



ISSN: 2230-9926

Available online at <http://www.journalijdr.com>

IJDR

International Journal of Development Research
Vol. 09, Issue, 10, pp. 30455-30457, October, 2019



RESEARCH ARTICLE

OPEN ACCESS

CONGENITAL DENTAL MALFORMATION AND SPEECH DEVELOPMENT OF PUPILS IN CROSS RIVER STATE, NIGERIA

*Ewa, J.A., Eke, V.U. and Olayi, J.E.

Department of Special Education, Faculty of Education, University of Calabar, Calabar, Nigeria

ARTICLE INFO

Article History:

Received 12th July, 2019
Received in revised form
19th August, 2019
Accepted 30th September, 2019
Published online 16th October, 2019

Key Words:

*Congenital dental malformation,
Cleft palate, malocclusion,
Healthy speech development.*

ABSTRACT

This study investigated the influence of congenital dental malformation and speech development of Pupils in Cross River State, Nigeria. To achieve the aim of the study, three research questions were generated with three corresponding hypotheses to guide the study. Survey research design was used for the study. Simple random sampling technique was used to draw 1200 pupils that serve as sample. A four point Likert-like rating scale of fifteen (15) items questionnaire named Congenital Dental malformation and healthy speech development of school age children in Cross River State, Nigeria questionnaire (CDMAHSDSCCRSNQ) was the instrument used for data collection. The instrument was face and content validated by three experts. Independent t-test was used to test the hypotheses. Based on the findings, conclusion was drawn that congenital dental malformation depending on the severity and type, influence healthy speech development. Therefore, it was recommended among others that awareness campaign by government, health workers and non-government organizations be organized to sensitize parents on the need to engaged medical experts for early intervention.

Copyright © 2019, Ewa et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Ewa, J.A., Eke, V.U. and Olayi, J.E. 2019. "Congenital dental malformation and speech development of pupils in Cross River State, Nigeria", *International Journal of Development Research*, 09, (10), 30455-30457.

INTRODUCTION

Family is the microcosm of the society. Parents and children make up family. The essence marriage institution is for procreation. Every family prays to have healthy child devoid of any health challenge including disabilities. Nonetheless some children are born with disabilities. Glaring case could be that affecting speech. There are truly children born with unhealthy speech that are identified as those with unhealthy speech development. The foregoing affects many children of school going age in Cross River State, Nigeria. This condition affects education and social lives of these children. The condition has come to stay in this part of the country. Efforts so far made has not arrested the situation and researchers seem not to focus on it and the seriousness of the condition on the pupils of this state. This development has necessitated looking at the congenital malformations of these special population. An estimated 30,300 newborns worldwide die within weeks of birth every year due to different forms of congenital malformations.

*Corresponding author: Ewa, J.A.,

Department of Special Education, Faculty of Education, University of Calabar, Calabar, Nigeria

According to the World Health Organization (WHO) document in Ndifreke and Adigeb, (2019) the term congenital malformation is defined as structural defects at birth". Congenital malformation can be viewed as structural or functional malformation including metabolic disorders, which are present at the time of birth. Structural malformations with other congenital malformations are the most common causes of neonatal mortality both in developed and developing countries. The most common and severe congenital malformations are heart defects, cleft lip and palate, spinal bifida, limb defect and Down syndrome (Ndifreke and Adigeb, 2019). The development of the teeth involves complex processes which include biological processes: epithelial, mesenchymal interactions, differentiations, morphogenesis, fibrillogenesis and mineralization (Ohanrajani, 2002). The most common craniofacial deformity is cleft of the lip and cleft of the palate. This constitutes the incomplete fusion of the lip and/or palate, which can appear alone as part of a hereditary syndrome. Family history of cleft increases the chances of inheriting the disorder. Cleft lip with or without a cleft palate occurs most frequently among Nigerian and is found more often in boys than girls (Ikpaye 2004). Cleft lip or

