the socio-cultural environment is an oversight. A deaf child that grows in up in a hostile social environment where he/she is being ridiculed and marginalized as a result of his/her hearing challenges will definitely not perform well academically due to psychological or emotional disturbance such hostility will have upon the child. Moreover, some cultures discriminate against people with hearing impairment. Belonging to such culture as one with such challenge will certainly be a difficult experience for the hearing impaired which can reflect on their academic performance in school.

Research Hypotheses

On the basis of the research variables, the following hypotheses are hereby posed for testing.

Hypothesis₁: Quality of life would have a significant effect on the educational attainment of adolescents living with hearing loss.

Hypothesis₂: Male adolescents with hearing loss would significantly have lower educational attainment motivation compared to female adolescents.

Hypothesis₃: There would be a significant interaction of quality of life and gender on the educational attainment motivation of adolescents with hearing loss.

Method and Procedure for Data Collection

Research Participants

The purposeful sampling method was used to draw up the participants who participated in the study.

The Sample of this study is 100 hearing impaired adolescents according to the Scheduled Size Sample Determination (Krejcie & Morgan, 1970) but 96 of those questionnaires were returned to the researcher which suggests that 4 respondents did not return theirs.

The study respondents are from the Plateau State School for the Deaf at Bassa LGA of Plateau State. Participants include adolescents' ages 14-19 with either unilateral hearing loss, or bilateral hearing loss.

Recruitment and Procedure

The eligible individuals were contacted by the researcher through their teachers. Data collation

took about 2 weeks to complete as there needed to be an interpreter on ground before this could be done. Students were called upon to a separate class for instructions to be given. Sometimes questionnaires were administered at the Hostels to allow for flexibility in their responses.

Research Instruments

After the researcher explained the study purpose to the participants and the focus group session was over, the researcher administered the questionnaires or research instruments to interested participants to complete. The instrument administered is the Achievement Motivation Inventory Scale and the Hearing Related Quality of Life Measure for Adolescents.

Result and Hypothesis Testing

Descriptive Results

This chapter presents the descriptive and inferential result from the analyzed data collected. The descriptive result presents the frequencies of demographic characteristics, while the inferential result presents the results for the hypotheses tested.

Table 1: Demographic Characteristics of Participants

	Frequency	%
Age group		
14-16 years	40	43.0
17-19 years	53	57.0
Gender		
Male	42	43.8
Female	54	56.2

Table 1 revealed that 40 (43%) of the study participants were between the ages of 14-16 years, and the majority 53 (57%) were between 17-19 years of age. There were 42 (43.8%) male participants, and majority 54 (56.2%) were females.

4.2 Inferential Results

The hypotheses stated in the study were tested with the Two-way analysis of variance (ANOVA) at $p = 0.05$ significance level and the results are presented below.

Table 2: Two-Way ANOVA Source Table for Quality of Life and Gender on Educational Attainment

Source	Type III Sum of squares	df	Means square	F-ratio	Sig.
Corrected Model	282.321	3	94.107	3.511	.018
Intercept	149350.636	1	149350.636	5572.701	.000
Quality of life	178.501	1	178.501	6.660	.011
Gender	25.276	1	25.276	.943	.334
Quality of life*Gender	29.875	1	29.875	1.115	.294
Error	2465.637	92	26.800		
Total	164288.000	96			
Corrected Total	2747.958	95			

Hypothesis One

Quality of life would have a significant effect on the educational attainment of adolescents living with hearing loss

The result revealed that quality of life had a significant effect on the educational attainment of adolescents living with hearing loss, $F(1, 92) = 6.660$, $p = 0.011$ (table 2); with educational attainment motivation mean score of 39.20 for adolescents with low quality of life; and education attainment motivation mean score of 42.01 for participants with high level of quality of life (table 3). The hypothesis was supported. This means that adolescents living with hearing loss with high quality of life were predisposed to higher educational attainment motivation.

Table 3: Mean Score of Educational Attainment Motivation across Levels of Quality of Life

Quality of life	Mean educational attainment	Standard Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Low	39.20	.83	37.56	40.85
High	42.01	.70	40.61	43.41

Hypothesis Two

Male adolescents with hearing loss would significantly have lower educational attainment motivation compared to female adolescents.

