

# Assessing the Level of Oral Health Knowledge and Practice among State University Students in Enugu State, Nigeria.

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## ABSTRACT

### Background

Oral health is often ignored, especially among young adults, posing risks to overall health and well-being. In Enugu State, Nigeria, like every other place in the globe, inadequate oral health knowledge and practices among university students are of great concern. Hence, this study focuses on state university students, recognizing their unique challenges such as study pressures and limited access to oral healthcare. Understanding their oral health knowledge and practices is essential for targeted interventions. Data generated can inform the state governments to prioritize oral health initiatives and allocate resources effectively within the region, addressing a critical public health concern.

### Aim

This study elucidated assessing level of Oral health knowledge and practice among State University students in Enugu State, Nigeria.

### Methods

The sample of the study comprised 786 students drawn through a multistage sampling selection method. A pre-tested, well-structured questionnaire was the main instrument of data collection for assessing level of Oral health knowledge and practice among State University students in Enugu State, Nigeria. Statistical Package for Social Sciences (SPSS) Version 23 was used for analysis.

### Results

Findings showed 34% of students possess inadequate oral health knowledge while lesser percentage of students 1% showed poor oral health practice compared to students' total population. Whereas socio-economic status indeed plays a role in shaping students' oral health knowledge and practices, potentially warranting targeted interventions to address disparities and promote oral health equity among university

students. However, Chi-square analysis reveals demographic variables' associations with knowledge and practice levels among students. Gender lacks significance in both areas ( $p=0.47$  for knowledge;  $p=0.175$  for practice). However, age significantly correlates with knowledge ( $p<0.001$ ), and class level associates highly with both knowledge and practice ( $p<0.001$ ). Thus, age and class significantly influence students' habits.

## Conclusion

Relevant oral health educational interventions are required to promote oral health knowledge and practice among State University students in Enugu State, Nigeria.

**Keywords:** assessing, level, Oral health, knowledge, practice, among, State University, students, State.

## INTRODUCTION

Oral health is an essential component of an individual's overall well-being (World Health Organisation, WHO, 2015), yet it often receives inadequate attention, particularly among young adults (Okoronkwo et al, 2020). In Enugu State, Nigeria, like several other regions worldwide, the level of oral health knowledge and practice among university students remains a matter of concern. Poor oral health knowledge and practices can lead to various dental problems, impacting individuals' quality of life and overall health outcomes (Tefera, Girma, & Adane, *et al.*, 2023).

Enugu State is home to several state universities, attracting students from diverse backgrounds and regions (Ugwuoke, Eze, & Omeje, 2019). But this study is focused on state university student as students within this study locality often face a lot of challenges, including study pressures, change of lifestyle, and limited access to adequate oral healthcare services (Okoroafor *et al.*, 2023). Hence, understanding the level of oral health knowledge and practices among these students becomes imperative for developing targeted interventions programme to promote better oral health outcomes (Tadin, Poljak, Domazet & Gavic, 2022). Although it is assumed that there is availability of oral health education programs in our higher institutions, yet there is an observed gap in understanding how effective these ideas reach and influence university students in Enugu State. As factors such as socio-economic status, cultural beliefs, and access to oral healthcare facilities may have influenced students' oral health knowledge and practice (Egbunah, Sofola & Uti, 2023).

Hence, assessing the level of oral health knowledge and practices among state university students in Enugu State will provide valuable insights into their awareness, knowledge and behaviors concerning oral health. This assessment will identify areas of strengths and weaknesses, indicate potential barriers to oral health promotion, and serve as a reference point to the development of interventions programme to improve oral health outcomes among this demographic (Czwikla, *et al.*, 2021). As well as the utilization of this findings by State governments and its health authorities to prioritize oral health initiatives and allocate resources more effectively within the state.

