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Dental Phobia and Its Impacts on School Aged Children at Etegwe Community, Yenagoa L.G.A, Bayelsa State, Nigeria

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ABSTRACT: Etegwe Community in Yenagoa Local Government Area of Bayelsa State, was carried out between September - October 2020. Across sectional survey design was used to examine dental phobia and its impact among school age children, simple random sampling method was used to select 200 school age children used in the study, 91(**45.50%**) and 109(**54.50%**) females and the study was analyzed using **Z** test. A self-administered; close ended questionnaire was used. The results shows that a greater number of school age children have visited the dental Clinical at least once 117(**58.50%**). The level of dentophobia is high between the age range of 6-8, 24(**41.00%**). The study shows that all participants indicated that dentophobia has impacted to their life quality in one way or another majority on health disability 48(**24.00%**). The study revealed a high level of dentophobia due to ignorance, dental fear and poor knowledge of dental treatment and it has impacted immensely on qualities of life of school age children used for the study. Therefore, the importance of this study is that there is an urgent need for free and accurate education on Oral health education about the harmless nature of dental treatment by dental professionals to the school aged children in Etegwe Community to improve oral health knowledge.

Key Words: Aerophobia, Agoraphobia, Claustrophobia, Dental Anxiety, Dentophobia, Mysophobia, Vicious cycle

I. INTRODUCTION

Going to the dentist is something most people hate to do. The dentist is frequently depicted as the antagonist in movies, and the idea of losing a tooth is associated with torture and pain. Whether this stems from a previous bad experience, the media, or friends who have told them horror stories, the result is that they neglect to maintain their dental health by avoiding visits to the dentist, and in turn create more problems. In terms of dental health and overall well-being, one of the primary reasons that most people avoid visiting the dentist and seeking dental care is dental anxiety [1].

Fear and anxiety constitute an important theme in dentistry, especially with children. Fear and anxiety are some usual reactions to stressful conditions. They may help children in staying alert insinuations of impending threat. However, highly fearful, or anxious children generally experience dental visits and treatments in a more negative way[2]. 'Fear', 'Anxiety', and 'Phobia' have related and overlapping connotations yet are not entirely the same. According to the Cambridge Dictionary, both 'fear' and 'anxiety' are described as being 'unpleasant' and related to 'worry', fear was regarded as a reaction and a response to an immediate live threat. For example, the sight of a needle or the sound of drilling can cause the feeling offer. Anxiety is understood as a feeling of fear or apprehension about what is to come. Phobia, on the other hand, is a mental disorder diagnosis and is diagnosed when a person persistently exhibits marked or extreme fear or anxiety responses that might be out of proportion, or cause "marked distress".

Dental phobia refers to the fear of dentistry and of receiving dental care. dental phobia denotes a severe type of dental anxiety and is characterized by marked and persistent anxiety in relation to either clearly discernible situations or objects (e.g. drilling, local anaesthetic injections) or to the dental setting in general[3]. Dental phobia can include fear of dental procedures, dental environment or setting, fear of dental instruments or fear of the dentist as a person. People with dental phobia often avoid the dentist and neglect oral health, which may lead to painful dental problems and ultimately force a visit to the dentist. The emergency nature of this appointment may serve to worsen the phobia[4].

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According to Longman Dictionary of Contemporary English school age' is the age at which a child is old enough to go to school. Quality of life refers to one's perceptions about life, both positive and negative, as a result of the cultural context in which one lives. Quality of life encompasses several domains, including psychological functioning and social relationships among others[5]. Although there has been general improvement in children's dental health over recent decades, dental problems are still highly prevalent during childhood. Dental health plays a key role in the overall health status and quality of life of both children and adults; dental health also may affect several domains of child development and growth [6]. Good dental health enhances the child's ability to develop several physical and social functions such as feeding, breathing, speaking, smiling, and social adaptation. Consequences of dental diseases in children may include pain, discomfort, embarrassment, challenged cognitive development, reduced self-esteem, and impairments of daily life activities Severe caries in young children is associated with underweight, poor growth, irritability, higher risk of hospitalization, disturbed sleeping, and diminished learning ability[7].

