Oral Health Knowledge Correlated With Behaviours of Secondary School Students Focusing on Gender and Age in Awka Education Zone

S. N. Igwilo (Ph.D), and Dorothy I. Obidike

Health Promotion and Public Health Education, Nnamdi Azikiwe University, Awka, Anambra, Nigeria

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ABSTRACT

Oral health is one of major aspects of an individual's general health and it is also a state of being free from any form of oral disorder. Unfortunately, many young people in developing countries are known to suffer disproportionately from the burden of oral conditions, trauma and diseases. But, having adequate knowledge and good practice of oral health are essential for a healthy oral health status. Hence, the researcher's motivation to take up this study to ascertain the level of oral health knowledge and behavior among students in Awka Education Zone with 3 research questions and 3 hypothesis serving as guide. Relevant related literature were reviewed guided by conceptual framework, theoretical framework, review of empirical studies and summary of reviewed related literature. The study employed correlational survey design aimed at obtaining respondents opinion on the subject matter and was carried out within 6 months (November 2024 to April, 2025) The study population comprised of 6,274 SS2 students from 65 schools and the sample size of 375 students from 10 selected schools of both gender (150 Male students and 225 Female students), aged 13 – 18 years using Yamane, 1967 standard formula ±5% with Stratified simple random sampling technique of balloting with replacement. The instrument for collection of data were OHKQ and SBQ which were subjected to validation. Data were analyzed descriptively and inferentially using SPSS version 25 and hypotheses were tested at 0.05 level of significance. The data generated were presented by the use of tables according to research questions and hypothesis. The data analyzed with Pearson product moment Correlation showed that age of the student has a moderately positive significance in students at age 15 r (375 = 0.378 p =0.002 ≤ 0.05) indicating a significant correlation between the two variables of oral health knowledge and students behaviour with 95% confidence level (CI) which ranges from 0 to 0. And, the Regression ANOVA analysis correlation moderated by gender (p = .328> 0.05), knowledge and behaviour (p = .001> .05). Conclusion: The outcome of this study shows that among others, there is a moderate and significant positive relationship between the variables amongst secondary school students' in Awka Education Zone, which aligns with educational expectations.

Keywords: Oral Health, Knowledge, Behaviours of Secondary School Students

BACKGROUND TO THE STUDY

Good oral health has several benefits which includes; allowing us to eat, speak, smile, and show emotions, reduces the risk of heart attack, diabetes, and cancer, improves lung health and weight-loss, and enhances overall quality of life; But, the experience of pain, endurance of dental abscesses, problems with eating and chewing, embarrassment about the shape of teeth or about missing, discolored or damaged teeth does adversely affect people's daily lives and well-being. Oral health being a major aspect of an individual general health is also a state of being free from any form of disorder in the oral cavity (World Health Organization, WHO, 2015). It encompasses not only the absence of disease but also the presence of a healthy, functional, and aesthetically pleasing oral environment (American Dental Association, 2019).

Oral diseases (OD), commonly tooth decay and periodontal disease, are major public health problem with 3.58 billion people reported to have tooth decay, according to Kassebaum in Emmanuel Nzabonimana et al. (2024). And, on the Global Burden of Disease Report conducted, periodontal diseases are prevalent in developed and

developing countries and affect about 20-50% of the global population. In fact, oral diseases can be averted by using right oral health behaviour. Furthermore, oral health behavior is also associated with various factors together with dental expertise, attitude, lifestyle, schooling level, socioeconomic status, feel of coherence and self-efficacy. And, evidence has demonstrated that virtuous knowledge of oral health is a prerequisite for better oral care practices and those with better information on dental care showed more positive attitude towards oral health care, Smyth in Nagarajappa (2021). Good Oral health has several benefits which includes; allowing us to eat, speak, smile, and show emotions, reduces the risk of heart attack, diabetes, cancer, improves lung health and weight-loss, and enhances the overall quality of life. Besides the oral health knowledge, other variables identified with oral health behavior and practices are age, gender, attitude toward general health and access to oral health services, Ostberg in Gayathri et al (2021). A suitable oral health education 11 can improve healthy oral health behavior and practice. In order to advance such oral health education program, the evaluation of current knowledge and practice of the subjects is essential.

