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Attachment, Knowledge, and Attitude of Special Needs Teachers Toward the Use of Assistive Technology in the Teaching of Students with Special Needs in Port Harcourt Metropolis

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Abstract

The study investigated the attachment knowledge and attitude of special needs teachers towards the use of assistive technology in teaching of special needs students in Port Harcourt Metropolis. A survey research design was employed for the study. Four research questions and four corresponding null hypotheses were raised to guide the outcome of the study. The population of the study comprised 54 special needs teachers of students with special needs in Port Harcourt Metropolis. census sampling technique was used to select the entire sample for the study. The instrument for data collection was a researcher-structured questionnaire titled: 'Knowledge of Teachers Towards the Use of Assistive Technology Questionnaire (KTUATQ). The instrument was validated by the researcher's supervisor in the Department of Educational Psychology, Guidance and Counseling and other experts in the Measurement and Evaluation and Special Education Unit of Ignatius Ajuru University of Education, Port-Harcourt. The reliability of the instrument was determined using the Cronbach's alpha method. The KTUATQ yielded a reliability coefficient of 0.77. The data obtained were analyzed using descriptive and inferential statistical tools. The research question was analyzed using mean and standard deviation, while the null hypotheses were tested using independent sample t-test at 0.05 alpha level. The findings of the study showed that there is significant difference in the knowledge of special needs teachers towards the use of assistive technology in special needs students in Port Harcourt metropolis, based on gender, years of experience, qualification, and school ownership. It was recommended that teachers should be trained and retrained on the use of assistive technologies in teaching these students, amongst others

Keywords: Assistive Technology, Special Needs Teachers, Students with Special Needs, Knowledge and Attitude, Inclusive Education

Introduction

Secondary school education in Rivers State, like in other parts of Nigeria, is the next level of education after primary school. It is a compulsory phase in the Nigerian educational system and a preparatory stage to tertiary education. It is divided into two categories: junior and senior (JSS and SSS classes). Each category in the 6-6-4 educational system lasted for three years. In Nigeria, the National Policy on Education (NPE, 2014) orders the integration of all learners with disabilities into regular classrooms and free education for all exceptional students at any level. Hence, students with hearing impairment are also admitted into public secondary schools to further their education after primary school. Ajuwon et al. (2019) opined that students with blindness or partial sightedness have generally been educated in regular secondary schools, a process which is popularly known as inclusion. In this educational system, teachers are expected to provide students with hearing impairment with equitable support to enable them fully participate physically, socially and academically with their peers without

disability.

Unfortunately, this needed support expected from public secondary school teachers to students with hearing impairment is not visible among public school teachers as such, teachers are found putting up discriminatory attitudes, rejecting, and labelling students with hearing impairment under their care as well as setting high academic expectations, exhibiting negative emotions and poor knowledge of the condition of hearing impairment. These wholesome attitudes, by public secondary school teachers has forced a lot of students with hearing impairment out of the classroom, causes poor performance, frustration, hardship and lost concentration.

Hearing impairment is a generic term that refers to a significant loss of vision that interfere with the individual's ability to function effectively in reading and writing print, mobility, daily living skills, social and economic activities. Students or persons with hearing impairment therefore, are those students whose vision barriers prevent them from reading and writing print as well as independent mobility (Nanjwan & Igba, 2019). Kirk et al. (2009), hearing impairment is a general term for a visual loss (blindness and low vision) that affects learning in school environment. These authors divided the term into two large groups in the biased of the ability to use visual sense for learning after maximum correction; (i) Children with blindness are those who cannot use vision for learning but still can be responsive to light and darkness and may have some visual imagery, (ii) Children with low vision are those who have difficulties accomplishing visual tasks, but they can learn through the visual sense by the use of various special technologies and teaching techniques. The major differences between the two groups is that children who are blind use their tactile or auditory senses as their primary sensory learning channels while children with low vision can, with aids still use the visual sense as their major sensory channel for learning. To ameliorate the loss of sight in persons with hearing impairment, there is need for attitudinal change to support the proper functioning of the remaining senses of students with hearing impairment.

This support system, which is highly needed by students with hearing impairment is sacrifice in the altar of negative attitude of public secondary school teachers. An attitude is the degree of positive or negative affect associated with some psychological object. Doob (2006) defines attitude as an implicit response, which is both anticipatory and mediating in reference to patterns of overt behavioural responses, which is evoked by a variety of stimulus patterns as a result of previous learning or of gradients of generalization and discrimination which is itself cue and drive producing, and which is considered socially significant in the individual's society. As such, the attitude of the public secondary school teachers can mar or make education of learners with hearing impairment. Negative attitudes like stigmatization, discrimination, labelling, rejection, and underrating the academic strength of students with hearing impairment will drastically weaken the academic performance of students with hearing impairment.