“hare lip” usually appears on one side, and most often on the left. A bilateral or two sided cleft is less common among Nigerians. An incomplete cleft stops short of the nostril; while a complete cleft goes into the nostril. Both cleft types often involve the palate. A typical patient with cleft palate/cleft ridge has defects in the roof of the palate, with an opening into the nasal cavity that makes speech production nasalized. There is also what is called Malocclusion. This is also called a bad bite. Malocclusion is caused by crowded, extra or missing teeth, or jaws not of alignment. Most malocclusion are inherited genetically and can lead to temporomandibular jaw (TMJ) disorders that can result in problems of chewing and speaking. The objective of the diagnosis, and surgical and non-surgical management of malocclusion and potential TMJ complications, is to restore function and eliminates pain (Romito *et al.* 2004). As they grow, babies begin to sort out the speech sounds that compose the words of their language. By 6 months of age most babies recognize the basic sound of their native language (National Institute on Deafness and other communication disorders (NIDCD). Children vary in their development of speech and language skills. However, they follow a natural progressive timetable for mastering the skills of language. Sometimes, a delay may be caused by hearing loss, while other times it may be due to a speech or language disorder. Children who have trouble understanding what others say (receptive language) or difficulty sharing their thoughts (expressive language) may have a language disorder. Specific language impairment is a language disorder that delays the mastering of language skills. Some children with specific language impairment may not begin to talk until their third or fourth year.

Statement of problem: When a child is delivered off by the expectant mother, it is expected that the child undergoes normal development best as a hitch free process. This process among others include speech development prone to be healthy. These children are to be pupils in Primary schools without any element of speech and language challenge. It is disheartening to note that some children are born with unhealthy speech that result to difficulty in making proper pronouncement of certain words. Observably, most of such children’s dentition has been malformed. Most of these children in school find it difficult to speak publicly because of the fear that they will be laughed at when they pronounce certain words wrongly. They become afraid of being labelled or stigmatized. Their thoughts, feelings, actions, emotions among others are affected. The foregoing has remained the challenge of some pupils in primary schools in Cross River State of Nigeria. The condition of this special population of pupils has come to stay in school without recourse to attend to them. This has far reaching effect on these pupils and yet seemed not addressed by researchers. There is no work available to the researchers that have addressed this very ugly trend especially factors that bring about it. The present researcher observed with curiosity the place of congenital malformation in this challenge of unhealthy speech development of these pupils. Malocclusion, Cleft Palate and Taurodontism are instrumental to most congenital malformations. It is on that premise, therefore that, this study sought to find the influence of Malocclusion and Cleft Palate on healthy speech development of pupils in Cross River State, Nigeria.

Purpose of the study: The major purpose of this study was to determine the influence of congenital dental malformations and speech development of pupils in Cross River State, Nigeria.

The study specifically was to determine the influence of

- Malocclusion on speech development among school age children
- Cleft palate on speech development among school age children

Hypotheses

These Hypotheses guided the study

- There is no significant influence of malocclusion on speech development of pupils in C.R.S, Nigeria.
- There is no significant influence of cleft palate on speech development of pupils in C.R.S, Nigeria.

RESEARCH METHODS

The research design adopted for the study was survey design. Survey research design involves the collection of data to accurately and objectively describe the existing condition or phenomena. According to Isanghedighi, Johnson, Asim and Ekuri (2004), the survey research is that which is directed towards determining the nature of a situation as it existed at the time of investigation. This research design was chosen because it can be used to study large and small population by selecting and studying samples chosen from the population to discover the relative incidence, distribution, interrelations of sociological and psychological variables. The population of this study comprised all the primary schools in Cross River State of Nigeria. Nonetheless, Stratified sampling techniques was used to draw 20 schools respectively from the three educational zones of CRS. In each of the school, there was identification of pupils with unhealthy speech development with bias of those born with the condition. Based on that purpose sampling was utilized to draw 1200 pupils with unhealthy speech. The sample for this study was therefore 1200 pupils with congenital unhealthy speech development. The major instrument used for data collection was questionnaire. The researchers developed an instrument named Congenital Dental Malformation and Speech Development of Pupils in Cross River State, Nigeria questionnaire (CDMASDOPICRSN). It was a 15- item questionnaire that consisted two sections A and B. Section A, was designed to collect demographic information from the respondents, while section B was designed to sample opinion from the respondents on the variables under study. The questionnaire was constructed on a four points Likert-like scale of strongly agree (SA), Agree, (A) Disagree (D) and strongly disagree (SD). The Instrument was face and content validated by three experts. The content validation was done by two experts in special education while one expert in Measurement and Evaluation did face validation of the same instrument. Their input gave the instrument status of validity. Research Assistants and the researchers gathered data using the instrument. Data collected in the course of this study were analyzed using Independent t-test was used to analyze the data.

