

Teachers of Special Needs Education Understanding of Genetic Counselling As A Preventive Measure for Intellectual Disabilities in Akwa Ibom State

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Abstract

The study investigated teachers of special needs education understanding of genetic counselling as preventive measures for intellectual disabilities in Akwa Ibom State. In order to achieve the purpose of this study three objectives were stated and tested.

Descriptive survey research design was adopted for the study and the population consisted of all the teachers in two special education schools in Akwa Ibom state. 30 teachers were purposively selected for the study. The instrument used was teachers of special needs education understanding of genetic counselling as a preventive measure for intellectual disability questionnaire” (TSNEUGCMFIDQ) which was validated and had a reliability coefficient of 0.73. Independent t-test was used to test the hypothesis at 0.5 level of significance. The result and the major findings showed that there is a significant understanding of the genetic counselling as a preventive measure for intellectual disability among teachers of special education. It was recommended that the health workers should create more awareness in schools on geneticcounselling to help the students avoid future consequences. Seminars and workshops should be organized, awareness through pamphlets and leaflets to intensify effort in assisting the students, teachers and parent know the dangers of avoiding genetic counselling.

Key Words; *Genetic Counselling, Preventive Measure, Intellectual Disability*

Date of Submission: 21-02-2021

Date of acceptance: 05-03-2021

I. Introduction

Education is critical in addressing the growing burden of public health problems in developing nations. The goal of sustainable developmental. Goals place emphasis on the functionality of education as a requisite to achieving health lives and wellbeing across the life-course (Maurice, 2015). Establishing available link between education and health is essential to setting policy priorities. Education empowers to make informed decision as well as dictating the behaviour of the individual attitudes towards a specific action.

Education started long before the Europeans arrived, education had been part of Nigerians. The children were taught about their culture, social activities, survival skills and work. Most of these education processes were impacted into the children informally. In these societies, there are formal teaching and instructions that governed the rites of passage from youth into adulthood. The youth is expected to have attained the necessary social and survival skill as well as having a grounded knowledge in the culture. These are the foundation of education in Nigeria, and upon them were the western education implemented upon.

Special education, these is an education given to persons with special needs Act (2004) define special educational needs as restriction in capacity of a person to participate in and benefit from education on account of an enduring physical, sensory, mental-health or learning disability or any other conduction which results in such individual learning differently from one without that condition. Special education needs relates to terms like disability, impairment, handicap, and other special needs. UNESCO (2006) refers to persons with special needs as those that have emotional, behavioural, sensory, physical or mental disabilities. Students who for a variety of reasons (intellectual, physical, social, psychological) experience learning disabilities which are more significantly than those experienced by majority of learners of the same age. Such students needs special educational needs.

According to Oliver and Williams (2005) the mentally handicapped child has special educational needs and is thus often regarded as special in the sense that he requires assistance and support to overcome contextual, social and individual difficulties. These difficulties may also include slow cognitive development reasoning, problem-solving, remembering and generalizing.

Egunjobi (2013) also asserts that persons with special educational needs refers to persons with visual auditory, physical impairments, the mentally challenged and the learning disabled. But no matter the disability one has such individual has constitutional right to education. Olusola (2013) sees persons with special needs as those who have difficulties in realizing their full potential, their emotional, physical, social or intellectual performance falls below or rises above that of others. The differences may be related to physical, cognitive, emotional or psycho-social factors or a combination of these. The person with special needs include those with hearing impairment gifted and talented, visual, speech and language impairment, orthopaedic impairment, social maladjustment, learning disabilities and multiples impairment (Olusola, 2013). However, these individuals with all forms of special needs require skilled identification, intervention and special care from trained professionals special educators to enable them achieve their goals and at the same time receive adequate quality education.

A special education teacher are those who are specifically trained to provides academic intervention and support for children with unique needs. Serving as an advocate and a teacher, a special education teacher works with classroom teachers, counselors and family members to write an Individualized Education Programs (IEPs) for children who are struggling academically, socially and personally. Assessment, instructional planning, and teaching special education teachers work with students who have behavioural issues, learning disabilities, visual impairment, autism are gifted and talented.