Most public secondary school teachers set high academic goals for students with hearing impairment and hope for high expectations without appropriate support. Academic expectation is a standard set to pursue academic goal. This is good to guide students' achievement but becomes impediment when it is above the standard and functional ability of the student. Students tend to be more satisfied and to persevere to graduate when their expectations and the academic reality they encounter are matched (Pascarella & Terenzini, 2005). Positive and realistic expectations reinforce the use of coping strategies when faced with initial adaptation difficulties (Krammer, 2016). When the initial expectations of students are too high or unrealistic, they are more likely to fail. In this situation, students experience frustration and reduce their investment in acquiring new skills to deal with the challenges of high expectations (Kreig, 2013).

Teachers' knowledge on condition of hearing impairment correlate with the teachers' ability to cater for students with hearing impairment. Students with hearing impairments require specialized services in order to learn skills that sighted peers typically learn incidentally. These services are termed the expanded core curriculum (ECC), and encompass skills in: functional academics, orientation and mobility, social-emotional development, independent living, recreation and leisure, career education, sensory efficiency, self-determination, and assistive technology (Hatlen, 2006). Therefore, teachers of students with hearing impairment need to have basic knowledge on all these areas that enhanced the functioning of individuals with hearing impairment. If the teacher lacks this, the education of the students with hearing impairment will be impede.

The emotional status of the public secondary school teacher towards students with hearing impairment either enhance or mar the academic progress of students with hearing impairment. Emotional status according to Bar-on (2011), is a collection of skills and abilities that equipped a person to adaptation with environment and achievement success. This is what is lacking in most public secondary school teachers which makes it difficult for them to handle students with hearing impairments. Bar-on Emotional Intelligence Model comprises of

fifteen (15) components that involved emotional self-awareness, decisiveness, self-honor, self-actualizing, independent, sympathy, interpersonal communications, responsibility, problem solving, the measurement of reality, resilience, pressure tolerance, impulsive control, happiness, and optimism (Bar-On, 2011). If the public secondary school teachers lack these attributes in their day-to-day interaction with students with hearing impairment, it becomes difficult for them to tolerate this category of students who struggle to channel information through other senses as the result of vision loss.

Consequently, in Nigeria, most students with hearing impairment are educated in public schools but over the years, they are faced with attitudinal barriers from public secondary school teachers who are supposed to provide professional services based on their knowledge on the condition of hearing impairment and the functioning of students with hearing impairment. With this, it becomes difficult for these students to cope with academic and school goals which resultantly will lead to academic frustration, depression, disappointment and finally total withdrawal or dropout from school. And becomes nuisance to the society or reduced to street beggars. However, the National Policy on Education (2014) has provided that all Colleges of Education and Universities' faculties of education should offer element of special needs education which will help exposed them to the condition of disability and how these categories of students function in the classroom. It is unfortunate, that public secondary teachers still not understanding the educational needs of students with hearing impairment. And students with hearing impairment are till today still considered as the unteachable, unfit, those punished by the gods and liabilities for the school and the society. It is based on this forgoing that the researcher sought to investigate teachers' attitude towards students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State.

Statement of the Problem

Students with hearing impairment in Rivers State were educated in a segregated setting (special school) by special education teachers before the advent of inclusive education (Hamma, 2019). Currently, in compliance with the global mission on inclusive education and based on the provisions of the Nigerian National Policy on Education (NPE, 2014) some regular secondary schools started catering for all students in the same classrooms under inclusive education program or any of its kind. Students with hearing impairment make different complaints on the inclusion which ranged from inability to access the physical environment, use of non-inclusive teaching methods by the regular teachers, non-inclusive assessment strategies and inadequate provision for curricular and non-curricular activities.

Consequently, the difficulties experienced by teachers in catering for students with hearing impairment have turned into attitudinal barriers that will in turn impact negatively in the academic or schooling of students with hearing impairment. Therefore, the major problem of this study was to find out teachers' attitudes towards students with hearing impairment in the public secondary schools in Rivers State. the inability of the public secondary schools' teachers to cater for the needs of students with hearing impairment which resultantly leads to high rate of illiteracy, frustration and dropout of students with hearing impairment from public secondary schools. This problem has affected many persons with hearing impairment by making them unemployable as well as reduced them to street beggars, dependent and bundle of liabilities to their families and the society at large.

The government has also signed into law; the Discrimination Against Persons with Disabilities (Prohibition) Act but the problem of students with hearing impairment being frustrated and dropout from public secondary schools in Rivers State on a daily basis still persist. It is based on this backdrop that the researcher sought to investigate teachers' attitudes towards students with hearing impairment in public secondary schools in Rivers State.

Purpose of the Study

The purpose of this study was to investigate teachers' attitudes towards students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State. Specifically, the study sought to:

1. Examine the mean rating of teachers' attitudes towards tolerating students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State
2. Explore the mean rating of teachers' attitudes towards social participation of students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State

Research Questions

The following research questions guided the study:

1. What is the mean rating of teachers' attitude towards tolerating students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State, based on gender?
2. What is the mean rating of teachers' attitudes towards social participation of students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State, based on gender?

