

The role of mouthwash uses and routine dental visits in dental hygiene among public secondary school students

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ABSTRACT

Purpose– This study utilized a descriptive survey design to assess dental hygiene practices among public secondary school students in Awka Education Zone, Anambra State.

Method– Targeting SS2 students in 20 schools, purposive sampling was employed, resulting in a sample size of 1,063 students. Data was gathered using a validated, self-structured questionnaire divided into demographic and research sections, with responses rated on a four-point scale. Reliability testing yielded a Pearson correlation of 0.75. Responses were collected directly in classrooms, and 1,000 completed questionnaires were retrieved. Analysis involved weighted mean scores and standard deviation, with an acceptance threshold of 2.5.

Findings– The study found that mouthwash is considered an effective dental hygiene practice among public secondary school students, with mean scores ranging from (2.71) to (2.79). Routine dental visits were also acknowledged for detecting oral issues, with mean scores between (2.63) and (2.81), highlighting the importance of both practices in promoting oral health. Similarly, routine dental visits were recognized for detecting oral issues and maintaining dental health, with average means above the acceptance level, underscoring the importance of dental hygiene practices among students.

Keywords: dental hygiene, secondary school students, mouthwash, routine dental visits.

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INTRODUCTION

The increased burden of communicable diseases among school children due to poor dental hygiene practices and inadequate sanitary conditions remains a concern on the public health agenda in developing countries. School children are particularly vulnerable to neglect of basic dental hygiene due to lack of knowledge and practice (Salawu & Omitoye, 2019). Poor knowledge, practice of and attitudes to dental hygiene such as brushing for at least two minutes twice a day with a fluoride toothpaste, flossing daily and seeing the dentist every six months for check-ups and dental cleanings play major roles in the high incidence of poor dental hygienic practices and therefore has negative consequences among public secondary school students in terms of overall development (Oyedele, et.al., 2018).

Public secondary school are schools that are managed, maintained, and funded by the government. Secondary school is defined as schooling after elementary school, which involves grades 6 through 12. However, once a student reaches grade 9, they are considered to be a high school student. Oral health education has been part of the primary school

curriculum and implemented by teachers at primary schools; however, the oral health education sessions addressed oral hygiene by teachers may be deficient in content and in methods (Oziegbe & Schepartz, 2023; Ani, Omenyi & Achebe, 2015). Also, the level of dental hygienic practices among public secondary school students is unknown and worthy of investigation. Improved awareness and dental hygiene practices especially among children have effectively reduced gastrointestinal and respiratory tract infections by up to 50% the two leading causes of livelihood morbidity and mortality around the world (Edman, & Wårdh, 2022). In addition, studies have also shown that school children with better knowledge and practices of dental hygiene have fewer sick days and absenteeism in school and achieve higher grades.

School is the place where health education regarding important aspects of hygiene, environment and sanitation, as well as social customs is being imparted. Health is a key factor in school entry, as well as continued participation and attainment in school. The teacher is the guardian of the child in school and plays a pivotal role in the whole process of primordial prevention. Bearing in mind that school children have been consistently implicated in the spread of communicable diseases and that the school has been recognized as a vital setting for health promotion. The involvements of teachers and school children in message dissemination have significant effort on improvement in dental hygiene & related morbidities among children. Some of the researches done on these co-relational issues were carried outside the country (Whippel, 2016). While the research conducted in Nigeria did not cover Anambra State. From the above, therefore, it is necessary to carry out this research in Awka Education zone of Anambra state to ascertain the fact about dental hygiene practices among the students. The society in general and educators in particular seem to consider parental involvement an important ingredient for the remedy for many problems in education.

Oral health problems are deviations from normal oral health. They are those health problems that affect the oral cavity and as such causes discomfort to such individuals. The mouth being the gateway to the body is challenged by a constant barrage of invaders which includes bacteria, fungi and viruses. These invaders in line with other local contaminating factors, systemic factors and other unhealthy practices contribute to oral problems which includes – oral thrush, cold sores, canker sores, black hairy tongue, oral cancers, leukoplakia, lichen planus, geographic tongue, TMJ syndrome, chipped teeth, amalgam tattoo, gum inflammation (gingivitis), periodontitis, aspirin burn, dental caries and cavities, abscesses, discolorations, bad breath and transient lingual papillitis.

However, majority of the livelihood illnesses are preventable by promotion of hygienic practices among school children through proper health education by their parents and teachers. The rationale for this study stems from the growing concern over poor dental hygiene practices among secondary school students, particularly in developing countries like Nigeria. Inadequate oral health knowledge and irregular dental care can lead to significant oral health issues, such as cavities and gum disease. Despite existing health education programs, the effectiveness of practices like mouthwash use and regular dental visits remains unclear. This study seeks to explore how these practices influence students'

oral hygiene habits, emphasizing the need for better awareness and preventive care within schools. The findings aim to guide interventions for improving dental health among adolescents.

