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Research Paper

The Level of Oral Health Awareness among the Students Attending City Girls Secondary School Ogui, Nike. Enugu

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ABSTRACT
This study investigated the level of oral health awareness among students attending City Girls Secondary School Ogui, Nike between February to March 2021. Enugu. A cross-sectional research design was employed to generate quantitative data from 180 respondents using self-structured questionnaire and the data was analyzed using simple frequency tables and percentages. The age range of the study participants were 11-12, 13-14, 15-16, 17-above, but the highest number is in 13-15,being 78(53%) indicating that there may be more of this age group in the school.
The study revealed thatbyassessing the general oral health awareness of the students, that up to 148 (82%) of these students had a satisfactory knowledge on oral health while 32(18%) of the students were deficient of it. Most of the respondents claimed they have heard of oral health Awareness. 50(28%) of the respondents got their information from the radio/television while the rest got it from the other options or never heard it. Showing that most students watch television and listen to radio programs. It could be recommended that there is a need for reinforcement of their knowledge level for the sustenance of their oral health by including oral health education in the already existing school curriculum.

KEYWORDS: ***Alzheimer, Disease, Meta-Analysis, Dentistry, Health And Oral.***

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I. INTRODUCTION

Background to Study

Oral health awareness is an individual or collective alertness to the existence and prevention of oral disease and an equal alertness in taking necessary steps to obtain treatment for those disease when they occur (Jeboda, 2015), this will lead to oral health which according to Locker (2014), is not merely an absence of disease but also include functional aspect, social and psychological well-being thereby focusing on optimal functioning of social roles. Oral health is an essential aspect of general health, as such, appropriate oral health attitudes and behavior are an essential pre-requisite for health-related practices (Carneiro, *et al*, 2018). To prevent common oral diseases, specific measures such as regular tooth brushing and flossing, fluoridation, sealants, healthy nutritional habits and regular dental attendance must be promoted and encouraged, and these are gotten through oral health education which will result in oral health awareness creation (Olusile 2010).

The attitude of an individual toward oral health depends upon his own experience, lifestyle, belief, cultural value, financial status, time, and influence of the surrounding. Therefore, awareness and knowledge are very crucial to avoid many diseases and complications, just as lack of awareness and less education comes hand in hand with low socio-economic status (Sofola, et al, 2017).

The achievement of what constitutes the entity referred to as (Oral) health is gotten through several measures and activities, these include the acquisition of knowledge especially of oral diseases and their preventions, acceptable oral hygiene, and non-harmful dietary practices as well as utilization of available facilities (Sofola, et al, 2017). According to Nyamuryekung'e (2012) 0ral hygiene behavior and seeking oral health care depend on several factors. Patients comply better with oral health care regimens when informed and positively reinforced. Lack of information is among the reasons for nonadherence to oral hygiene practices. Further, oral health attitudes and beliefs are significant for oral health behavior.

A higher likelihood of seeking preventive dental care is found to be associated with dental health knowledge (Nyamuryekung'e 2012). Kuwait (2018) stated that the inadequate perception about oral health has a direct effect on the treatment seeking behavior of the individual and population. Kuwait (2018) further stated that people are not well informed about steps to take in both the prevention and treatment of oral disease which is not limited to malocclusion, traumatize teeth, dental fluorosis, and oral tumor.

In recent years, attention has been drawn toward assessing the effectiveness of oral health programmers as oral disease remains the most prevalent condition in the world, especially among school children and is largely preventable. Current researchhas linked the condition of oral cavities, especially dental plaque accumulation and periodontal health to several systematic diseases including cardiovascular diseases, diabetes mellitus and preterm low birth (Sofola, et al, 2017).

Patients comply better with oral health care regimes when informed and positively reinforced (Kneck, 2015). Oral health education methods must be strengthened and rigorously carried out while bearing in mind the social determinants of health in our environment without which oral health talks would have no impact (Zhu et al, 2015).

Oral health awareness provides a broad knowledge about oral health and is a foundation for attitude and practice of oral health. With improvement in communication via information technology, structured oral health system and informed background of the student's awareness, there are various means awareness should translate to better oral health.

Statement of the Problem

Many children face challenges regarding their oral health because of lack of awareness or knowledge of oral health and their daily high intake of sugary foods and drinks (Orenstein, 2011). Although various forms of oral awareness programmes have been conducted in schools and other settings, yet a high level of oral health awareness is yet to be attained and sustained because of peer pressure, increase in the intake of sugary foods without caring for the teeth and oral tissues after consumption (Sofola, 2017). In view of the above, the researcher intends to carry out a study to determine the level of oral health awareness among students at City Girls Secondary School Ogui, Nike.Enugu.