Demographic factors, such as age, gender, socioeconomic status, and education level, have been shown mostly to influence the correlation between oral health and knowledge and behaviours amongst adolescents.

Several theoretical frameworks have been proposed to explain the concept of correlation between oral health knowledge and behaviour amongst adolescents. But the most widely used theory is the Health Belief Model (HBM), by Rosenstock, 1974), has been used to study the correlation between oral health knowledge and behaviour amongst students' adolescents. It is a psychological model that explains how people's beliefs and attitudes influences their health behaviors. It suggests that an individual's health behaviour is determined by their perceived susceptibility to a health problem, perceived severity of the problem, perceived benefits of taking action, perceived barriers to taking action in practicing good oral health, self -efficacy and confidence to prevent or treat the health problem and cues to action.

Applying this model theory to oral health knowledge in relation to students behaviour towards that knowledge for example, an individual runs the risk for oral health problems due to irregular brushing of teeth: perceived susceptibility, such a person could lose the teeth if he/she fails to take care of it: perceived severity; if the person brushes the teeth regularly, oral health problem can be prevented: perceived benefit, if such a person maybe dislikes the taste of toothpaste or do not have time to brush regularly: perceived barrier; if maybe its due to lack of self-confidence and the person could not take care of their oral health: self-efficacy; then, reminders from dentists, a public health campaign, or a mobile app can motivate such a person on the need to take action to improve his/her oral health: cues to action. By understanding this Health Belief Model theory, healthcare providers and public health professionals can develop effective interventions to promote oral health and encourage individuals to adopt healthy behaviours and students would possibly benefit the most.

Good oral health has several benefits which includes; allowing us to eat, speak, smile, and show emotions, reduces the risk of heart attack, diabetes, and cancer, improves lung health and weight-loss, and enhances overall quality of life; But, the experience of pain, endurance of dental abscesses, problems with eating and chewing, embarrassment about the shape of teeth or about missing, discolored or damaged teeth does adversely affect people's daily lives and well-being. And, circumstance shows that there is an insufficient degree of education about oral health and hygiene that many children in the country are victims and a good number of them don't even use a toothbrush, instead relied on traditional methods to keep their teeth clean.

Purpose of the Study

The purpose of this study was to investigate the correlation of oral health knowledge and behaviour among secondary school students in Awka education zone, Anambra state. Specifically, the study sought to:

1. Determine the correlation of oral health knowledge and behaviour of students based on gender in the Education Zone.

2. Ascertain the correlation of oral health knowledge and behaviour of students based on age in the Education Zone.

Research Questions

1. What is the correlation of students' oral health Knowledge and behaviour as moderated by gender in the Education Zone?

2. What is the correlation of students' oral health Knowledge and behaviour as moderated by age in the Education Zone?

Hypotheses

1. There is no significant relationship between oral health knowledge and behaviour among secondary school students in Awka Education Zone as moderated by gender.

2. There is no significant relationship between age of students with oral health knowledge and behavour in Awka Education Zone.

METHODOLOGY

The design of the study was a correlational descriptive survey. Correlation design is used to investigate relationship between two or more variable without the researcher controlling or manipulating any of them. This design, according to Egwuyenga et al in Obidike (2018), is used to establish the relationship that exists between two or more variables.

This study was conducted in Awka Education Zone of Awka in Anambra State, Nigeria. The zone is a significant administrative and educational division within the state which encompasses several local government area; including Awka North, Awka South and Njikoka. Awka the state capital is the central city in the zone, known for its rich cultural heritage and lively communities. The zone is an ideal region for educational and social research. The zone is also characterized by urban and rural areas and bordered by other regions that fosters agriculture and trading with a tropical climate that influences agricultural and lifestyle patterns in the zone.