RESULTS

Hypothesis one: There is no significant influence of malocclusion on speech development of pupils in C.R.S, Nigeria.

Table 2. T-test analysis of the influence of malocclusion on speech development of pupils

Variable	N	\bar{x}	SD	t-cal	Decision
Malocclusion	1200	1785	1.92		4.23*
Speech development	1	16.97		2.06	

The result shows that the calculated t-value Q 4.23 was greater than the critical t-value of 1.96 at .05 level of significance and 378u degree of freedom, the null hypothesis was rejected since the calculated t-value was greater than value. This implies that there is a significant effect of malocclusion on healthy speech development.

Hypothesis two: There is no significant influence of cleft palate on healthy speech development of pupils in C.R.S, Nigeria.

- This hypothesis was tested using independent t-test analysis as presented in Table 3.

Table 3. Independent t-test analysis on the influence of cleft palate on speech development of pupils

Variable	N	\bar{x}	SD	t-cal	Decision
Cleft palate	1200	20.23	7.60		5.86
Speech development		17.11		4.19	

Finding of Table 3 revealed that the calculated t-value of 5.86 is greater than the critical t-value of 1.96. Therefore, the null hypothesis which states that there is no significant influence of cleft palate in speech development of pupils was rejected at 0.05 levels of significance.

DISCUSSION OF FINDINGS

The finding from hypothesis one prove significantly that malocclusion influence speech development. This findings is in line with that of Butlers theory which revealed that mammalian dentition have influence on healthy speech development, and that within each field teeth are presumed to be stable., this implies that malocclusion influence speech development. Clayton study (1999) examined 3551 subjects and found that most posterior tooth of a third group was the most frequently missing in the sample. It was discovered that this missing tooth affects speech development among individuals with speech problems. It was found in the study that cleft palate has significant influence on speech development of pupils in primary schools. The finding agrees with that of Ikpaya (2004) that Cleft lip with or without a cleft palate occurs most frequently among Nigerian and is found more often in boys than girls.

There is a close relationship of this with the study's finding hence with that the influence is very obvious. Worse still, the author asserted that an estimated 30,300 newborns worldwide die within weeks of birth every year due to different forms of congenital malformations. This implies that it is not only resulting in unhealthy speech but outright death of the children affected.

Conclusion

From the foregoing, it is concluded that congenital dental malformation influence speech development especially cleft palate and malocclusion that play significant role in bringing about unhealthy speech development of pupils in primary schools under study.

Recommendations

Based on the findings and conclusion of the study the following recommendations were put forward.

- Awareness campaign by government, health workers, non-governmental organization should be organized to sensitize the public most especially parents on reaching medical experts for early intervention.
- Parents should be properly guided by speech therapists through counseling on the dangers posed by congenital dental malformation in children and the need to seek for early intervention.
- Government and Nongovernmental organizations should e include dental health services for children in their free health care delivery programmes to tackle the menace.

REFERENCES

- Dhanrajani P. J. 2002. Hypondontia: Etiology, clinical features and management. *Quintessence Int.* 33:294-302 link: <https://goo.gl/CEKWKO>-Jaspers
- Ged K. R., Cimen M. 2000. Multiple taurodontism: A case report *Journal of dentistry for children* 216-217.
- Hollan G. 2008. Dens invagiy canine: a case report *international journal of pediatric dentistry* 8 61-64 link <https://goo.gllrsHgWx>
- Jeremiah, N. E. and Adigeb, T. U. 2019. Congenital Dental Malformation and implications for Health and speech development among school age children in Uyo Education Zone, Awa Ibom State. Un-published seminar paper, Department of Special Education, University of Calabar, Nigeria.
- Moji. O. 2007. Therapeutic approaches to speech and hearing problems. Gab publication Ibadan ISBN 978-34480-9-9
- Romito, R. &Omata H. 2004. Concrecence: Report of a rate case oral med oral pathol *Radiol Endod* 97:325-327.
- World Health Organization (WHO)