Objective of the Study

The objective of the study is to assess the level of oral health awareness among the students attending City Girls Secondary School Ogui, Nike.Enugu.

The specific objective of this study includes:

1. Assess the level of oral health awareness among the students attending City Girls Secondary School Ogui, Nike.Enugu.
2. Ascertain the class-related distribution of oral health awareness among the students.
3. Determine their sources of information

Research Questions

The following research questions were developed to guide the study**.**

1. What is the level of awareness of the students attending City Girls Secondary School Ogui, Nike.Enugu.?
2. Which is the class-related distribution of oral health awareness?
3. What are their sources of information on oral health?

Statement of Hypothesis

Ho: The level of oral health awareness among the students attending City Girls Secondary School Ogui, Nike.Enugu is not significantly high.

Ha: The level of oral health awareness among the students attending City Girls Secondary School Ogui, Nike.Enugu is not significantly high.

Significance of Study

The study is significant in the sense that it will help to ascertain the level of oral health awareness among the students attending City Girls Secondary School Ogui, Nike.Enugu. This will provide data which will help the school management in the planning of appropriate programs toward educating the students on the effects of poor oral health and the appropriate methods of reducing oral health problems through proper oral hygiene measures. The result of this study will be kept in the data base of Legacy University, The Gambia, for oral health programmes.

Scope of the Study
The study was limited to the students attending City Girls Secondary School Ogui, Nike. Enugu.

II. RESEARCH METHODOLOGY

Research Design
A cross-sectional survey design was used to study the level of oral health awareness among the students at City Girls' Secondary school Ogui Nike Enugu. The choice of cross-sectional design is necessary because data was collected at a particular point in time, considering the age group and classes of the students.

Description of the Study Area
The study area is City Girls Secondary School Ogui Nike Enugu. The school was established in the year 1978 by the state government. It was formerly located near the JAMB office and now relocated to Ogui Nike Enugu-North, and it comprises only of day students. The school has ten blocks, which is made up of twenty-two classrooms, an Administrative block, Biology Lab, Chemistry Lab and the library. The school has a recreation center for sporting activities, and a space for morning assembly activities. It has a total population of 802 students with 45 teaching staffs and 21 Nonteaching staffs. It is bounded by Metropolitans Girls school, Woman Training Collage (WTC) and Exam Development Center (EDC) (Source: Mrs. Ngozi Agu; Principal- personal communication).

Population of the study
City Girls Secondary School Ogui Nike has a total population of 802 students with forty-five (45) teaching staff and Twenty-one (21) non-teaching staff (Source: Mrs. Ngozi Agu; Principal- personal communication).

Sample size and Sampling Technique
A sample size of 180 students attending City Girls Secondary School Ogui Nike Enugu State was selected using Proportional stratified sampling technique; the classes were divided into strata's and 30 students each were selected from each of the classes of JSS1 to SS3 using simple random sampling technique.

Instrument for Data collection
The instrument used for data collection was a closed-ended questionnaire. This was modeled in line with the one used by Omale (2018).

Method of Data Collection
After obtaining approval from Legacy University, The Gambia, an introductory letter was collected from the BDTH lead facilitator and was presented to principal of City Girls Secondary School Ogui Nike, Enugu for a free access and cooperation of the students and staff to get their supports. Two teachers were assigned to help me with the sample selection process; the same teachers also helped with the administration of questionnaires to the students. The questionnaires were collected immediately after the students finished filling inthem.

Method of Data Analysis
The data was arranged, grouped and computed into different categories and analyzed using simple frequency tables and percentages. The results obtained were also calculated and presented in tables, figures and essay forms for easy understanding.

Method of Data Presentation
The data was presented in group such as sex, age, and class of the students and computed into different categories and analysed using simple frequency tables and percentages. The results obtained were also calculated and presented in tables, figures and essay forms for easy understanding.

Test of Hypothesis
The Hypothesis was tested using Z test which is mathematically represented as

$$\boldsymbol{z} = \frac{\boldsymbol{x} - \mu}{\boldsymbol{s}/\sqrt{\boldsymbol{N}}}$$

Where $\boldsymbol{x}$= *sample means*
$\boldsymbol{\mu}$ = *population means*
$\boldsymbol{s}$ =*standard deviation*
$\boldsymbol{n}$ = *sample size*

III. DATA ANALYSIS AND PRESENTATION

Presented below are the results of the data analyzed in simple frequency table and easy comprehension.The data was arranged, grouped and computed into different categories and analyzed using simple frequency tables and percentages. The results obtained were also calculated and presented in tables, figures and essay forms for easy understanding.