Population of the Study

The study population comprised of all the 6,274 senior secondary two (SS 2) students of the 65 schools in the zone.

Sample Size Calculation and Sampling Techniques

The sample of the study consisted of 375 senior secondary two (SS 2) between the age 13 – 18 years (150 males and 225 females) from 10 randomly selected schools of balloting with replacement. The sample was gotten using Yamane 1967 standard formula, which stipulated that a population of 6000 to 6999 should have a sample size of 375 at ± 5%.

They are Oral Health Knowledge Questionnaire (OHKQ) and Students Behavour Questionnaire (SBQ). Oral Health Knowledge Questionnaire (OHKQ) was adopted for this study. OHKQ was used to assess students' understanding of oral health practices and conditions. Its reliability, often measured by Cronbach's alpha, indicates consistent results; typical values range from 0.70 to 0.90, reflecting good internal consistency.

The instruments were subjected to validation by three personnel experts, two from the Department of Human Kinetics in Health Education, University of Education, Nsugbe, and one Measurement and Evaluation expert, Peaceland University of Science and Technology, Enugu.

The reliability co-efficient of the questionnaires was established by administering each of the questionnaires once to sixty (60) SS2 students randomly selected from a Community Secondary School in Imo State. The school is outside the area of the study. Cronbach's alpha technique was used to determine the internal consistency of items in the instruments. The rationale for the use of Cronbach's alpha is that the test items are

non-dichotomous and no response is deemed correct or wrong. Thereafter, set of scores for each respondent were coded for computer analysis using SPSS version 25. The result of the analysis shows that Oral Health Knowledge Questionnaire (OHKQ) yielded a Cronbach alpha coefficient of (α = .86) and Behavour Questionnaire (SBQ) yielded Cronbach alpha of (α = .76). Pearson product moment correlation was used to answer research questions.

Presentation of Results

Research Questions 1

What is the correlation of students' oral health knowledge (dental caries and periodontal diseases) and behaviour (e.g., frequency and reason of dental visit, brushing and flossing frequency, and consumption of food with sugar content) among secondary school students in Awka Education Zone as moderated by gender?

Table 1: Pearson Correlation Coefficient for the correlation of students' Oral Health Knowledge (OHK) and Secondary School Students Behaviour when moderated by Gender

Variables	N	r	R^2	Magnitude & Direction	Adjusted R^2	Std. Error	Sig	Decision
OHKQ SBQ	375	0.338[a]	0.072	Moderate positive relationship	.062	35.808	0. 328[c]	Not Significant

Key: R^2 = coefficient of determination

Table 1 reveals correlation coefficients of the relationship between oral health knowledge (dental caries and periodontal diseases) and behaviour (e.g., frequency and reason of dental visit, brushing and flossing frequency, and consumption of food with sugar content) among secondary school students in Awka Education Zone as moderated by gender as 0.338. This means there was a moderate positive relationship between oral health knowledge and male and female secondary school students' behaviour. The coefficient of determination (0.072) also known as the correlation/relationship value means that 7.2% of oral health knowledge accounted for the variation in male and female secondary school students' behaviour in Awka Education Zone of Anambra State. This is an indication that 92.8% of variation in male and female secondary school students' behaviour in Awka Education Zone of Anambra State is attributed to other factors other than oral health knowledge.

Research Questions 2

What is the correlation of students' oral health knowledge and behaviour as moderated by age among secondary school students in Awka Education Zone?

Table 2: Pearson Correlation Coefficient for the correlation of students' Oral Health Knowledge (OHK) and Secondary School Students Behaviour as moderated by Age.