## METHODS

### Research Design/Techniques

The study design for this study were descriptive survey design to determine the baseline oral health knowledge and practice among state university students. This design is best fitted for this study as it has been used by similar study by Ibe *et al* (2020). The sampling Techniques for this study was multistage sampling technique. The first stage sampling techniques, all faculties of the Universities were selected, that is 11 faculties. For second stage, which was the selection of departments from the faculties; 15 departments were selected with population of 3,651 students. This was generated through 30% of departments from each

faculty. These was according to the rule of the thumb where 30% of the sample was found to be representative of the population. In the third stage, students were allocated to each sampled department using proportional sampling technique. Here, each of the sampled department were proportionally allocated students base on the departmental and faculty population. In the Fourth stage, proportional sampling technique were used to allocate students to year/level (Year 1 – 4) of study for each department. In the fifth stage, stratified sampling techniques were used to stratify students gender into Male and Female. Then, the Sixth stage was where students were allocated to the strata (Male and Female) using systematic techniques.

### **Instrument for Data Collection**

The instrument required for data collection for this study was a questionnaire. The questionnaire has well-structured questions that were used to collect data for this study which is to determine the level of oral health knowledge and practice among state university students in Enugu state. This instruments were validated, by an expert in the field of oral health, Public health and health education, in relation to language, clarity, adequacy of content and ability to elicit accurate information in relation to the purpose of the study. However, the internal consistency of the instrument was confirmed with kuder-Richardson-21 reliability coefficient of 0.807 and Cronbach's alpha reliability coefficient of 0.811.

### **Method of Analysis**

The data generated from the questionnaire were collected and collated by the researcher and were entered into computer software called Statistical Package for Social Science (SPSS) version 23 for both descriptive and inferential statistical analysis. Descriptive statistics were used to report frequencies for categorical variables and were illustrated in the form of tables. The outcome was analyzed and presented using score and percentage grading system. This grading system showed that, students with less than 40 % score had Poor knowledge, those with scores within 40% – 55% scores had moderate knowledge while students with scores above 55% had high knowledge. These were also attributed to oral health practice; students with oral health practice score below 40% were regarded as those with poor practice, whereas students with score within 40% to 55% has moderate practice while those with score above 55% were regarded as students with high oral health practice. Inferential statistics were applied using chi-square test tool to test for significance difference between variables (Price, Jhanganian & Chiang, 2015).

### **Ethical Considerations/Informed Consent**

The department of Public health, School of Health Technology, Federal University of Technology, Owerri approved the study and gave a letter of introduction to the researcher. The ethical committee gave ethical approval after going through the proposal, while a verbal informed consent was sorted and received from the participating students.

## **RESULT**

### **Socio-demographic characteristics**

Result from Table I, showed that students from within Age less than 18years were 140(17.8%) respondents. Students with Age range of 18 – 23 years were 223(28.4%), for students with Age range of 24 – 29years, respondents were 469(34.2%) students. But for Age above 29years, the outcome was 154(19.4%) students. For Gender of the study, Female students the outcome of respondents was 55.3%. But for year of study, year 1, students had 107(13.6%) students. For year 2, students had 213(27.1%) students. For year 3, students had 276(35.1%) students. For year 4, has 190(24.2%) students.

Table 1: Distribution of respondents by Socio – demographic Characteristics, n =786 (100%)

Variables	Frequency	%	C%
<b>Age</b>			
less than 18yrs	140	18	100
18-23yrs	223	28	28
24-29yrs	269	34	63
Above 29yrs	154	20	82
<b>Total</b>	<b>786</b>	<b>100</b>	
<b>Gender</b>			
Male	350	45	100
Female	435	55	55
Others	1	0.1	100
<b>Total</b>	<b>786</b>	<b>100</b>	
<b>Year of study</b>			
Year 1/1001	107	14	14
Year 2/2001	213	27	27
Year 3/3001	276	35	76
Year 4/4001	190	24	100
<b>Total</b>	<b>786</b>	<b>100</b>	

### Oral health knowledge

From table 2 below, we have frequency of students with knowledge of oral hygiene at 71% students while for Adequate for cleaning mouth was 493(62.7%) students. For Best time to brush the teeth, the outcome was 82 (10.2%) students indicating poor knowledge on best time to brush the teeth for both school. However, for ways to clean the mouth, the researcher had 448(57%) students for All of the above option, indicating greater respondents with adequate knowledge on ways to clean the mouth. For Food good for the teeth, 19(12.4%) affirmed cake, 156(19.8%) affirmed chewing gum, 21(2.7%) affirmed ice cream, 16(2.0%) affirmed sweet, while 574(73.0%) affirmed vegetables. For Ways to prevent oral disease, the outcome showed 223(28.4%) students for All of the above, 58(7.4%) students for by brushing the teeth, 50(6.4%) students for by Flossing, 375(47.7%) students for by Reducing sugar intake and 80(10.2%) students for by Regular mouth wash. For Oral diseases as a result of poor oral hygiene, the outcome showed 405(51.5%) respondents for Gingivitis, 146(18.6%) for Graves’ disease, 94(12%) for Oral cancer and 141(17.9%) for Oral stomatitis.