Table 1. Classes of Respondents

Classes	Frequency	Percentage %
JSS1	30	16.67
JSS2	30	16.67
JSS3	30	16.67
SS1	30	16.67
SS2	30	16.67
SS3	30	16.67
Total	**180**	**100**

Table 1 above shows that the respondents werefrom six (6) classes from JSS1-SS3; 30 (16.67%) respondentsselected from each of the classes.

Table 2. Age Distribution of the Respondents

Age range	Frequency	Percentage%
10-12	55	30.5
13-15	78	43.3
16-18	45	25
19-abvoe	5	2.7
Total	**180**	**100%**

Table 2: shows different age groups that were involved in the study 55(30.5%) respondents were between the ages 10-12, 78(43.3%) respondents were between the age of 13-15, 45(25%) respondents were between the age of 16-18, and 5(2.7%) respondents were between the age of 19 and above.

Table 3. Ages of Respondents in each class

Age	JSS1 %	JSS2 %	JSS3 %	SS1 %	SS2 %	SS3 %
10-12	28 (93.3)	22 (73.3)	5 (16.6)	_ _	_ _	_ _
13-15	2 (6.6)	8 (26.6)	25 (83.3)	27 (45)	14 (46.6)	2 (6.6)
16-18	_ _	_ _	_ _	3 (10)	6 (20)	24 (80)
19-above	_ _	_ _	_ _	_ _	10 (33.3)	4 (13.3)
Total	30 (100)	30 (100)	30 (100)	30 (100)	30 (100)	30 (100)

Table 3 shows the age of the respondents in each class 28(93.3%), 22(73.3%) and 5(16.6%) are the number of respondents that fall between the ages of 10-12 in JSS1, JSS2 and JSS3 respectively.

2(6.6%), 8(26.6%), 25(83.3%), 27(45%),14(46.6%) and 2(6.6%) are the number of respondents that fall between the ages of 13-15 in JSS1, JSS2, JSS3, SS1 and SS3 respectively.
3(10%), 6(20%) and 24(80%) are the number of respondents that fall between the ages of 16-18 in SS1, SS2 and SS3 respectively. While 10(50%) and 4(13.3%) are the number of respondents that fall between the ages of 19 and above in SS2 and SS3 respectively**.**

Table 4. Respondents' knowledge of oral health awareness

S/N	Questions	SD %	D %	A %	SA %

1	To keep teethhealthy, it is necessary to brush after breakfast in the morning and last thing at night.	28 (15.56)	20 (11.11)	72 (40)	60 (33.33)
2.	It is necessary to always rinse our mouth with water after each meal to remove food debris trapped between the teeth.	19 (10.56)	25 (13.89)	79 (43.89)	57 (31.67)
3	It is necessary to go for dental check-up at least once a year.	25 (13.89)	31 (17.22)	70 (38.8)	54 (30)
4	Caring for your mouth is as important as caring for other parts of the body.	28 (15.56)	37 (20.56)	55 (30.56)	60 (33.33)
5	Foods and drinks with sugar such as sweets, chewing gum and soft drinks destroy your teeth.	32 (17.78)	41 (22.78)	61 (33.89)	46 (25.56)
6	Eating fruits like apple, pawpaw, pineapple, watermelon etc. keeps the teeth.	22 (12.22)	46 (25.56)	52 (28.89)	60 (33.33)
7	It is possible to prevent oral diseases by brushing, flossing and avoiding sugar.	24 (13.33)	35 (19.44)	54 (30)	67 (37.22)
8	It is good to remove food particles trapped between the teeth with dental floss Instead of toothpick	44 (24.44)	51 (28.33)	29 (16.11)	56 (31.11)
9	Chewing stick is used for cleaning the teeth	20 (11.11)	24 (13.3)	62 (34.44)	74 (41.11)
	Total	242(134.45)	310(172.19)	534 (296.58)	534 (296.66)

Table 4 above shows the knowledge of the students on oral health. According to the result of the study, those who strongly disagreed that to keep the teeth healthy, it is necessary to brush after breakfast in the morning and last thing at night were 28(15.56%), those that disagreed were 20(11.11%), 72(40%) agreed and 60(33.33%) strongly agreed.

Those who strongly disagreed that it is necessary to always rinse our mouth with water after each meal to remove food debris trapped between the teeth 19(10.56%), those who disagreed were 25(13.89%), those who agreed were 79(43.89%) and 57(31.67%) strongly agreed.

Those who strongly disagreed that it is necessary to go for dental check-up at least once a year were 25(13.89%), those who disagreed were 31(17.22%), those who agreed were 70(38.8%) and 54(30%) strongly agreed.