Several dental problems in children and adolescents also have been negatively associated with psychosocial well-being. Dental pain affects emotional stability of children and enrollment in social activities such as by preventing children from engaging in playing time[8]. Malocclusion has been associated with reduction in perceived attractiveness by others and social acceptance Traumatic dental injury especially in the anterior teeth has been associated with reduced children's sociability including avoiding to smile, not enjoying contact with other people, and anxiety about others' perceptions of them[9]. Cognitive behavioral therapy, development of coping skills, Medications, distractions psychological approaches has been proven to be ineffective in treatment of the dental phobia [10].

Dental phobia is definitely a problem because it affects such a large portion of the population [11]. Uncooperativeness in dentistry has been conceptualized in different ways. Dental phobia (DP): an excessive or unreasonable fear or anxiety with regard to the challenge/threat of dental examination and treatment, which influences daily living and results in prolonged avoidance of dental treatment[12]. Many investigators have reported fear of dental treatment in children that may result in treatment management difficulties. Behavior management problems are also related to dental factors, such as earlier negative treatment experiences particularly injection, drilling, and extraction, which have been shown to carry the most negative emotional loads. Furthermore, the dentist's attitude toward the pediatric patient is of vital importance for good treatment outcomes [13].

II. METHODOLOGY

The research was a cross-sectional survey carried out, in EtegweCommunity in YenagoaLocal Government Area of BayelsaState, Nigeria. Etegwe community is one the community's found in Epie and Atissa kingdom. Epie and Atissa are two Nations that live along Epie Creek, Northeast of Yenagoa, Bayelsa State, Nigeria. Together, they are commonly known as the Epie-Atissa. This people were established by migrants mainly from the Engenni to the north. The Engenni people are an Edoid group. The Epie-Atissa share cultural aspects of both the Ijaw and the Engenni. Epie-Atissa settlements include: Onopa, Igbogene, Kpansia, Ogu, Edepie, Etegwe, Yenaka, Opolo, Swali, Ikolo, Akenfa, Yenagoa, and Biogbolo. They speak the Epie and English language. The community has being in existence before the independence of Nigeria 1960.

The community is made up of men, women, youths, and children. Most people from Etegwe community are farmers, traders, public and private workers, they are mostly Christians while some practice traditional beliefs. The community has several schools both primary and secondary school. The community also has a town hall where they carry out many activities such as men and women meetings, youth activities, events, and others. The community has a traditional head, community development chairman [**CDC**], youth president and family Chief's that rules the community.

The population of school aged children in Etegwe community is 986 (Nine hundred and eighty-six). 362 males and 624 females. A sample size of 200 school aged children were used, simple random sampling method was used to select 200 school aged children, 91 males and 109 females, to make a total of 200 school age children as the sample size of this work.

An introductory letter was collected from the head of Dental Therapy department in Federal College of Dental Technology and Therapy, Trans-Ekulu, Enugu Sate, Nigeria and was given to the head of the selected community, to get permission and cooperation of members in council and to gain an access to their community for the purpose of the study, the researcher went to various schools in the community with help of members of the

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community members to ascertain cooperation from the schools and parents, the researcher explained to them on the research that was to be carried out on them and the modified dental anxiety scale questionnaire was shared to the students with the help of their teachers and guidance, the researcher explained to them what is required of them from the questionnaire. The questionnaire was filled with the help of their teachers, parents, guidance and submitted back to the researcher.