Model R^2	Age	r	R^2	Magnitude & Direction	Adjusted	Std. Error	Sig. Decision	
OHKQ	13	.143[a]	.020	Low positive relationship	.003	16.84708	.281[c]	NS
SBQ	14	.118	.014	Low	-.002	13.92633	.357[c]	NS
	15	.378s[a]	.143	Moderate	.129	15.19992	.002[c]	S
	16	.172	.029	Low	.014	15.36937	.175[c]	NS
	17	.146	.021	Low	.005	18.37141	.262[c]	NS
	18	.046[a]	.002	Low	-.014	18.86645	.718[c]	NS

Key: R^2 = coefficient of determination

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Table 2 reveals correlation coefficients of the relationship between age, oral health knowledge and behaviour among 13, 14, 16, 17 & 18 years secondary school students in Awka Education Zone as 0.143, 0.118, 0.172, 0.146 & 0.046 respectively. This means there were a low positive relationship between oral health knowledge and among secondary school students behaviour in ages 13, 14, 16, 17 and 18 years respectively. The coefficient of determination (0.020, 0.014, 0.029, 0.021 & 0.02) also known as the correlation/relationship value means that 2.0%, 1.4%, 2.9%, 2.1% and 2.0% of oral health knowledge respectively accounted for the variation in secondary school students' behaviour in Awka Education Zone across the ages of 13, 14, 16, 17 and 18 years. This is an indication that 98%, 98.1%, 97.1%, 97.1% and 98% of variation in secondary school students' behaviour in Awka Education Zone across the ages 13, 14, 16, 17 and 18 years are attributed to other factors other than oral health knowledge.

More so from table 2 revealed also a correlation coefficients of the relationship demographic variable (age), oral health knowledge and behaviour among 15 years secondary school students in Awka Education Zone as 0. 378. This means there was a moderate positive relationship between oral health knowledge and 15years secondary school students behaviour. The coefficient of determination (0. .143) also known as the correlation/relationship value means that 1.43% of oral health knowledge respectively accounted for the variation in secondary school students' behaviour in Awka Education Zone across the ages of 15 years. This is an indication that 98.57 % of variation in secondary school students' behaviour in Awka Education Zone across the ages 15 years are attributed to other factors other than oral health knowledge.

Hypothesis 1

There is no significant relationship between oral health knowledge (dental caries and periodontal diseases) and behaviour (e.g., frequency and reason of dental visit, brushing and flossing frequency, and consumption of food with sugar content) among secondary school students in Awka Education Zone as moderated by gender.

Table 3: Regression ANOVA Analysis of Correlation Significant of Oral Health Knowledge and Secondary School Students Behaviour when Moderated by Gender

Model		Sum of Squares	Df.	Mean Square	F	Sig
	Regression	5823.511	1	5823.511	16.842	.328[c]
	Residual	97821.431	373	475.777		
	Total	103644.942	374			
a. Dependent Variable: SBQ b. Selecting only cases for which GENDER = MALE & FEMALE						
c. Independent: (Constant), OHKQ						

Table 3: reveals regression ANOVA analysis of correlation significant of oral health knowledge and secondary school students' behaviour as moderated by gender. The results show no significant difference F (1, 475.77) = 16.842, p = .328> .05 indicating that oral health knowledge (dental caries and periodontal diseases) is not significantly correlated to male and female secondary school students' behaviour (e.g., frequency and reason of dental visit, brushing and flossing frequency, consumption of food with sugar content) in Awka Education Zone as moderated by gender

Hypothesis 2

There is no significant relationship of age of students' with oral health knowledge and behaviour among secondary school students in Awka Education Zone.

Table 2 above, revealed Pearson correlation coefficient for the relationship between demographic variable (age), oral health knowledge and secondary school students behavour. A low positive correlation were found across the ages of 13, 14, 16, 17 and 18 r (375 = 0.143, 0.118, 0.172, 0.146 and 0.046 p values in the respective ages =0.281, 0. .357, 0.175, 0.262, 0.718 ≥ 0.05) indicating no significant correlation between the two variables of oral health knowledge and students behaviour within the ages of 13, 14, 16, 17 and 18. The null hypothesis which stated that there is no significant relationship between demographic variable (age), oral

health knowledge and behaviour among secondary school students in Awka Education Zone was therefore uphold for students at ages of 13, 14, 16, 17 and 18 years. The inference drawn was that the higher the students in ages of 13, 14, 16, 17 and 18 years gain oral health knowledge, the more negative behaviour they develop towards oral health knowledge. Where as in the table below show slight difference.