Those who strongly disagreed that caring for your mouth is as important as caring for other parts of the body were 28(15.56%), those who disagreed were 37(20.56%), 55(30.56%) agreed and 60(33.33%) strongly agreed.

Those who strongly disagreed that foods and drinks with sugar such as sweets, chewing gum and soft drinks destroy the teeth were 32(17.78%),41(22.78%) disagreed,6(5%), 61(33.89%) agreed and 46(25.56%) strongly agreed.

Those who strongly disagreed that eating fruits like apple, pawpaw, pineapple, watermelon, etc. keeps the teeth healthy were 22(12.22%),46(25.56%) disagreed,3(2.5%), 52(28.89%) agreed and 60(33.33%) strongly agreed. Those who strongly disagreed that it is possible to prevent oral disease by brushing, flossing and avoiding sugar were 24(13.33%), 35(19.44%) disagreed, 54(30%) agreed and 67(37.22%) strongly agreed.

Those strongly disagreed that it is good to remove food particles trapped between the teeth with dental floss instead of toothpick, finger or broom 44(24.44 %), 51(28.33%) disagreed, 29(16.11%) agreed and 56(31.11%) strongly agreed.

Those strongly disagreed that chewing stick is used for cleaning teeth 20(11.11%), 24(13.3%) disagreed, 62(34.44%) agreed, 74(41.11%) strongly agreed.

Table 5. Respondents' awareness of dental health problem.

Are you aware of dental problem?	**Frequency**	**Percentage %**
Yes	148	82.22
No	32	17.78
Total	**180**	**100**

Table 5 (i) above shows the students' awareness of dental problems. 148(82.22%) are aware of dental problems while 22 (17.78%) are not aware of dental problems.

Table 6. Respondent experience of dental health problem

Have you experienced any dental problem?	**Frequency**	**Percentage** %

Yes	64	35.56
No	116	64.4
Total	180	100

Table 5(ii) shows 64(35.56%) has experienced dental problems while 116(64.4%) has not experienced it.

Table 7. Respondent heard of dental health.

Have you heard of oral health education?	**Frequency**	**Percentage %**
Yes	44	24.44
No	136	75.56
Total	180	100

Table 5(iii) shows that 44(24.44%) have heard of oral health education while 136(75.56%) have not heard of oral health education.

Table 8. Respondents' sources of information

Where did you get the information?	**Frequency**	**Percentage %**
Church	33	18.33
Social gathering	17	9.44
Radio/television	65	36.11
Newspaper	10	5.55
Others	10	5.55
None of the above	45	25
Total	**180**	**100**

Table 6 shows that 33(18.33%) got their information from the church, 17(9.44%) got their information from social gathering, 65(36.11%) got their information from the radio/television, 10(5.55%) got their information from the newspaper, 10(5.55%) got their information from others and 45(25%) had no information at all.

Table 9. Respondents' awareness on oral health in relation to their ages.

Awareness oforal health	**Frequency %**	**10-12 %**	**13 –15 %**	**16 - 18 %**	**19 –above %**
Yes	103 (57.22)	18 (10)	26 (14.44)	38 (21.11)	21 (11.67)
No	77 (42.78)	25 (13.89)	19 (10.56)	18 (10)	15 (8.33)
Total	**180 (100)**	**43 (23.89)**	**45 (25)**	**56 (31.11)**	**36 (20)**

Table 7 shows that 38(21.11%) respondents within the age group of 16-18 have a higher level of awareness of oral health education than those 18(10%) within the age of 19- above. While 25(13.89%) within the age of 10-12, 19(10.56%) within the age of 13-15. 18(10%) within the age of 16-18 and 15(8.33%) within the age of 19-above were not aware of oral health education.

IV. Discussions

This study presented a comprehensive overview and information about oral health awareness among selected students at City Girls' Secondary School, Ogui Nike, Enugu. A total of 180 students were selected for the study and all of them are females because the school is a female school. The age range of the study participants were 10-12, 13-15, 16-18, 19-above, but the highest number is between 13-15years old,being 78(43.33%).

Most of the students had satisfactory knowledge on the causes on various preventive measures of oral diseases, such as, knowing that it is necessary to brush the teeth after breakfast in the morning and last thing at night, to avoid intakes of foods and drinks that contain sugar, to go for dental check-up at least once in a year, and that it is possible to prevent oral diseases by brushing, flossing and avoiding sugar. These findings are also supported by the studies conducted by Omale (2018) that the findings from the study revealed a significant high knowledge of positive dental health among the participants. Most students, about 45 (25%) and 75 (62.5%) respectively, had positive attitudes towards their oral health status, as most of them either strongly agreed or agreed that caring for the mouth is as important as caring for other parts of the body. This agrees with the findings of Omale (2018) who explained that maintaining positive attitudes will go a long way in preventing dental health problems.