The data collected was grouped into categories such as sex, age group and classes. Data was analyzed using simple frequency tables and calculation of percentages was used. The results was presented in tables and explained in an easy form for understanding.The hypothesis was tested using the Z test, which is mathematically represented as,

$$z = \frac{x - u}{s/\sqrt{n}}$$

Where
× =sample mean
z =statistical value
μ= population mean
s= sample standard deviation of the population
n= sample size

III. RESULTS

SECTION A: DEMOGRAPHIC DATA

Table 1: Age of Respondent

Age	Frequency (f)	Percentage (%)	Male		Female	
			f	%	f	%
6– 8	24	12	7	7.7	13	11.9
9– 11	35	17.5	14.3	14.3	22	20.2
12 – 15	82	41	37	40 7	45	41.2
Above 15	59	29.5	34	37.3	29	26.6
Total	**200**	**100**	**91**	**100**	**109**	**100**

Source: Field Survey, 2020

Table **1** above shows different age groups involved in the study. A total number of 200 children of 24(**12%**) were between the age range of 6-8yrs of which 7(**7.7%**) were males and 13(**11.9%**) were females. 35(**17.7%**) respondents were between the age range of 9-11yrs of which 13(**14.3%**) were males and 22(**20.2%**) were females. 82(**41%**) of respondents were between the age range of 12-15yrs of which 37(**40.7%**) were males and 45(**41.3%**) were females. 59(**29.5%**) of respondents were above 15 years of age of which 34(**37.3%**) were males and 29(**26.6%**) were females.

Table 2: Classes of Respondents

Class	Frequency (f)	Percentage (%)	Male		Female	
			f	%	f	%
Primary 3	12	6	5	5.5	7	6.4
Primary 4	32	16	14	15.5	18	16.5
Primary 5	28	14	12	13.2	16	14.7
Primary 6	49	24.5	29	31.9	20	18.3
JSS 1	32	16	13	14.3	19	17.4
JSS 2	21	10.5	7	7.6	14	12.8
JSS 3	26	13	11	12.1	15	13.9
Total	**200**	**100**	**91**	**100**	**109**	**100**

Source: Field Survey, 2020

Table **2** above shows six (7) different classes of respondents. A total of 12(**6%**) respondents were in primary three of which 5(**5.5%**) are males while 7(**6.4%**) are females. 32(**16%**) respondents were in primary four of which 14(**15.4%**) are males and 18(**16.5%**) are females, 28(**14%**) respondents were in primary five of which 12(**13.2%**) are males and 16(**14.7%**) are females , 49(**24.5%**) respondents were in primary six of which 29(**31.9%**) are males and 20(**18.3%**) are females, 32(**16%**) respondents were in primary JSS1 “Junior Secondary School 1” of which 13(**14.3%**) are males and 19(**17.4%**) are

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females, 21(**10.5%**) respondents were in JSS2 "Junior Secondary School 2" of which 7(**7.7%**) are males and 14(**12.8%**) are females , and 26(**13%**) respondents were in JSS3 "Junior Secondary School 3" of which 11(**12.1%**) are males and 15(**3.9%**) are females .

Table 3: Sex Distribution of Respondents

Sex	Frequency (f)	Percentage (%)
Males	91	45.5
Females	109	54.5
Total	**200**	**100**

Source: Field Survey, 2020

Table **3** above shows that 200 respondents were involved in the study in which 91 (**45.5%**) were males and 109(**54.5%**) were females.

SECTION B: RELEVANT QUESTIONS TO THE RESEARCH

Table 4: Previous Visit to the Clinic

Option	Frequency (f)	Percentage (%)	Male		Female	
			f	%	f	%
Yes	117	58.5	36	39.6	81	74.3
No	83	41.5	55	60.4	28	25.7
Total	**200**	**100**	**91**	**100**	**109**	**100**

Source: Field Survey, 2020

Table **4** above shows that 117(**58.5%**) of which 36(**39.6%**) males and 81(**74.3%**) females respondents have visited the dental clinic while 83 (**83.5%**) of which 55(**60.4%**) males and 28(**25.7%**) females respondents have not visited the dental clinic before.