Hypotheses

The following null hypotheses guided the study:

H₀₁: There is no significant difference in the mean rating of teachers on their attitude towards tolerating students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State, based on gender.

H₀₂: There is no significant difference in the mean rating of teachers on their attitude towards social participation of students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State, based on gender.

Review of Related Literature

The review of related literature was done under the following subheadings: Conceptual review, theoretical review, empirical review and summary of literature review.

Conceptual Review

Teachers' Attitude

Attitude is very important in all spheres of human activity. An individual's attitude may determine or influence the activity of that individual. Attitude is an individuals' predisposition towards an idea or activity. Allport in Agwogie (2016) explain that attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related. Attitude consists of three aspects viz: cognitive, affective and behavioural. Cognitive aspect pertains to the ideas or proposition that expresses the relation between situations and objects. Affective aspect pertains to the emotion or feeling that accompanies the ideas. Behavioural aspect pertains to the predisposition or readiness for action (Croumbough & Henrion, 2014). In most cases, attitudes are learned incidentally rather than as a result of preplanned instruction. This shows that several variables could influence attitude of teachers towards students with hearing impairment. Teachers' attitude is very important determinant of their success or performance at the work place. Okoroma (2016) posit that work attitudes are the feelings an individual have toward different aspects of his/her work environment. Job satisfaction and organizational commitment are two key attitudes that are the most relevant to important outcomes. How teachers behave at work often depends on how they feel about being there. Therefore, making sense of how teachers behave depends on understanding their work attitudes.

Hearing impairment

The term hearing impairment covers deficiencies ranging from partial sight to total blindness. An individual who is virtually handicapped, her/his ability to see is affected, hindered, or completely lacking. This shortcoming has a serious implication for the learning event, personally development, and progress towards self-actualization. The partially sighted are those who can read bodies of large print and who need magnifying devices. A partial sighted person has sufficient functional visual efficiency in such measure that vision rather than touch or hearing can be utilized as a chief avenue of learning. These visually impaired students, more often than not need a lot of support in academic institutions. According to Taylor et al. (1995), the cost of educating a student in South Africa is very high. Teaching exceptional students is a challenging, rewarding, and sometimes frustrating endeavor. Through research and continued teaching, we are constantly discovering more and more about the characteristics, capabilities, and educational needs of exceptional students (Taylor et al., 2005). In this case, although students who are visually impaired are enrolled, it is the responsibility of these students determined by their specific disability to make sure that they learn under conditions of normal students. The problem is that when this university was established, no great thought was given to the teaching of visually impaired students. The followings are some of the problems which are seen as impediments in the teaching of the visually impaired students in tertiary institutions.

The human eye plays a vital role in anything we do. Generally, the thinking in most quarters is that if any suffer sight loss, one has become useless. To such a person, life is assumed to be meaningless. But in the field of Special Education this presumption is not valid. This is perhaps why Ubani (2010) declares that "there are no handicapped persons, only that persons that are made handicapped by poor perception, negative attitude and the reluctance of society to adjust and accommodate people with special needs. Hearing impairments have characteristics some of which imposes certain constraints on the individual's developmental tasks. However, the degree of this constraint depends on the type of visual loss, severity, age of onset, intellectual ability and

environmental experiences. The lack of vision or reduced vision may result in delays or limitations in motor, cognitive and social development. Without visual input, an infant may not be motivated to reach and move toward interesting objects in the environment. As soon as the infant with a hearing impairment finds it exciting to hear sound, he or she will begin to reach and move toward the objects in the environment that make sound. This does not occur until several months later, since hearing sounds does not motivate toward objects as soon as seeing objects does. Adekunle (2017) also stated that cognitively, the child who has a hearing impairment cannot perceive objects in the environment beyond his or her grasp, including those that are too large or too small or are moving. While use of other sense enables the child to obtain information about the environment, a cognitive limitation does exist in the range and variety of experiences.

Socially, a child with a hearing impairment is limited in interaction with the environment. The child cannot see the facial expressions of parents, teachers and peers; cannot model social behaviors through imitation; and sometimes is unaware of the presence of others unless a sound is made. While touch provides direct information, it is often socially unacceptable. The older child is limited in the ability to orient to environmental cues and travel freely. Hallahan and Kauffman (1988) noted that in recent years a minor explosion in communication has resulted in electronic devices for use in the teaching-learning process of children with hearing impairment. For example, the optacon converts print materials to a tactile image. It can be adapted to read a computer screen, an electronic calculator or a typewriter. The Kurswell reading machine converts prints into speech when a material is placed face down on a scanner, the individual hears the material being "read" by an electronic voice, at a level as fast as human speech. The speech plus calculator or talking calculator displays information visually and speaks. It performs basic operations such as addition, subtraction, multiplication and division as well as computer square roots and percentages.