Level of oral health awareness in relation to the different age groups show that 38(21.11%) respondents within the age group of 16-18 have a higher level of awareness of oral health education than those 18(10%) within the age of 19- above. While 25(13.89%) within the age of 10-12, 19(10.56%) within the age of 13-15.

18(10%) within the age of 16-18 and 15(8.33%) within the age of 19-above were not aware of oral health education.

Further questioning of the students to corroborate the findings on the questionnaire shows that38 most of the students brushed twice a day 85(70.83%). This could be that they have some knowledge of oral hygiene practices. Most of the students used fluoride toothpaste and toothbrush in cleaning their teeth while most of them claimed never to have used chewing stick in cleaning. This is also in agreement with Omale (2018) who explained that it could be attributed to the fact that most modern-day children prefer using toothbrushes to chewing sticks. Most of the students used either vertical or horizontal techniques in brushing their teeth with the least number of them using roll technique of brushing. This could be because ofinappropriate information on oral hygiene practices. All the students eat fruit.

As regards the respondents' sources of information, 33(18.33%) got their information from the church, 17(9.44%) got their information from social gathering, 65(36.11%) got their information from the radio/television, 10(5.55%) got their information from the newspaper, 10(5.55%) got their information from others and 45(25%) had no information at all. This findingagrees with Attah (2016) who also observed that majority of people get their oral health information from the radio and television.

V. Conclusion

The study carried out showed that there is poor oral health awareness among the students at City Girls' Secondary School, Ogui Nike, Enugu. This could be attributed to inappropriate awareness of oral health. Their oral health can be improved if emphasis is laid on the importance of oral health to overall health and well-being. This can be achieved if oral health education is installed in the school curriculum and enforced by the school authorities to carry it out regularly.

Recommendations

From the results the following recommendations are very important for the enhancement of the oral health awareness of the students towards improving the education on oral health.

1. Oral education should be included in the school curriculum and training of teachers and be incorporated into some textbooks used by students in secondary schools.
2. Dental therapists are also advised to put more effortinto reaching out to some schools located on the out sketch especially boarding schools that hardly get information and create oral health awareness among them.
3. Oral health programs should be carried out on the mass media, i.e. radio/television stations as well as articles in newspapers and magazines students are likely to read to get informed as well as the public on the available measures one can prevent oral health problems too.

Suggestion for further Studies

1. The need to enhance oral health awareness in schools.
2. Effects of poor oral hygiene practiceon oral health among adolescents.
3. Oral hygiene measures adopted by inmates of Enugu correctional home**.**

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APPENDIX I

Dear Respondent,
Please provide the appropriate answers to the questions that are asked below as all the information you provide will be treated with maximum confidentiality.

Thanks for your co-operation.

1. Age group (years) (a) 10-12 (b) 13-15 (c) 16-18 (d) 19 and above
2. Class (a) JSS I (b) JSSII (c) JSS III (d) SS I (e) SS II (f) SS III
3. To keep your teeth healthy, it is necessary to brush after breakfast in the morning and last thing at night. 1-strongly disagree 2-disagree 3- not applicable 4- agree 5-strongly agree
4. It is necessary to always rinse our mouth with water after each meal to remove food debris trapped between teeth. 1-strongly disagree 2-disagree 3- not applicable 4- agree 5-strongly agree
5. It is necessary to go for dental check-up at least once a year. 1-strongly disagree 2-disagree 3- not applicable 4- agree 5-strongly agree
6. Caring for your mouth is as important as caring for other parts of the body. 1-strongly disagree 2-disagree 3- not applicable 4- agree 5-strongly agree
7. Foods and drinks with sugar such as sweets, chewing gums, and soft drinks destroy your teeth. 1-strongly disagree 2-disagree 3- not applicable 4- agree 5-strongly agree
8. Eating fruits like apple, pawpaw, pineapple, watermelon etc. keeps teeth healthy. 1-strongly disagree 2-disagree 3- not applicable 4- agree 5-strongly agree
9. It is possible to prevent oral diseases by brushing, flossing and avoiding sugar. 1-strongly disagree 2-disagree 3- not applicable 4- agree 5-strongly agree
10. Have you heard of oral health education? (a) Yes (b) No
11. If yes to question 20, where did you get the information? (a) Church (b) Social gathering

(c) Radio/television (d) Newspaper (e) Others