Table 5: **Reasons for Visiting the Clinic**

Reasons	Frequency (f)	Percentage (%)	Male		Female	
			f	%	f	%
For treatment	42	35.9	8	22.2	41	50.6
To see a friend	19	16.2	18	50	16	19.8
Other reasons	56	47.9	10	27.8	24	29.6
Total	**117**	**100**	**36**	**100**	**81**	**100**

Source: Field Survey, 2020

Table **5** above shows that 42(**35.9%**) respondents have visited the dental clinic for treatment, of which 8(**22.2%**) are males and 41(**50.6%**) are females, 19(**16%**) respondents visited the clinic to see a friend of which 18(**50%**) are males and 16(**19.8%**) are females, and 56(**47.9%**) of which 10(**27.8%**) males and 24(**29.6%**) females respondents have visited the dental clinic for other reasons.

Table 6: Reasons for Not Attending the Clinic

Reasons	Frequency (f)	Percentage (%)	Male		Female	
			f	%	f	%
Dental fear	21	25.3	12	21.8	9	32.1
Financial problem	37	44.6	27	49.1	10	35.7
Ignorance	17	20.5	11	20	6	21.4
Other reasons	8	9.6	5	9.1	3	10.8
Total	**83**	**100**	**55**	**100**	**28**	**100**

Source: Field Survey, 2020

Table **6** above shows that 21(**25.3%**) respondents are has dental fear of which 12(**21.8%**) are males and 9(**32.1%**) are females fear, 37(**44.6%**) respondents has financial

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problems of which 27(**49.1%**) are males and 10(**35.7%**) are females, 17(**20.5%**) respondents are ignorant dental clinic of which 11(**20%**) are males and 5(**16.5%**) are females and 8(**9.6%**) respondents have other reasons for visiting the dental clinic. of which 5(**9.1%**) are males and 3(**10.8%**) are females.

Table 7: **Dentophobic Scale of the Participants**

Option	**Frequency (f)**	**Percentage (%)**
No dentophobia	34	17
Slight dentophobia	51	25.5
Moderate dentophobia	39	19.5
High dentophobia	58	29
Severe dentophobia	20	10
Total	**200**	**100**

Source: Field Survey, 2020

Table **7** above shows that 34(**17%**) respondents are not dentophobic, 51(**25.5%**) respondents have slight dentophobia, 39(**19.5%**) respondents have moderate dentophobia, 28(**35%**) respondents have moderate dentophobia, 58(**29%**) respondents have dentophobia, and 20(**10%**) have severe dentophobia.

Table 8: Sex Specific Prevalence of Dentophobia

Option	**Frequency (f)**	**Percentage (%)**	**Male**		**Female**	
			f	**%**	**f**	**%**
No dentophobia	34	17	15	16.5	19	17.4
Slight dentophobia	51	25.5	25	27.5	26	28.6
Moderate dentophobia	37	19.5	15	15.4	25	22.7
High dentophobia	58	29	26	23.9	32	35.2
Severe dentophobia	20	10	8	8.8	12	11
Total	**200**	**100**	**91**	**100**	**109**	**100**

Source: Field Survey, 2020

Table **8** above shows that 34(**17%**) respondents are not dentophobic, 15(**16.5%**) are males and 19(**17.4%**) are females; 51(**25.5%**) respondents have slight dentophobia of which 25(**27.5%**) were males while 26(**28.6%**) were females, 37(**19.5%**) have moderate dentophobia, 15 (**15.4%**) are males and 25(**22.7%**) are females, 58(**29%**) have high dentophobia, 26 (**23.2%**) are males and 32(**35 2%**) are females and 20(**10%**) respondents have severe dentophobia, 8(**8.8%**) are males and 12 (**11%**) are females.

Table 9: **Age – Specific Prevalence of Dentophobia**

Option	**Frequency (f)**	**Percentage (%)**	**6-8yrs**		**9-11yrs**		**12-15yrs**		**Above 15yrs**	
			f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
No dentophobia	34	17	7	20.6	3	8.8	11	32.4	13	38.2
Slight dentophobia	52	25.5	19	37.3	11	21.4	15	29.4	6	11.8
Moderate dentophobia	39	19.5	8	20.5	14	35.9	7	17.9	10	25.7
High dentophobi	58	29	24	41.5	9	15.5	14	24.1	11	18.9

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Severe Dentophobia	20	10	6	30	4	22.2	8	40	2	11.1