Result revealed that male adolescents with hearing loss did not significantly have lower educational attainment motivation compared to female

adolescents, $F(1, 92) = 0.943$, $p = 0.334$, (table 2); with educational attainment motivation mean score of 40.08 for males; and educational attainment motivation mean score of 41.14 for female participants (table 4). The hypothesis was not supported.

Table 4: Mean Score of Educational Attainment Motivation across Gender

Gender	Mean educational attainment motivation	Standard Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	40.08	.80	38.49	41.67
Female	41.14	.73	39.67	42.60

Hypothesis Three

There would be a significant interaction of quality of life and gender on the educational attainment motivation of adolescents with hearing loss.

Results revealed that there was no significant interaction of quality of life and gender on the educational attainment motivation of adolescents with hearing loss, $F(1, 92) = 1.115$, $p = 0.294$ (table 2). The hypothesis was not supported. Table 5 shows the mean score of educational attainment motivation across levels of quality of life and gender interaction.

Table 5: Mean Score of Educational Attainment Motivation across Quality of Life and Gender Interaction

Quality of life	Gender	Mean educational attainment motivation	Standard Error	95% Confidence Interval	
				Lower	Upper
Low	Male	39.25	1.16	36.95	41.55
	Female	39.16	1.19	36.80	41.52
High	Male	40.91	1.104	38.72	43.10
	Female	43.11	.88	41.38	44.85

The use of questionnaires as a quantitative method to achieve this proved to be an effective technique. The questionnaires allowed participants to share their thoughts candidly.

The research results indicate that adolescents with hearing loss are affected differently than adults. Therefore, currently available adult inventories are not appropriate for adolescents. In contrast to adults who are concerned with self-

sufficiency and depression or mood, adolescents are more concerned with domains such as school, sports, and fitting-in with their peers (Chia, Wang, Rochtchina, Cumming, Newall & Mitchell, 2007). The results from the responses received support previous findings that adolescents with hearing loss experience more social problems as well as educational challenges than their normal hearing peers (Davis & Hind, 1999; Eldik, Treffers, Veerman, & Verhulst 2004) especially as most of them were self motivated in their educational endeavours. Although this may be true for some adolescents with hearing loss, as the result of the quantitative study indicated, it is not something that can be assumed true for all adolescents with hearing loss as can be seen from the tested hypothesis of the study in the previous chapter. It can also not be assumed that these individuals are receiving maximum support.

The primary aim of this study was to find out how the quality of life and gender of adolescents with hearing loss affect their educational attainment and recommend ways that improves the quality of life for adolescents with hearing loss. The credibility of the study was supported by the use of questionnaires; this methodology was consistent with the research questions and the study objectives. The findings of this study were presented in a way to be utilized for further research and in the creation of more assessment instruments for the target populations that capture every aspect of the life of adolescents living with hearing impairment.

Recommendations

Since parents are the major source of support for these adolescents and they are capable of facilitating their children's functional communication skills and also the competence to associate with the hearing and speaking world. Therefore, it is suggested that the families should be provided with social support both tangible and intangible to enable these families maintain the well-being of these adolescents especially so they can provide more healthy environment for these hearing impaired adolescents' favourable development. As it has been suggested by Zins (1988), the parents' right should be informed and they should also be empowered to advocate for their children's needs and rights as their knowledge

towards their children is more advanced and updated than those guessed by the professionals.

Practical supportive services in special schools, in youth centres, in the ordinary schools or at the students' home in the time these students find feasible should be provided for the adolescents by government agencies, specialists or by volunteers.

Conclusion

Hearing loss is a condition that affects both the young and older populations' quality of life in various ways. In contrast to adults who are concerned with self-sufficiency and depression or mood, children and adolescents are more concerned with domains such as school, sports, and fitting-in with their peers. Without appropriate assessment of the quality of life for adolescents, it should not be assumed that they are receiving appropriate intervention specific to their needs. With a suitable assessment tool for adolescents the clinician would be able to effectively evaluate how adolescent quality of life and educational attainment is affected by their hearing loss and what further involvement may be necessary.

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