Computers have also been used to increase the level of interaction between children with hearing impairment and the sighted world (Oshon, 2013). Computers with low vision and devices assist the mobility of this category of special needs people. Computers with synthetic speech (Duxbury word processor) help in pronouncing texts for them. The computer can tell children with hearing impairment about other information displayed on the screen. These children can also use the electronic communication system (network) vis-à-vis braille, to send information to one another in braille. The computer helps to display typed information in large letters. These children can also use the computer to change the background of the text in different contrasting colours.

Theoretical Review

This study was guided by the functional theory of attitude formation theory.

Functional Theory of Attitude Formation propounded by Daniel Katz in 1960

The theory states that attitudes are formed based on how useful or the worth of a person or thing is to our needs or service. From a psychological perspective, the reasons for holding or changing attitudes are found in the functions they perform for the individual, specifically the functions of adjustment, ego defence, value expression, and knowledge. The conditions necessary to arouse or modify an attitude vary according to the motivational basis of the attitude. Ego-defensive attitudes, for example, can be aroused by threats, appeals to hatred and repressed impulses, and authoritarian suggestion, and can be changed by removal of threat, catharsis, and self-insight. Expressive attitudes are aroused by cues associated with the individual's values and by the need to reassert his self-image and can be changed by showing the appropriateness of the new or modified beliefs to the self-concept. Brain washing is primarily directed at the value-expressive function and operates by controlling all environmental supports of old values. Changing attitudes may involve generalization of change to related areas of belief and feeling. Minimal generalization seems to be the rule among adults; for example, in politics voting for an opposition candidate does not have much effect upon party identification. For an attitudinal change to occur, there must be a disagreement between the need being met and the attitude itself. For a change in attitude to be achieved, there must be recognition of the function of the attitude for the individual and design of strategies of producing a disparity between the attitude and one or more of the attitude functions.

The functional attitude theory therefore suggests that beliefs and attitudes are influential to various psychological functions. Attitudes can be influential on many processes such as being utilitarian (useful), social, relating to values, or a reduction of cognitive dissonance. They can be beneficial and help people interact with the world and on the other hand be disadvantageous to those whom the change in attitude impacts on. The relevance of this theory to this research work is that the attitude of public secondary school teachers towards students with hearing impairment in this instance are influenced by their level of knowledge about the learners, their self-image and egos as well as nature and degree of disabilities of the learners. It implies that those factors that influence their attitude towards students with hearing impairment could be their poor awareness on the condition of hearing impairment and its classroom management skills, their self-image which reflects their self-

assessment of their competence in teaching the learners and their ego which reflect their dislike for severe disability (Kofi, 2002). The change in attitude is achieved by identifying how functional the attitude is for the individual and designing strategies to produce a difference between the attitude and one or more of the attitude functions. Therefore, when such factors are identified and appropriate measures are put in place, the teachers are bound to develop positive attitudes towards students with hearing impairment. This theory is conceptualized to guide attitude of teachers towards students with hearing impairment.

Empirical Review

Teachers' Attitude towards Students with Hearing impairment

Mantey (2014) studied discrimination against children with disabilities in mainstream schools in Southern Ghana: Challenges and perspectives from stakeholders. The study examined challenges children with hearing impairment face in mainstream schools as well as perspectives on disability. The study utilized qualitative method of research mainly in-depth interviews and a social model of discrimination, advanced by Mike Oliver as an underpinning research technique theory. The study found that children with hearing impairment mostly face challenges such as discrimination from their colleagues, teachers, and non-teaching staff in the school. Also, government does not adequately plan for children with disabilities by way of policies and programme. The number of special education teachers in the mainstream educational facilities is inadequate, and the few available teachers seem to lack the competence to properly impart knowledge to them to ensure the development of their potentials. Besides, findings indicated that the understanding of the word "disabled" and its explanation associated with cultural beliefs cause and worsen disability in these groups of children denying them their rights. These challenges indicate that, children with disabilities' educational needs were not properly taken care of and the system does not help them to benefit from education. The study therefore recommends the need to re-orient people's thoughts and their beliefs towards children with disabilities to reduce or eliminate the challenges they encounter in schools and the larger society.

Kasiram and Subrayen (2013) observed that people with hearing impairment experience exclusion and marginalization from family, mainstream schools, the community and universities in KwaZulu-Natal. The experience of social exclusion is multi-structural, multidimensional and complex. Therefore, they carried out a study that aimed to describe the social exclusion of students with hearing impairment at a tertiary institution where the authors are employed. The design of the study was qualitative. It used an exploratory design to provide compelling data on the insider perspectives of students. Setting and subjects: Fifteen (15) students participated in the study, of whom nine were men and six were women. Eleven students were partially sighted and four were blind. All the subjects were from the university where the authors are employed. The study established that participants' exclusion from access to opportunities and development left them psychologically, socially, financially and emotionally scarred. Conclusion: The study established that hearing impairment and poverty were related and that women experienced oppression on two counts. The first was because of their disabled status and the second was oppression by other female students at the university. Recommendations are for changes within families, schools, communities and universities.