Source: Field Survey, 2020

Table **9** above shows that34(**17%**) respondents have high dentophobia, out of which 7(**20.6%**) respondents are between the age range of 6-8yrs, 3(**8.8%**) are between the age range of 9-11yrs, 11(**32.4%**) are between the age range of 12-15yrs, and 13(**3.2%**) respondents are above 15.51(25.5%) respondents have slight dentophobia, out of which 19(**37.3%**) respondents are between the age range of 6-8yrs, 11(**21.5%**) are between the age range of 9-11yrs, 15(**29.4%**) are between the age range of 12-15yrs, 6(**11.8%**) and 24(**41.5%**) respondents are above 15.39 (**19.5%**) respondents have moderate dentophobia, out of which 8(**20.5%**) respondents are between the age range of 6-8yrs, 14(**35.9%**) are between the age range of 9-11yrs, 7(**17.9%**) are between the age range of 12-15yrs, 4(**16%**) and 10(**25.7%**) respondents are above 15.58 (**29%**) respondents are not dentophobic, out of which 24(**41.5%**) respondents are between the age range of 6-8yrs, 9(**18.9%**) are between the age range of 9-11yrs, 14(**24.1%**) are between the age range of 12-15yrs, 3(**20%**) and 11(**18.9%**) respondents are above 15.20 (**10%**) respondents have severe dentophobia, out of which 6(**30%**) respondents are between the age range of 6-8yrs, 4(**22.2%**) are between the age range of 9-11yrs, 8(**40%**) are between the age range of 12-15yrs, and 2 (**11.1%**) respondents are above 15yrs.

Table 10: Impact of Dentophobia in Children

Option	Frequency (f)	Percentage (%)	Male		Female	
			f	%	f	%
Social disability (Shyness)	15	7.5	9	9.9	6	5.5
Sleep & eating disturbance (health)	48	24	21	23.1	27	24.8
Behavioral impact	26	13	10	10.1	16	14.7
Improve oral hygiene	19	9.5	7	7.7	12	11
Poor academic performance	25	12.5	11	12.1	14	12.8
Physiological impact	36	18	20	21.9	16	14.7
Low interaction with other kids	31	15.5	13	14.4	18	16.5
Total	**200**	**100**	**91**	**100**	**109**	**100**

Source: Field Survey, 2020

Table **10** above shows that a total number of 15(**7.5%**) respondents have social disability such as Shyness of which 9(**9.9%**) are males and 6(**5.5%**) are females 48(**24%**) respondents have health disability of which 21(**23.1%**) are males and 27(**24.8%**) are females, 26(**13%**) respondents have behavioral disability of which 10(**10.9%**) are males and 16(**14.7%**) are females, 19(**9.5%**) respondents have improve oral hygiene, of which 7(**7.7%**) are males and 12(**11%**) are females, 25(**12.5%**) respondents have poor academic performance, of which 11(**12.1%**) are males and 14(**12.8%**) are females 36(**18%**) respondents have physiological disability of which 20(**21.9%**) are males and 16(**14.7%**) are females, 31(**15.5%**) respondents have low interaction with other kids. of which 13(**14.3%**) are males and 18(**16.5%**) are females.

IV. DISCUSSION & CONCLUSION

The aim of this research work was to examine dentophobia and its impact on the quality of life among school aged children at Etegwe community in Yenagoa Local Government Area of BayelsaState of Nigeria. In this study, a total of 200 respondents were used, 91(**54.5%**) are males and 109(**54.5%**) are females. The following were observed from the data obtained through the use of a specially designed phobia measurement questionnaire "The Modified Dental Anxiety Scale".