Table 4: Regression ANOVA Analysis of Correlation Significant of Oral Health Knowledge and Secondary School Students Behaviour when Moderated by Age

Model		Sum of squares	Df	Mean square	F	Sig.
	Regression	2430.233	1	2430.233	10.519	.002[c]
	Residual	14555.367	63	231.038		
	Total	16985.600	64			
a. Dependent Variable: SBQ						
b. Selecting only cases for which AGE = 15						
c. Predictors: (Constant), OHKQ						

Table 4, reveals a moderately positive correlation were found in students in age 15 r (375 = 0.378 p =0.002 ≤ 0.05) indicating a significant correlation between the two variables of oral health knowledge and students behaviour at the age of 15. The null hypothesis which stated that there is no significant relationship between demographic variable (age), oral health knowledge and behaviour among secondary school students in Awka Education Zone was therefore rejected for students at age of 15. The inference drawn was that the higher the students at age 15 gain oral health knowledge, the more the more positive behaviour they developed towards oral health knowledge.

DISCUSSION OF FINDINGS

Relationship between oral health knowledge and students behaviour among secondary school students in Awka Education Zone as moderated by gender

To discuss research question 2 and hypothesis 2, table 2 is correlation coefficients of the relationship between students' oral health knowledge (dental caries and periodontal diseases) and behaviour (e.g., frequency and reason of dental visit, brushing and flossing frequency, consumption of food with sugar content) among secondary school students in Awka Education Zone as moderated by gender. The result revealed a low negatively relationship between students' oral health knowledge and students behaviour in school irrespective of gender. Hence, there was no significant relationship between students' secondary school students' oral health knowledge scores and students' behaviour in school irrespective of gender as showed in table 2. The result is also in line with the findings of Bhaskar, N. N et al (2016) who revealed that there was low mean perception and low negative perception of the students in integrated science on the oral health knowledge with no significant difference. There is no significant relationship between oral health knowledge (dental caries and periodontal diseases) and behaviour (e.g., frequency and reason of dental visit, brushing and flossing frequency, and consumption of food with sugar content) among secondary school students in Awka Education Zone as moderated by gender.

Relationship between the age of students' with oral health knowledge and behaviour in Awka Education Zone.

Table 2 revealed a correlation coefficients of relationship between students demographic variable (age), oral health knowledge and behaviour among secondary school students in Awka Education Zone. From the table, the data shows a low positive relationship between the students' age, oral health knowledge and behaviour among secondary school students' scores. Hence, there was no significant relationship between secondary school students' age, oral health knowledge and behaviour. The finding is not in consonance with the observations of Nagarajappa R. (2021) that reported a significant positive relationship between students demographic variable (age), oral health knowledge and behaviour among secondary school students outcomes with the correlation coefficient value high positive relationship. The researchers' findings also revealed a significant positive relationship between students' age, oral health knowledge and behaviour among secondary

school students outcomes; the level of the relationship was very strong and a positive correlation between demographic variable (age), oral health knowledge and behaviour among secondary school students outcome were found by them. The findings of a low positive relationship between students' demographic variable (age), oral health knowledge and behaviour among secondary school students and there is no significant relationship between demographic variable (age), oral health knowledge and behaviour among secondary school students in Awka Education Zone.

CONCLUSION

Based on the investigation into oral health knowledge and behaviour amongst secondary school students in Awka education zone, Anambra state, it is then, concluded among others that there is no moderate positive relationship that exists between students' oral health knowledge and behaviour amongst secondary school students. Hence, there is no significant in the relationship. More so, it can be concluded, that low positive relationship exists between students' perception of oral health knowledge and behaviour amongst secondary school students but the relationship was not significant.