Table 2: Frequency distribution of oral health knowledge of students, n=785(100%)

VARIABLES	FREQUENCY	%	C%
Definition of oral hygiene	71	9	9
Brushing the teeth only	104	13	22
Keeping only the mouth clean and the teeth clean to prevent dental problem	529	67	90
Keeping the teeth clean only	67	8.5	98
None of the above	15	1.9	100
<b>Total</b>	<b>786</b>	<b>100</b>	

Adequate for cleaning mouth			
Dental floss	103	13	76
Tooth brush only	81	10	86
Tooth paste only	109	14	
All of the above	493	63	100
<b>Total</b>	<b>786</b>	<b>100</b>	
Best time to brush the teeth			
Afternoon only	47	6	6
Morning and night	611	78	84
Morning only	82	10	94
Night only	46	5.9	100
<b>Total</b>	<b>786</b>	<b>100</b>	
Ways to clean the mouth			
All of the above	448	57	57
Brushing the teeth	83	11	68
Flossing	44	5.6	73
Rinsing the mouth with water	156	20	93
Use of toothpick	55	7	100
<b>Total</b>	<b>786</b>	<b>100</b>	
Food good for the teeth			
Cake	19	2.4	2.4
Chewing gum	156	20	22
Ice cream	21	2.7	25
Sweet	16	2	27
Vegetables	574	73	100
<b>Total</b>	<b>786</b>	<b>100</b>	
Ways to prevent oral disease			
All of the above	223	28	28
By brushing the teeth	58	7.4	36
Flossing	50	6.4	42
Reducing sugar intake	375	48	90
Regular mouth wash	80	10	100
<b>Total</b>	<b>786</b>		
Consequences of poor oral hygiene			
All of the above	457	58	58
Bad breathe	63	8	66
Dental caries (tooth cavity)	65	8.3	74
Gum bleeding	78	9.9	84
Swelling of the gum	123	16	100
<b>Total</b>	<b>786</b>	<b>100</b>	
Cleaning the teeth prevents			
All of the above	472	60	60

Dental caries	91	12	72
Halitosis	104	13	85
Swelling of the gum	119	15	100
<b>Total</b>	<b>786</b>	<b>100</b>	
Benefits of cleaning teeth except			
It gives confidence	237	30	30
It helps to prevent oral infection	177	23	53
It keeps the mouth fresh	176	22	75
It prevents shedding	196	25	100
<b>Total</b>	<b>786</b>	<b>100</b>	
Oral diseases as a result of poor oral hygiene			
Gingivitis	405	52	52
Graves disease	146	19	70
Oral cancer	94	12	82
Oral stomatitis	141	18	100
<b>Total</b>	<b>786</b>	<b>100</b>	

### Oral health knowledge frequency distribution by score Level

On the assessment of oral health knowledge, table 3 results showed that students with less than 40% score were 34% of the students. While those with moderate score were 13% of the students. However, students with high knowledge were 53.1% students.

Table 3: Distribution of respondents by oral health knowledge score level, n=786 (100%)

Variables	Frequency	%	C%
Poor Knowledge	267	34	34
Moderate	102	13	46.9
High knowledge	417	53.1	100
Total	786	100	

### Oral health practice

From table 4 below, the outcome showed, 571 (72.6%) students Daily, 2 (0.2%) students for Don't know, 88(11.2%) for Four times a week, 1(0.1%) students for One a week, 46(5.9%) students for None and 78 (9.9%) students for Others. For question on, do you clean your teeth, the outcome showed 29(3.7%) students affirmed No as their respondents and 757(96.3%) students affirmed Yes. For question on Frequency of cleaning teeth, the outcome showed 44(5.6%) students responded Afternoon only, 470(59.8%) students responded Morning and night, 218(27.7%) students responded Morning only, while none of the students responded Never, but 53 (6.7%) student affirmed Night only and 1(0.1%) student affirmed Sometimes as their responds.