Job description of special education teacher everyday presents a new challenge and new job duties for a special education teacher. Special education teachers serve as a consultant to classroom teacher to offer advice about how to help at risk students succeed in the classroom. Administrative tasks consume a large portion of the day for special education teachers. Lesson planning, updating case files of students receiving special assistance and writing new IEPs. Often special education teachers supervise instructional assistants and this require managing their daily work and coaching them about how to work with assigned students. Finally, special education teachers regularly communicate with parents, teachers and administrator about student progress, classroom needs and special concerns that may arise.

Special education teacher must have been one who has a solid foundation. Based on the following the exceptional learners, learning environment, assessment, differentiating instruction for special needs learners, and health issues of special need students, you focuses on behavioral issues, emotional disturbances, autism or exceptional talent.

Teachers of special education comprises of both male and female teacher. But female teacher tend to have more understanding of genetic counseling as a preventive measure for intellectual disabilities because they are potential future mothers they show more interest than the male.

Counseling is the skilled and principled use of relationship to facilitate self-knowledge, emotional acceptance and growth and the optimal development of personal resources. Genetic counseling, combines education about genetic conditions with support for individual and families affected by these conditions. The field represents the translation of empirical genetic knowledge to everyday healthcare (American Medical Association) (AMA, 2016). This is meant to assist the clients understand and adapts to the diagnosis of a genetic condition in the family. Its implications and make informal decisions (C.G.E). Diagnostic, carrier predictive and pre-symptomatic genetic testing options are also provided when appropriate (Centre for Genetic Education, 2012).

Genetic counselling is a family-focused service that considers the effects of the genetical conditions on the whole family, not just the referred individual and provides support and appropriate resources to all who are interested, genetic counseling remain respectful to clients, culture, language, traditions, lifestyle, religious beliefs and values (American Board of Genetics Counselling (ABGC) 2007). In a clinical settings, genetic counselling is beneficial to individual and families with a high risk of either having, developing and inherited condition.

Major areas of genetic counseling includes pre-natal, pediatric, adult and cancer genetic e.g. a client may be referred to a genetic counseling if a possible genetic risk is discovered through regular pre-natal testing or screening. Pediatric genetic counseling involves seeing families following the birth of a child with known genetic condition like phenylketonuria (Pku), Medical concerns for genetic condition. Adult genetic counselling might includes seeing someone with a family history of genetic condition, such as Huntington Disease, who is interested in considering the option of genetic testing as well as individuals or families could seek genetic counselling to discuss their personal or family history of cancer.

Other specially areas in genetic counselling include cardiovascular disease, metabolic disease, neurology, ophthalmology, hematology, infertility, pharmacogenetics and genomic medicine (National Society of Genetics Counselors –(N.S.G.C) 2012). This is not a comprehensive list. The field is continuously growing

and changing overtime. Some genetic counselors do not work in a clinical capacity. They may work in genetic testing laboratories or as part of clinical research studies, even in the business sector using their genetic and communications expertise.

According to the tenth revision of the W.H.O (World Health Organization) Intellectual Disability (I.D) is a disorder defined by the presence of incomplete or arrested mental development, specially characterized by the deterioration of concrete-functions at each stage to develop and contribute to the overall level of intelligence, such as cognitive language, motor and socialization functions. In this normal adaptation to the environment is always affected for intellectual disability ID scores for intellectual developmental level must be determined based on all the available information, including clinical signs adaptive behaviours in the cultural medium of the individual and psychometric findings.

On the other hand, the American Association on Intellectual and Developmental Disabilities (AAIDD) indicates that in addition to a significantly sub-average intellectual functioning, limitations are observed in two or more areas of adaptive skills, and disorder presents itself before the age of 18.

When a developmental disability is predominantly mental, it is referred to as mental retardation/deficiency, Mental Retardation (MR) was coined by the American Psychiatric Association (APA) Coren (2001), and the overall prevalence of MR is not known with certainty and in India too. It is estimated to be 2-3 percent of the population (Kaur, 2003). The DD/MR is an heterogeneous groups of disability orders and various genetic acquired factors can be responsible, the earlier one contributing to the hereditary or the familia nature of the disease (Aggarwa, 2012) once the acquired etiology such as infection, trauma, teratogens, radiation, toxicity, nutritional deficiency causing brain damaged or mental (Motor disability is excluded, the recurrence risk estimate is easy and genetic factors among others can be considered (Dave, Shelly, 2010).