Similarly, low negative relationship between students' oral health knowledge (dental caries and periodontal diseases) and behaviour (e.g., frequency and reason of dental visit, brushing and flossing frequency, consumption of food with sugar content) among secondary school students scores in Awka Education Zone as moderated by gender but there was no significant relationship. More so, it can be concluded that a low negative relationship between students' oral health knowledge and students' behaviour scores in secondary school but there was no significant relationship, low negative relationship between male and female students' oral health knowledge and students' behaviour in schools. Hence, there is no significant relationship, low positive relationship between secondary school students' oral health knowledge and students' behaviour in schools when moderated by gender and there is no significant relationship.

Finally, a low positive relationship between secondary school students' demographic variable (age), oral health knowledge and behaviour among secondary school students in Awka Education Zone. However, there was no significant relationship and low positive relationship between secondary school students' students' demographic variable (age), oral health knowledge and students behaviour scores in the secondary school in Awka education zone but there is no significant relationship in the variables.

REFERENCES

1. Abiola A, Afolabi O, Victor A, Oyinkansola S and Oladapo A (2018). Effect of Health Education Intervention Conducted by Primary Health Care Workers on Oral Health Knowledge and Practices of Nursing Mothers in Lagos State. Journal of Public Health Africa; 9 (2):833.
2. Akinyamoju C, Taiwo J, Uwadia E, Agbogidi J, Ambeke A, (2018). Oral Health Knowledge and Practice among Traders in Ibadan. Ann Ib Postgraduate Medical.16 (2):150-156.s
3. Al-Ansari, J. et al. (2017). Correlation between oral health knowledge and behavior amongst adolescents. Journal of Clinical and Diagnostic Research, 11(9), 15-18.
4. Al-Malik, M., & Farsi, N. (2018). Oral health knowledge, attitude, and practices among Saudi Arabian adolescents. Journal of public health dentistry, 78(2), 147- 153.
5. American Dental Association (2019). Oral Health Knowledge and Attitudes among Adolescents. Journal of Dental Research, 98(Special Issue A), 1553.
6. American Academy of Pediatric Dentistry (2018). The Reference Manual on Pediatric Dentistry - Fluoride Therapy. Chicago: American Academy of Pediatric Dentistry; p. 263.
7. Balasubramanian, R., & Sivakuma, N. (2017). Assessment of oral health knowledge among adolescents in Chennai, India. Journal of Oral Science, 59(2), 241-248.
8. Bhaskar, N. et al (2016). Department of Public Health Dentistry, Dayananda Sagar College of Dental Sciences, Bengaluru - 560 078, Karnataka, India. 2016 Journal of Indian Association of Public Health Dentistry | Published by Wolters Kluwer – Medknow E-mail: drnithinbhaskar@gmail.co
9. Centers for Disease Control and Prevention. (2020). Oral Health for Adolescents. Retrieved from (link unavailable)