Table 4: Frequency distribution of student's oral health practice, n=786 (100%)

VARIABLES	FREQUENCY	%	C%
Often do you clean your mouth			
Daily	571	72.6	72.6

Don't know	2	0.2	83.8
Four times a week	88	11.2	34.0
One a week	1	0.1	89.0
None	46	5.9	99.9
Others	78	9.9	100
<b>Total</b>	786	100	
Clean your teeth			
No	29	3.7	3.7
Yes	757	96.3	100
<b>Total</b>	786	100	
Frequency of cleaning teeth			
Afternoon only	44	5.6	5.6
Morning and night	470	59.8	65.4
Morning only	218	27.7	93.1
Never	0	0	
Night only	53	6.7	99.9
Sometimes	1	0.1	100
Others			
Clean mouth after meal			
Always	354	45.0	45.0
Never	100	12.7	57.8
Sometimes	332	42.2	100
<b>Total</b>	786	100	
Items used to clean teeth			
Charcoal	24	3.1	3.1
Clewing stick	58	7.4	10.1
Dental powder	68	8.7	19.1
Floss	0	0	0
Mouth wash	0	0	0
None	0	0	100
Others	0	0	100
Toothbrush & paste	636	80.9	100
Use of charcoal to clean teeth			
Always	163	20.7	20.7
Never	373	47.5	68.2
Sometimes	250	31.8	100
<b>Total</b>	786	100	
Use of chewing stick			
Always	145	18.4	18.4
Never	299	38.0	56.5
Sometimes	342	43.5	100
<b>Total</b>	786	100	



Use of dental powder			
Always	169	21.5	21.5
Never	267	34.0	55.5
Sometimes	350	44.5	100
<b>Total</b>	<b>786</b>	<b>100</b>	
Use of tooth & paste			
Always	424	53.9	53.9
Never	91	11.6	65.5
Sometimes	271	34.5	100
Pattern of brushing			
Up & down technique	182	23.2	23.4
Up & down and sideways	399	50.8	49.0
Sideways	201	25.6	49.2
Others	2	0.2	100
Reason for cleaning the mouth			
To avoid oral infection	322	41.0	31.0
To avoid bad breathe	233	29.6	58.9
To avoid oral diseases	219	27.9	99.0
Others	11		100
Routine dental checkup			
Once per year	384	48.9	20.4
Twice per year	241	30.7	69.2
Never	3	0.3	69.3
Others	157	20.0	100
Parents support for dental checkup			
Always	410	52.2	52.2
Sometimes	370	47.1	52.8
Never	3	0.4	99.9
<b>Total</b>	<b>786</b>	<b>100</b>	

### Oral health practice by score level

Result from table 5, showed that students with poor practice scores was 1% and those with moderate practice score were 10 %. While students with high practice score 88.8%.

Table 5: Distribution of respondents by oral health Practice, n=786 (100%)

Variable	Frequency	%	C%
Poor practice	8	1	1
Moderate practice	80	10	11.2
High practice	698	88.8	100
<b>Total</b>	<b>786</b>	<b>100</b>	



### Student Parental socio-economic status

Result from table 6, showed that students whose father’s highest level of education was No formal education were 22% of the students while those Father’s highest education was tertiary education were 40.5% students. However, students whose Mother’s highest education was No formal education were 16.2% students while those whose Mother’s highest education was tertiary were 36.5% of the students. Hence, for student father’s occupation, 0.3% of them was in the categories of others. While for mother’s occupation, those with others had 0% students. For Parent’s residence, those with 0.2% in the categories of others while those in urban areas had 41.3% of them resides in semi-urban area. However, those with 15.1% were for those in the categories of N20,000 – N 29,000 monthly upkeep from parents. While 41.6% of the students were at N10,000 – N19,000 monthly upkeeps from parents. But for student’s residence, students respond for others were 0.0% while those in off-camp were 30.5%.