According to Ozoji, Unachuku, Kolo (2010) intellectual disability as based on I.Q score mild, mental retardation IQ score from 70 down to 55/50. Moderate mental retardation, I.Q score from 55/50 to 40/35. Severe mental retardation, I.Q score 40/35 to 25/20. Profound mental retardation, I.Q score below 25/20.

Statement of the Problem

It has been observed that there is a steady increase in the numbers of persons with intellectual disability, due to ignorance, careless attitude and poor counselling system in Akwa Ibom State and Nigeria at large, very few researchers have been carried out studies to ascertain the role of special education needs teachers understanding of genetic counselling as a preventive measure for intellectual disability in Akwa Ibom State. An attempt has been made to educate teachers of special education on genetic counselling married and unmarried teachers of special education both female and male teacher are also educated as the need to understand the preventive measure for intellectual disabilities. The problem still persists and is getting worse by the day. Genetic counselling services are not readily available in some villages in Akwa Ibom.

Most times people do not seek counselling before they engage in sexual affairs. Genetic counselling will serves as a way to reduce the number of individual with intellectual disability in the society. The study, therefore intends to determine how teachers of special needs education understanding of genetic counselling can be used as a preventive measure for intellectual disabilities in Akwa Ibom State.

Objectives of the Study

The purpose of this study is to investigate the level of understanding of genetic counselling as a preventive measure for intellectual disabilities in Akwa Ibom State. Specially, the study intends to:

- (1) Determine the level of understanding of teachers in special needs education on genetic counselling as a preventive measure for intellectual disability in Akwa Ibom State.
- (2) Determine the level of understanding of male and female teachers in special needs education on genetic counselling as preventive measure for intellectual disability in Akwa Ibom State?
- (3) Determine the level of understanding of married and unmarried teachers in special needs education on genetic counselling as a preventive measure for intellectual disability in Akwa Ibom State?

Research Hypothesis

- (1) The level of understanding of teachers in special needs education on genetic counselling as a preventive measure for intellectual disability will not be statistically significant.
- (2) There is no significant difference in the level of understanding of male and female teachers in special needs education on genetic counselling as preventive measure for intellectual disability.
- (3) There is no significant difference in the level of understanding of married and unmarried teachers in special needs education in genetic counselling as a preventive measure for intellectual disability.

Scope of the Study

The study will be carried out in two special schools in Akwa Ibom State. They are government special education centre Mbiabong, Uyo and St. Louis School for Inclusive Education Ikot Ekpene in Akwa Ibom State and were limited to the teachers in both special schools.

Research Design

The descriptive survey research design was used for the study. The researcher adopted this design because it allows samples to be drawn from the population for the purpose of providing descriptive analysis and inference.

Population of the Study

The population of study comprised teachers of pupils with intellectual disability in two special education schools in Akwa-Ibom which are Government Special Education Center, Mbiabong, and St. Louise School for Inclusive Education, Ikot-Ekpene.

Sample and Sampling Technique

Purposive sampling technique was used in selecting the 30 teachers, based on their willingness to participate in the study.

Instrumentation

The instrument to be used for this study was a researcher developed questionnaire known as “Teachers of Special Needs Education Understanding of Genetic Counselling as a Preventive Measure for Intellectual Disability Questionnaire” (TSNEUGCMFIDQ). The instrument has section A and B. Section A covers respondents personal bio-data and section B comprises of fifteen (15) questions items developed to guide the study, respondents were required to respond to items using a four Likert Scale questionnaire options, ranging from Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD).

Validity of Instrument

The face validity of the instrument was established by the input of two research experts in the faculty of education, University of Uyo of the Department of Early Childhood and Special Education who ascertained the clarity, appropriateness of language and ability to receive accurate responses. Thereafter, the corrections of the experts were added into the final draft of the instrument used for the study.

Reliability of the Instrument

After the modification of the instrument in line with view of the validators, the instrument was tested on 10 teachers; the data collected was used to establish the internal consistency reliability of the instrument using Cronbach’s Alpha which yielded a reliability co-efficient index of 0.73.

Administration of the Instrument

The instrument was administered by the researcher to special education teachers during school hours. The researcher took permission from the Head Teachers before distributing the questionnaire and the questionnaire will be filled and collected on the spot.

Method of Data Analysis

The data collected were analyzed using t-test statistical method.