10. Cepeda, M., Weinstein, R., Blacketer, C., Lynch, M., (2017). Association of Flossing/Inter-Dental Cleaning and Periodontitis in Adults. J. Clin. Periodontal, 44, 866–871.
11. Chakraborty, R., & Das, K .C (2020). Correlation between oral health knowledge and attitude among adolescents in Eastern India. Journal of Clinical and Diagnostic Research, 14(9), 23-27.
12. Cronbach L. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16(3), 297-334.
13. Dilan A. et al (2024) Department of Pediatric Dentistry, Faculty of Dentistry, Hacettepe University, 06230 Ankara, Turkey. ACT ODONTOLOGICA SCANDINAVICA VOL. 83, 404411 https://doi.org/10.2340/aos.v83.40938
14. Gayathri R., Yuvaraj K., Sundar R., (2020) Assessment of oral health behaviour and knowledge among dental and engineering undergraduate students International Journal of Research in Pharm. Sci., 2020, 11 (SPL3), 1069-1076.
15. Khan, A.ss (2019). Relationship between Oral Health Knowledge and Attitude among Adolescents in Karachi, Pakistan (Master's thesis, Dow University of Health Sciences).
16. Kumar P. (2021) Microbial Dysbiosis: The root cause of periodontal disease. Journal of Periodontology. 2021; 92(8): 1079-1087
17. Kwan, S.., et al. (2018). Correlation between oral health and behaviour amongst adolescents. Journal of Public Health Dentistry, 78(2), 151-156.
18. Malik S, Kamra S, Bhardwaj A. (2021). Knowledge, attitude and behavior towards oral health among teaching staff members of non-medical faculties in higher education institution with multiple faculties. Ann Romanian Soc Cell Biol 2021; 25(6):13260-81.
19. Nagarajappa R, Naik D, Ramesh G, (2021). Sources of oral health information and its relationship on knowledge among Indian adolescents. Pesqui Bras Odontopediatria Clín Integr; 21:e0099. https://doi.org/10.1590/pboci.2021.01
20. National Cancer Institute, (2020) GLOBOCAN, Department of Health and Human Services, NIH, NCI website (link unavailable).
21. Nworgu, B. (2015). Promoting Educational Research through Effective Instrument Development, International Journal of Advanced Research and Publications ISSN: 2456-9992.
22. Obidike, .I (2018), Effect of the Use of Instructional Materials on the Academic Achievements of Secondary School Students. Unpublished Degree Project, Department of Health Education. Peaceland College of Education, Enugu State.
23. Okoronkwo S.s et al (2024). Dental Technology Department, Federal College of Dental Technology and Therapy, Enugu, Correspondent Author DOI: https://doi.org/10.51244/IJRSI.2024.1104039 Received: 01 April 2024; Accepted: 08 April 2024; Published: 13 May 2024.
24. Okoronkwo, S., Ibe, S., Okorie, P., Ugochukwu, B., Nwachukwu, C., & Amuneke, C. (2020). Assessment of Oral Hygiene Knowledge and Practice among Secondary School Students in Owerri Municipal Area, Imo State, Nigeria. Current Journal of Applied Science and Technology, 39(24), 91–101.
25. Oral Health Croatia (2022), Country Profile. Available online: https://www.who.int/publications/m/item/oral-health-hrv-2022-country-profile (accessed on 26 December 2023).
26. Patel, S., et al. (2017). Oral health knowledge and behaviour amongst adolescents. Journal of Clinical and Diagnostic Research, 11(10), 15-18.
27. Selvaraj S, Naing N., Wan-Arfah N, (2021). Assessment on oral health knowledge, attitude, and behaviour and its association with socio-demographic and habitual factors of South Indian population. Pesqui Bras Odontopediatria Clín Integr. 2021; 21:e0135. https://doi.org/10.1590/pboci.2021.159
28. Singh et al. (2018). Correlation between oral health knowledge and behaviour amongst adolescents. Journal of Oral Science, 60(2), 249-254.
29. Susi, M., Nila K. (2020). The relationship between maternal characteristics and early childhood caries. Padjadjaran J Dent.; 32(1): 22-7. DOI: 10.24198/pjd. vol32no1.23640
30. Tadin A, Poljak G, Domazet J, Gavic L (2022). Oral Hygiene Practices and Oral Health Knowledge among Students in Split, Croatia. Healthcare (Basel).21;10(2):406. doi:10.3390/healthcare10020406. PMID: 35207018; PMCID: PMC8872387.

31. Uguru .N, Onwujekwe .O, Uguru .O, Ogu .U, Okwuosa .C, Okeke .C, (2021).“Oral health-seeking behaviour among different population groups in Enugu Nigeria,” PLoS One, vol.16, no.2February, doi: https://doi.org/10.1371/journal.pone .0246164.
32. WHO, (2023) Global Oral Health Status Report: Towards Universal Health Coverage for Oral Health by 2030. Available online: https://www.who.int/publications-detail-redirect/9789240061484 (accessed on 25 May 2023).
33. WHO, (2015). Health: Action plan for promotion and integrated disease prevention. New York: World Health Organization.