Teachers' Attitude towards Tolerating Students with Hearing impairment

Avhasei et al. (2020). The attitude of lecturers towards tolerating visually impaired students in Limpopo Province in South Africa. This study used the quantitative and qualitative approach. Quantitative approach was also employed, because it gave a positive form of enquiry of research and search for facts (Mouton & Marais, 1994). Qualitative approaches were used, because the procedures are not strictly formalized (Mouton & Marais, 1994). Qualitative research was also employed, because it carries out the interpretive frame of the research and it gives us the production of meanings. The questionnaires were distributed amongst 20 lecturers at university and the interviews were conducted with 20 visually impaired students and also six HODs (heads of departments), deans, and directors of centers at the university were the respondents in this study. An interview schedule was designed to qualitative data and this was done on a face-to-face situation (Behr, 1988). Most case study interviews are of an open-ended nature, in which you can ask key respondents for the facts of a matter as well as for the respondent's opinions about events (Yin, 1994). Semi-structured interview questionnaires for visually impaired students and HODs, deans, or director of centers, in order to get the in-depth of the information and the problems within them. The quantitative approach was also followed, because the close-ended questionnaire was also used to collect data from lecturers. Findings indicate that the teaching of visually impaired students at one of the universities in the Limpopo Province is beset with a number of hurdles which have particular implications for the learning of the visually impaired students in tertiary education. Chauke (2012) investigated the effect of teachers' attitude towards tolerating students with hearing impairment in London. The purpose of this study was to investigate why some teachers prefer to embrace certain students and the effect of such attitude on the teachers' work. The study adopted a descriptive research design. The simple

random sampling technique was used to draw a sample of teachers from the study Area. Structured questionnaire and interview were used to elicit information from the respondents. The questionnaire adopted the 4-points rating scale which enabled respondents to indicate the extent of agreement or disagreement with the questionnaire items. The data collected were subjected to a number of statistical analysis, including frequency counts and percentages. The findings of the study included the following: that the attitude teachers adopted towards students with hearing impairment public secondary schools in the study area were found to be inadequate for effective school administration and negatively affected teachers' work attitude in the area.

Summary of Literature Review

The reviewed literature has shown the writings of scholars on the variables of the study. The literature review was discussed under conceptual review, theoretical review, empirical review and then summary of review literature. The conceptual review centred on teachers' attitude, students and hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State. The literature review also discussed three theories on which the study is anchored. These are the Functional Theory of Attitude Formation propounded by Daniel Katz in 1960, Social Learning Theory by Bandura in 1977 and The Social Model (SMD). These three theories laid a strong foundation for this study. The empirical review had studies carried out internationally and locally on the variables of the study. However, none was carried out in the location of the present study. This study therefore filled the gap of a study of this nature in Rivers State.

Methodology

This section discussed the method used in carrying out the study. The methodology used for the study includes the research design, area of the study, population of the study, sampling technique, sample of the study, instrument for data collection, validity of instrument, reliability of instrument, administration of the instrument and method of data analysis. This study adopted a survey design. The survey design was used because survey design is a design that allows the researcher to draw a sample from a large population and analyses their responses the way they are without manipulating any variable. Nwankwo (2013), also stated that descriptive survey design is that design that allows the researcher to draw a sample from a large population and analyses their response the way they are without manipulating any variable. The study was conducted in Rivers State of Nigeria. Rivers State is situated in the southern part of Nigeria with the appellation "Treasure Based of the Nation". It is bonded on the North by Imo, Abia and Anambra States, to the east by Akwa-Ibom state and the west by Bayelsa and Delta States. It has 23 Local Government Areas with Port Harcourt as the Capital City. Rivers State plays host to three universities namely- University Port Harcourt, Rivers State University of Science and Technology, and Ignatius Ajuru University of Education. With other higher institutions in the state which include Ken Saro Wiwa Polytechnic, Bori; Federal College of Education (Technical) Omoku, College of Health Technology, Port Harcourt; school of Nursing and midwifery; Rumueme; and Rivers State college of Arts and Science (Captain Elechi Amadi Polytechnic) Port Harcourt, not to mention numerous primary and secondary schools both public and private scattered in the state. Rivers state has many ethnic groups; Ekpeya, Ogba, Ikwerre, Etche, Ogoni, Ijaw, Kalabari, Igbo, and others. The researcher considered this are as suitable for the study, because she is conversant with the area, and because it will enable her to achieve the objectives of the study.