Purpose of the Study are to determine whether mouth wash, is a dental hygienic practice among public secondary school students and Ascertain if scheduled routine visits to a dentist every six months is a dental hygiene practice among public secondary school students. Research Questions guided the study: (1) How would mouth wash be a dental hygienic practice among public secondary school students in Awka education zone? (2) How would scheduled routine visit to a dentist every six month be a dental hygienic practice among public secondary school students?

METHOD

The research design for this study is a descriptive survey. Descriptive survey design was used in order to gather data at a particular point in time with the intention of describing the nature of existing conditions or identifying standards against which existing conditions can be compared. The study is carried out in Awka Education zone of Anambra state. Post Primary Schools Services Commission, Awka Zone is one of the six educational zones in Anambra State, set-up for the effective and efficient supervision, management and co-ordination of Post Primary (Secondary) schools - Public and Mission schools (with government Partnership).The Awka zonal office of the Commission is the largest of the six zones, covering five local government areas – Awka-North, Awka-South, Anaocha, Dunukofia and Njikoka Local Government Areas.

The Population of the study comprises of all the secondary school in Awka education zone. There are sixty-four public secondary school in Awka Education zone. These sixty-four public secondary schools in Awka education zone have a total population of thirty-three thousand, four hundred and twenty-four (33424) students. The sampling technique used in this study is purposive sampling, a non-probability sampling method where participants are selected based on specific characteristics determined by the researcher's judgment (Crewel, 2020). In this case, the researcher focused on Senior Secondary 2 (SS2) students from 20 public secondary schools within the Awka Education Zone of Anambra State. Purposive sampling was chosen because SS2 students are considered to possess adequate knowledge and maturity to respond meaningfully to the survey questions related to dental hygiene practices. The total population of the 20 selected schools was 1,063 students. These students were deliberately chosen, as they are likely to have a better understanding of the topics being investigated, such as mouthwash use and routine dental visits. This sampling method allows for a more focused and relevant group of participants, ensuring that the data collected is directly applicable to the study's objectives.

Instrument used for the study was a self-structured questionnaire. The instrument was made up of two sections. Section A contains the demographic data of respondents while section B contains the questionnaire based on research questions with the response. Format adopted was four-point scale of strongly agree (SA = 4 points), Agree (A=3 points), Disagree

(D=2 points) and strongly disagree (SD=1 point). The instrument was validated by supervisor and two experts from the department of Human Kinetics and Health Education, Nwafor Orizu College of Education Nsugbe. The corrections made were effected and the instrument was considered valid for the study. The researcher used twenty (20) students from Onitsha zone who will not participate in the study sample. The questionnaire was distributed to ss2 students. The scores of data collected were correlated using Pearson Product Moment Correlation, and it gave rise to 0.75. Hence the instrument was considered reliable. S

The researcher reached the respondents through the principals of the school used for the study, the researcher administered one thousand and sixty three copies of the questionnaire to the respondent s directly in their various classroom with the help of the school prefects, one thousand (1000) copies were retrieved. In analyzing the data, the researcher used weighted mean score and standard deviation in answering the research question. The acceptance point for the items stood at 2.50. Hence, the decision rule follows that the mean of 2.5 and above was regarded as being accepted while 2.4 and below was regarded as being rejected.

RESULTS AND DISCUSSION

Research Question 1: How would mouth wash be a dental hygienic practice among public secondary school students ?

Table 1: Mean rating on mouth wash as a dental hygienic practice among public secondary school students.

S/N	Items	SA	A	D	SD	Total	Mean	Decision
11	Mouth wash prevent plaque from building up on your gums, in-between teeth, and on the surface of your teeth.	249	398	235	118	1000	2.78	Accepted
12	Mouth wash helps to prevent bacteria that forms along the gum line.	248	372	253	127	1000	2.74	Accepted
13	Mouth wash prevent new plaque from forming and can also soften existing plaque.	257	378	239	126	1000	2.77	Accepted
14	Poor awareness of gum care leads to gingivitis and bad breath.	262	387	230	121	1000	2.79	Accepted
15	Mouth wash cleans the crevices and tight spaces in the mouth that brushing and flossing can't reach.	239	368	252	141	1000	2.71	Accepted

Grand mean=13.9

Average mean=2.76

The result in table 1 showed that mouth wash prevent plaque from building up on your gums, in-between teeth, and on the surface of your teeth (2.78). The respondents

agreed that mouth wash cleans crevices and tight spaces in the mouth that brushing and flossing can't reach (2.71) items 11, 12, 13, 14, and 15 yields mean scores of 2.78, 2.74, 2.77, 2.79 and 2.71.

Research Question 2: How would routine visit of a dentist every six month for dental check-ups, dental x-rays and teeth cleaning be a dental hygienic practice among public secondary school students?

Table 2: Mean rating on scheduled routine to a dentist as a dental hygiene among public secondary school students.