II. Result and major findings

Hypothesis One

The level of understanding of teachers in special needs education on genetic counseling as a preventive measure for intellectual disability will not be statistically significant.

Table 1: t-test analysis of significant level of the understanding of teachers in special needs education on genetic counseling as a preventive measure for intellectual disability in Akwa Ibom State

Variable	Response	n	\bar{x}	SD	df	t-cal.	t-crit	Decision
Level of understanding of genetic counselling	Agree	23	47.60	6.40	28	7.831	2.048	Reject H ₀
	Disagree	7	27.14	4.56				

*significant at $P < .05$; $df = 28$

The result in Table 1 revealed that the calculated t-value of 7.831 is greater than the critical t-value of 2.048 at .05 level of significance and at 28 degrees of freedom. With this result, the null hypothesis was rejected. This implies that the level of understanding of teachers in special needs education on genetic counseling as a preventive measure for intellectual disability is statistically significant.

Hypothesis Two

There is no significant difference in the level of understanding of male and female teachers in special needs education on genetic counseling as a preventive measure for intellectual disability in Akwa Ibom State.

Table 2: t-test analysis of significant difference in the level of understanding of male and female teachers in special needs education on genetic counseling as a preventive measure for intellectual disability in Akwalbom State

Variables	Gender	n	\bar{x}	SD	dft-cal	t-crit	Decision
Level of understanding of genetic counselling	Female	17	47.11	9.99	282.810	2.048	Reject H ₀
	Male	13	37.23	8.92			

*significant at P< .05; df= 28

The result in Table 2 revealed that the calculated t-value of 2.810 is greater than the critical t-value of 2.048 at .05 level of significance and at 28 degrees of freedom. With this result, the null hypothesis was rejected. This implies that there is significant difference in the level of understanding of male and female teachers in special needs education on genetic counseling as a preventive measure for intellectual disability in Akwa Ibom State.

Hypothesis Three

There is no significant difference in the level of understanding of married and unmarried teachers in special needs education on genetic counseling as a preventive measure for intellectual disability in Akwa Ibom State.

Table 3: t-test analysis of significant difference in the level of understanding of married and single teachers in special needs education on genetic counseling as a preventive measure for intellectual disability in Akwalbom State

Variables	Marital Status	n	\bar{x}	SD	df	t-cal	t-crit	Decision
Level of understanding of genetic counselling	Married	11	45.90	11.96	282.229	2.048	Reject H ₀	
	Single	19	37.21	9.24				

*significant at P< .05; df= 28

The result in Table 3 revealed that the calculated t-value of 2.229 is greater than the critical t-value of 2.048 at .05 level of significance and at 28 degrees of freedom. With this result, the null hypothesis was rejected. This implies that there is significant difference in the level of understanding of married and single teachers in special needs education on genetic counseling as a preventive measure for intellectual disability in Akwa Ibom State.

The following were the major findings of the study:

- i. The level of understanding of teachers in special needs education on genetic counselling as a preventive measure for intellectual disability is statistically significant.
- ii. There is a significant difference in the level of understanding of male and female teachers in special needs education on genetic counselling as preventive measure for intellectual disability.
- iii. There is a significant difference in the level of understanding of married and single teachers in special needs education in genetic counselling as a preventive measure for intellectual disability.

III. Conclusion

This study found that the teachers in special needs education had a high level of understanding of genetic counselling as a preventive measure for intellectual disability. Similarly male and female, married and single teachers significantly differ in their level of understanding of genetic counselling as a preventive measure for intellectual disability. In the light of these findings, it is concluded that genetic counselling serves as a way to reduce the number of individual with intellectual disability in the society, therefore teachers of special needs education should acquire adequate knowledge of genetic counseling regardless of gender and marital status.

IV. Recommendations

On the basis of the findings of this study, the researcher therefore makes the following recommendations:

- i. Pre-service teachers should be exposed to genetic counselling

- ii. It is also recommended that the ministry of education should organize seminars and workshops or create awareness through pamphlets and leaflets to intensify effort in assisting the students, teachers and parent know the dangers of avoiding genetic counselling.

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Okoro, Uloaku Nene, et. al. "Teachers of Special Needs Education Understanding of Genetic Counselling As A Preventive Measure for Intellectual Disabilities in Akwa Ibom State." *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 11(2), (2021): pp. 20-25