The targeted population of this study was secondary school teachers in the public schools that cater for students with hearing impairment. The estimated population size of accessible teachers for the study in Rivers State was 4000. The sample size was one hundred (100) teachers which was 25% of the accessible population from the public secondary schools that cater for students with hearing impairment in Rivers State. Purposive sampling was used for the selection of schools that cater for students with hearing impairment. Systematic random sampling was used to select teachers from the teacher's list of the schools a proportion of 25% of the teaching staff list was selected. The instrument for data collection was a self-structured questionnaire titled: "Teachers' Attitude to Hearing Impaired Student Scale" (TABSS). The TABSS was made up of two sections, A and B. Section A consisted of demographics of teachers the gender. Section. The section B consisted of five subscales (TATSVIQ, TALSVIQ, TASPVIQ, TACASVIQ and TALDSVIQ) with five items in each measuring the sub-scales of teacher's attitude to tolerance, learning ability, social participation, class accommodation, visual disability of students with hearing impairment. Section B has four response options to each item. The details of the instrument are attached in Appendix 1. The instrument was validated by two experts in Measurement and Evaluation and Special Education from the Department of Educational Psychology, Guidance and Counseling, Ignatius Ajuru University of Education, Port Harcourt, Rivers State. A draft of the instrument was attached to the purpose of the study, research question and hypotheses for the study and was given to each of the experts for validation. The experts scrutinized the draft reconstructed, amended, and reworded where necessary and corrections of the draft were made. The instrument was trial tested on 30 teachers who will not be part of the

final sample for the study. Data collected was subject to analysis using the Cronbach Alpha formula. The reliability coefficients for the sub-scales of teacher's attitude were: TATSVIQ ($\alpha = .75$), TALSVIQ ($\alpha = .78$), TASPVIQ ($\alpha = .72$), TACASVIQ ($\alpha = .75$) and TALDSVIQ ($\alpha = .80$). The overall scale has a reliability of ($\alpha = .73$). The researcher visited each of the selected schools with letter of introduction from the department to the principal of the schools for permission to conduct the study in their schools. The aim of the study was known to the school and the benefit the school and society stand to gain from the study was made known. After permission is granted, copies of the instrument for data collection were given to the selected teachers for responses. The copies of instrument were administered by the researcher directly with the help of the vice principal as research assistants in order to facilitate quick administration. The responses were retrieved immediately from the respondents. An appreciation was made to the school for their support and cooperation. Mean and standard deviation were used to analyse data to answer the research questions while the independent test was used to test the null hypotheses at 0.05 level of significance.

Results

This chapter is concerned with the presentation of results obtained after the collection and analysis of data. The results are presented in line with the research questions and hypotheses. However, the answer to the research questions was presented first before the answer to the testing of the hypotheses.

Research Question One: What is the mean rating of teachers' attitudes towards tolerating students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State, based on gender?

Table 1: Mean rating of the teachers' attitude towards tolerating students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State, based on gender.

| S/N | Items/Statements on teacher tolerance of students with hearing impairment | Female (N = 58) | | | Male (N = 42) | | |
|------------|---|-----------------|------|----------|---------------|------|----------|
| | | Mean | SD | Decision | Mean | SD | Decision |
| 1 | I pay attention to the complaints of my students | 2.73 | 0.46 | Agree | 2.10 | 0.84 | Disagree |
| 2 | I listen to the opinion of my students | 2.00 | 0.75 | Disagree | 2.20 | 1.05 | Disagree |
| 3 | I take time to get in-depth information of my students | 2.57 | 0.86 | Agree | 2.97 | 1.00 | Agree |
| 4 | I listen to the shared experiences of my students | 3.30 | 0.65 | Agree | 2.23 | 0.89 | Disagree |
| 5 | I tolerate the nuisances of my students | 2.43 | 0.63 | Disagree | 2.11 | 0.86 | Disagree |
| 6 | I pay attention to the complaints of my students | 2.83 | 1.02 | Agree | 2.10 | 0.84 | Disagree |
| 7 | I listen to the opinions of my students | 2.60 | 0.05 | Agree | 2.44 | 0.74 | Disagree |
| 8 | I take time to get in-depth information of my students | 2.13 | 0.65 | Disagree | 2.81 | 1.03 | Agree |
| 9 | I listen to the shared experiences of my students | 2.68 | 0.66 | Agree | 2.79 | 0.94 | Agree |
| 10 | I tolerate the nuisances of my students | 2.66 | 0.48 | Agree | 2.62 | 0.87 | Agree |
| Grand mean | | 2.61 | 0.65 | Agree | 2.47 | 0.86 | Disagree |

Criterion Mean = 2.5

Based on the result shown on teachers' attitudes towards tolerating students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State, based on gender, it was shown that female teachers had a mean rating of 2.61 (SD = 0.65), while male teachers had a mean rating of 2.47 (SD = 0.86). This result suggests that female teachers had a higher tolerance for students with hearing impairment than their male contemporaries in Rivers State. This is due to their higher mean rating compared to male teachers in public secondary schools in Obio/Akpor Local Government Area of Rivers State.

Research Question Two: What is the mean rating of teachers' attitudes towards social participation of students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State, based on gender?