S/N	Items	SA	A	D	SD	Total	Mean	Decision
16	Through routine visit of a dentist oral cancers, plaques, tartar and cavities disorders can be detected.	265	390	237	108	1000	2.81	Accepted
17	Check-ups allows your dentist to examine your mouth and it enhance healthy mouth.	252	375	248	125	1000	2.75	Accepted
18	Often dental check-up programs within schools to enhance accessibility.	269	301	219	211	1000	2.63	Accepted
19	Orthodontic issues often go unaddressed due to insufficient awareness of available treatments.	258	399	228	115	1000	2.8	Accepted
20	Initiate orthodontic awareness campaigns, advocating early treatment for alignment issues.	239	379	248	134	1000	2.72	Accepted

Grand mean=13.71

Average mean=2.742

The result in table 2 showed that often dental check-up programs within schools to enhance accessibility (2.63). Routine visit of a dentist oral cancer, plaques, tartar, and cavities disorders can be detected (2.81). Meanwhile the orthodontic issues often go unaddressed due to insufficient awareness of available treatments (2.8). In all, items 16, 17, 18, 19, and 20 yields mean scores of 3.06, 2.77, 3.14, 3.00 and 2.72.

Discussion of Findings

Research question 1 dealt on mouth wash as a dental hygienic practice among public secondary school students. Proper mouth wash helps to maintain fresh breath, promoting confidence and positive social interaction (Gandolfi, Zamparini, Spinelli, Risi, 2021). Mouth wash can help get to the remaining debris left behind after brushing and flossing. The liquid flows around and between your teeth, helping to flush out your mouth more thoroughly. The acids released by bacteria can inflame your gums, leading to gingivitis and eventual gum disease. When you use an anti-bacteria mouth wash, you lower the amount of teeth destruction (Abiola, Ekpen, 2021)

Research question 2 dealt on routine visit of a dentist every six month for dental check-ups, dental x-rays and teeth cleaning be a dental hygienic practice among public secondary school students. Dental check-ups plays a crucial role in early problem detection, promoting

optimal oral health (Oladipo, et.al., 2019). Neglecting regular dental check-ups is a common trend among students, with implications for long –term oral health (Ajayi, Acherman and Abe 2019). Furthermore, insufficient awareness of available treatments results in unaddressed orthodontic issues among students (Adegbulugbe, Katsillis and Rubson 2018). School-based dental check-ups programs enhance accessibility to preventive care, ensuring early detection and intervention (Adedigba, Velez and Jones, 2020). Furthermore, initiating orthodontic awareness campaigns is essential, advocating early treatment for alignment issues to prevent long-term oral health complication (Adeyemi, Iiyoshi and Kumar 2019).

The findings have important educational implications, underscoring the need for comprehensive oral health education in Nigerian schools. Irregular brushing habits and related oral health issues highlight the importance of incorporating practical oral hygiene education into the curriculum. Schools should offer structured lessons on proper brushing and flossing techniques, fostering lifelong habits. Schools should integrate oral health education into the curriculum, offering regular lessons on proper brushing, flossing, and the importance of mouthwash. Hands-on demonstrations and interactive sessions can help reinforce these practices.

The recommendation for dental check-up programs emphasizes the role of schools in facilitating healthcare access. Collaborating with local health authorities to organize regular dental visits will ensure early detection and intervention, promoting students' overall well-being. Distributing toothbrushes and educating on regular replacement can also address poor toothbrush maintenance, supporting preventive care.

Promoting orthodontic awareness in schools is essential for early intervention. Including information on orthodontic health in the curriculum can increase awareness and encourage timely treatment. Schools should distribute oral hygiene kits (toothbrushes, toothpaste, floss) to students, along with educational materials on maintaining and replacing toothbrushes regularly. Lastly, creating awareness about orthodontic health through workshops or campaigns can help identify and address alignment issues early.

CONCLUSION

The study concludes that both mouthwash use and routine dental visits play significant roles in promoting dental hygiene among public secondary school students. Findings indicate that mouthwash is widely recognized by students as effective in preventing plaque build-up, reaching areas not accessible by brushing, and reducing bacteria along the gum line. Additionally, routine dental visits were acknowledged as essential for early detection of oral health issues, such as cavities, tartar, and orthodontic concerns, which are often neglected due to limited awareness. These practices, therefore, contribute to improved oral hygiene and overall health. The study highlights the need for increased awareness campaigns and access to dental health programs within schools to foster sustained dental hygiene habits among students. This reinforces the importance of integrating dental hygiene education into school health programs to promote lifelong health practices. Based

on the findings of the study, the following recommendations are made: (1) Integrate practical and comprehensive oral health education into the standard school curriculum. This should include modules on proper brushing and flossing techniques, the importance of regular dental check-ups, and the consequences of poor oral hygiene. (2) Collaborate with local oral health professionals to organize routine dental check-up programs within the school premises. This will enhance accessibility to dental care services, allowing for early detection and intervention. (3) Implement awareness campaigns within schools to educate students, teachers, and parents on the importance of maintaining good oral hygiene practices. These campaigns can include workshops, seminars, and distribution of informative materials.

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