The survey carried out at Etegwe community, had five different age ranges ages 6 – 8yrs had (**12%**), 9– 11yrs had (**17.5%**), 12 – 15yrs had (**41%**), and above 15 years had (**29.5%**). The highest number of participants was between the age group of 12 – 15yrs with 82(**41%**) students. This is evidence that the greatest number of school aged children are between the age group of 12 – 15yrs in Etegwe community. The results obtained from

table 3, shows that a greater number of females 109(**54%**) than males 91 (**45.5%**) were involved in the study. The reasons for not attending the dental clinic for dental treatment as obtained in table **6** is mostly due to financial problem, 26(**25.3%**) respondents have fear of dental treatment, 37(**44.6%**) respondents has financial problem, 17(**20.5%**) respondents are ignorant to dental clinic and 8(**9.6%**) respondents has other reasons for going to dental clinic.

Table **4**, shows that a greater number of school age children have visited the dental clinic at least once 117(**58.5%**). This is in contrast with the researcher's thought before the research work who believed that school aged children are uncomfortable with any treatment to be rendered by a dentist. Also, from table 5, the results obtained shows that 42(**35.9%**) respondents, have been to the dental clinic to receive treatment, 19(**16.2%**) respondents have been to dental clinic to see or escort a friend and 56(**47.9%**) have other reasons for going to dental clinic.

The results obtained from table **8** showed that school aged children have severe dentophobia, 20(**10%**) respondents has severe dentophobia, 8(8**.8%**) are males and 12(**11%**) are females, this is in line withVan Wijk& Hoogstraten[14]that women tend to have dental fear than men. The results obtained from table **9** showed that above 15yrs of age are less dentophobic 13**(38.2%**) this is in agreement withNewton, Asimakopoulou, Daly&Scambler et al.[15]that younger people tend to report being more dentally fearful than older individuals. The results obtained from table 9 showed that the respondents between the age range of 6-8yrs has the highest degree of high dentophobia, 24(**41%**) respondents are between the age range of 6-8yrs.The results obtain from table **10** shows that dentophobia has interfered greatly with daily living of children mostly health. 48(**24%**) respondents have health disability, 15(**7.5%**) respondents have social disability, 31(**15.5%**) have low interaction with other kids due to dentophobia.

To this end, it is not likely that pathological forms of dentophobia are an exception. The present findings suggest that for the majority of these children, who have been avoiding dental care for a long period of time, besides the apparent functional impairments (e.g. poor oral health and endurance of dental abscesses), psychological and social dimensions of their dentophobia problem (e.g.uncertainty, fear of confrontations with treatment and pain, as well as embarrassment about missing, or damaged teeth) have profound effects on their quality of life. These findings within the dental context show that the participants of the present study encountered more problems affecting daily living.

Conclusively, Dental phobia and quality of life are both issues of central importance in dental care. Dental phobia has proven to be a major barrier to access and the provision of appropriate dental care, while quality of life becomes of growing importance when trying to understand the impact of dental problems, and the effectiveness of interventions, upon patients' wellbeing. The results of the present study highlight the importance of dental phobia in relation to qualify of life. Dental phobia appeared to be significantly correlated with the impact of oral health on quality of life. The impact of phobia on daily living when patients applied for treatment appeared to be considerable. All participants indicated that their phobia affected their life quality in one way or another. The results further showed that dental phobia had more impact on their sense of happiness than oral health did. present findings shows that dentophobia and quality of life are negatively correlated, treatment of anxious patients is not only effective in terms of alleviating dental trait phobia and improving oral health, but also that it can lead to substantial improvements concerning various aspects of patients' quality of life. The finding that reduction of dental phobia rather than improved oral health contributed to enhanced quality of life may have significant clinical implications. Therefore the importance of this study is that an urgent free and accurate oral health education on the harmless nature of dental treatment by dental professionals should be conducted to both parents and school aged children in Etegwe Community and that the treatment of dentally anxious patients should be focused on reduction of dental phobia and not only be aimed to make dental treatment possible.

V. RECOMMENDATION

From the researchers observation, the followings are recommended:

1. The government should incorporate Oral Health Education into the Curriculum of school children, so that students will be enlightened on the importance of taking care of their Oral health.

2. Government agencies and private organization should sponsor oral health education programme and seminars for parents on the importance of good oral health practice in the various communities.

3. Government, dental professional and other organizations should help to establish dental clinic in the community level and also render oral care services at reduce cost.

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