Table 2: Mean rating of teachers' attitude towards social participation of students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State.

| S/N | Items/Statements on teachers' attitude towards social participation of students with hearing impairment | Female (N = 58) | | | Male (N = 42) | | |
|-------------------|---|-----------------|-------------|-----------------|---------------|-------------|----------|
| | | Mean | SD | Decision | Mean | SD | Decision |
| 1 | I ensure that my students interact with their peers | 2.51 | 0.71 | A | 3.01 | 0.91 | SA |
| 2 | I ensure that the enabling environment is created for student participation in the class | 2.11 | 0.42 | D | 2.71 | 0.95 | A |
| 3 | I ensure that my students interact with me as well as with other teachers | 2.32 | 0.62 | D | 2.63 | 1.03 | A |
| 4 | I ensure that students are not isolated from others | 2.38 | 0.62 | D | 2.83 | 0.94 | A |
| 5 | I ensure that students are not discriminated against | 1.81 | 0.75 | SA | 1.77 | 0.98 | D |
| 6 | I ensure that my students interact with their peers | 2.74 | 0.54 | A | 2.77 | 0.93 | A |
| 7 | I ensure that the enabling environment is created for student participation in the class | 1.67 | 0.64 | D | 2.81 | 0.84 | SA |
| 8 | I ensure that my students interact with me as well as with other teachers | 2.92 | 0.67 | A | 2.92 | 0.87 | D |
| 9 | I ensure that students are not isolated from others | 2.62 | 0.59 | A | 1.77 | 0.92 | SA |
| 10 | I ensure that students are not discriminated against | 2.82 | 0.63 | Agree | 2.05 | 1.05 | SA |
| Grand mean | | 2.42 | 0.70 | Disagree | 2.58 | 0.96 | A |

Criterion Mean = 2.5

Based on the result shown in Table 2 on teachers' attitudes towards social participation of students with hearing impairment in public secondary schools female teachers had a mean rating of 2.42 (SD = 0.70), while male teachers had a mean rating of 2.58 (SD = 0.96). This result suggests that male teachers had a better level of attitude towards the social participation of students with hearing impairment in Rivers State. This is due to their higher mean rating in comparison to that of their female counterparts in public secondary schools

Test of Hypotheses

Hypothesis One: There is no significant difference between the mean rating of teachers on their attitude and tolerating students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State, based on gender.

Table 3: Independent samples t-test of teachers' attitude towards tolerating students with hearing impairment

| Gender | N | Mean | SD | Df | t-cal | p-value | Alpha | Decision |
|--------|----|------|------|----|-------|---------|-------|----------|
| Female | 58 | 2.61 | 0.65 | 98 | 1.54 | 0.02 | 0.05 | Rejected |
| Male | 42 | 2.47 | 0.86 | | | | | |

According to the result shown in Table 3 on the difference in the mean rating of teachers on their attitude towards tolerating students with hearing impairment in public secondary schools the independent samples t-test yielded a value of 1.54 at 98 degrees of freedom with a corresponding p-value of 0.02 which was less than the chosen alpha of 0.05. Since the p-value was less than the chosen alpha, it therefore suggests there is significant difference in the mean rating of male and female teachers on their attitude towards tolerating students with hearing impairment. The null hypothesis was therefore rejected.

Hypothesis Two: There is no significant difference in the mean rating of teachers on their attitude and the social participation of students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State based on gender.

Table 4: Independent samples t-test of the teachers on their attitude towards social participation of students with hearing impairment in public secondary schools

| Gender | N | Mean | SD | Df | t-cal | p-value | Alpha | Decision |
|--------|----|------|------|----|-------|---------|-------|----------|
| Female | 58 | 2.42 | 0.70 | 98 | 1.35 | 0.17 | 0.05 | Accepted |
| Male | 42 | 2.58 | 0.96 | | | | | |

According to the result shown in Table 4 on attitude towards social participation of students with hearing

impairment in public secondary schools, the independent samples t-test yielded a value of 1.35 at 98 degrees of freedom with a corresponding p-value of 0.17 which was greater than the chosen alpha of 0.05. Since the p-value was greater than the chosen alpha, it therefore suggested that there was significant difference in the mean rating of male and female teachers' on their attitude towards social participation of students with hearing impairment in Obio/Akpor Local Government Area of Rivers State. The null hypothesis was therefore accepted. From the analysis done and presented above, the major results obtained were summarized below:

- 1 Female teachers have a better attitude towards tolerating students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State.
- 2 Male teachers had a better attitude towards social participation of students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State.

Discussion

From the results of the first research question and the corresponding null hypothesis, female teachers had a better attitude towards tolerating students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State. However, there was a significant difference in the attitude of male and female teachers tolerating students in public secondary schools in Obio/Akpor Local Government . The implication of this result was attributed to the fact that females were more oriented towards care giving when, compared with male colleagues. Women tend to be more people oriented, always seeking a way to assist those in need. Conversely, males were usually work or task oriented, not emotionally attached or concerned like their female counterparts. The result of this study is similar to that obtained by Avhasi et al. (2020) who found significant difference in their attitude towards students with hearing impairment in public secondary schools in Limpopo province of South Africa

The second result obtained from the answer to the research question and the corresponding null hypotheses showed that male teachers had a better attitude towards social participation of students with hearing impairment in public secondary schools in Obio/Akpor Local Government. However, there is a significant difference in the attitude of male and female teachers towards the social participation of students with hearing impairment in Obio/Akpor Local Government. This result was as a result of the level of exposure of male teachers with respect to social participation compared with their female counterparts. The finding of this result was similar to that obtained by Smith et al. (2018) who found that gender significantly predicted social participation of students with hearing impairment in secondary schools in Nigeria.

Summary

This study was concerned with investigating teachers' attitude towards students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State. The study was motivated by the observation of the researcher that in most parts of Nigeria, especially Obio/Akpor Local Government Area, students with special needs complained of poor teacher attitude towards them. This support system, which is highly needed by students with hearing impairment is sacrificed on the altar of negative attitude of public secondary school teachers. The study was guided by four research questions and their corresponding null hypotheses. The significance of the study to various stakeholders were identified and the scope of the study was properly delimited. Extensive review of literature was conducted using the conceptual, theoretical and empirical review of studies. Conceptually, the term students with hearing impairment was discussed and the various moderating variables (attitude towards tolerating students with hearing impairment, attitude, teachers attitude towards social participation of students with special needs, teachers attitude towards classroom accommodation of students with hearing impairment, teachers attitude towards disability of students with hearing impairment, teachers attitude towards disability of students with hearing impairment). Theoretically, various theories were considered such as functional theory of attitude formation by Donald Katz in 1960, The Social Model theory and the Social Learning Theory of Bandura 1971. Finally, empirical review of literature was conducted which showed that several studies had been carried out on teachers' attitude towards students with hearing impairment in other locations. It was to fill this gap in the literature that informed the conduct of the present study. The study used a survey research design with a purposive sample of 100 secondary schools. One researcher created a questionnaire termed "Teachers' Attitude to the Hearing impaired Student Scale (TAHSS)." The instrument was properly validated by experts and the reliability coefficients established. Data collected from the administration of the instrument were analyzed using mean and standard deviation to answer the research questions, while independent samples t-test was used to test the corresponding null hypotheses. Result from the study included that: (i.) Female teachers had a better attitude towards tolerating students with hearing impairment in public secondary schools in Obio/Akpor Local Government. (ii.) Female teachers had a better attitude towards learning ability of students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area. (iii) Male teachers had a better attitude towards social participation of students with hearing impairment in

public secondary schools in Obio/Akpor Local Government. (iv.) Male teachers had a better attitude towards classroom accommodation of students with hearing impairment in public secondary schools in Obio/Akpor Local Government Area of Rivers State. (v.) Male teachers have a better attitude towards classroom accommodation of students with hearing impairment in public secondary schools in Obio/Akpor Local Government.

Conclusion

The major conclusion drawn from the study is that female teachers had a better attitude towards tolerating students with hearing impairment, and as well had a better attitude towards learning ability of students with hearing impairment in Obio Akpor Local Government Area of Rivers State. Also, male teachers have a better attitude towards social participation of students with hearing impairment, classroom accommodation of students with hearing impairment, and better attitude towards disability of students with hearing impairment in public secondary schools in Obio Akpor Local Government Area.

Recommendations

1. Based on the findings of the study, the following suggestions were made:
 1. The government has signed the Discrimination Against Persons with Disabilities (Prohibition) Act, therefore, the local government council should monitor teachers' actions with pupils with hearing impairments.
2. Special needs schools should hire professional counselors who specialize in addressing concerns for teachers with hearing impairments.

Limitation of the Study

Despite the success of the study, the study was limited by certain factors which were briefly presented below:

1. The relatively small size of the sample used is a major limitation as descriptive survey research designs often require that a large sample size is used for the purpose of generalization.
2. Some of the respondents were initially reluctant to respond to the instrument because of the sensitive nature of the research.
3. Lack of an empirically standardized instrument to assess the construct of hearing impairment and teacher attitude towards tolerating such students.

Suggestions for Further Studies

P[Based on the above the limitations, the following suggestions for further studies were presented.

1. Future studies should use a larger sample size drawn from different levels of education. This would facilitate a better generalization of the findings to other populations.
2. Future studies should investigate the teacher personality as correlates of their attitude towards students with special needs in Obio/Akpor Local Government Area.
3. Future studies should consider some challenges being experienced by teachers teaching special needs students in Obio/Akpor Local Government Area.

Contributions to Knowledge

This study has contributed to knowledge by establishing the attitude of teachers towards students with hearing impairment in Obio/Akpor Local Government Area of Rivers State.

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