Table 6: Distribution of respondents by student parental Socio – economic status, n=786 (100%)

Variables	F	%	C%
<b>Fathers highest level of education</b>			
No formal education	173	22	22
primary Education	108	13.7	35.8
secondary Education	187	23.8	59.5
tertiary Education	318	40.5	100
<b>Total</b>	<b>786</b>	<b>100</b>	
<b>Mothers highest level education</b>			
No formal Education	127	16.2	16.2
primary Education	173	22	38.2
Secondary Education	199	25.3	63.5
Tertiary Education	287	36.5	100
<b>Total</b>	<b>786</b>	<b>100</b>	
<b>Father’s occupation</b>			
Unemployed/Applicant	64	8.1	100
public/Civil Servant	203	25.8	50.6
Trading/Business	324	41.2	91.9
Farming	157	20	24.6
Artisan	36	4.6	4.6
Others	2	0.3	
<b>Total</b>	<b>786</b>	<b>100</b>	
<b>Mothers occupation</b>			
Unemployed/Application	90	11.5	100
public/civil servant	246	31.3	52.9
Trading/Business	280	35.6	88.5
Farming	126	16	21.6
Artisan	44	5.6	5.6
Other	0	0	0
<b>Total</b>	<b>786</b>	<b>100</b>	

<b>Parent area of residence</b>			
Urban	304	38.7	99.7
semi-Urban	325	41.3	61.1
Rural	155	19.7	19.7
Others	2	0.2	100
<b>Total</b>	<b>100</b>		
<b>Amount for upkeep from parents</b>			
Below #10000	143	18.2	35.5
#10,000 -#19,000	327	41.6	77.1
#20,000-#29,000	119	15.1	92.2
#30,000 -#39,000	61	78	100
Above #40,000	136	17.3	17.3
<b>Total</b>	<b>786</b>	<b>100</b>	
<b>Student area of residence</b>			
University Hostel	240	30.5	100
Off campus(Lodge	228	29	69.5
Living with Relative/friend	161	20.5	40.5
Living with parent	157	20	20
Other	0	0	0
Total	786	100	

Table 7: Relationship between Gender and Knowledge of the students

Gender and Knowledge					
		Knowledge			Total
		Poor Knowledge	Moderate Knowledge	High Knowledge	
Gender	female	149	51	235	435
	Male	117	51	182	350
	Trans gender	1	0	0	1
Total		267	102	417	786

chi square= 3.5, p< 0.47, CI =95%, 0.464- 0.483

The chi-square value here is 3.5 and the p-value associated with the chi-square value is 0.47, which suggests that there is no significant association between gender and knowledge level at a 95% confidence level. The confidence interval (CI) is also provided, which is 95% in this case, with a range of 0.464 to 0.483. Based on this analysis, there is no strong evidence to suggest a significant relationship between gender and knowledge level among the students in the study.

Table 8: Relationship between Age and Knowledge of the students

Age and Knowledge						
		Score1				Total
			Poor Knowledge	Moderate Knowledge	High Knowledge	
Age	18 – 23yrs	Count	80	30	113	223
	24-29yrs	Count	110	41	118	269

	Above 29yrs	Count	42	20	92	154
	Less than 18yrs	Count	35	11	94	140
Total		Count	267	102	417	786
chi square= 24.3, p< 0.001, CI =95%, 0- 0						

The chi-square value here is 24.3 and the p-value associated with the chi-square value is less than 0.001, indicating a highly significant association between age group and knowledge level at a 95% confidence level. The confidence interval (CI) is also provided, which is 95% in this case. The range is from 0 to 0, which suggests perfect agreement between age group and knowledge level. Based on this analysis, there is a significant relationship between age group and knowledge level among the students in the study. Specifically, older age groups tend to have higher levels of knowledge compared to younger age groups.

Table 9: Relationship between class level and knowledge of students

		Level and Knowledge				
		Knowledge				Total
			Poor Knowledge	Moderate Knowledge	High Knowledge	
Level	Year I/100L	Count	25	14	68	107
	Year II/200L	Count	96	31	86	213
	Year III/300L	Count	91	37	148	276
	Year IV/400L	Count	55	20	115	190
Total	Count	267	102	417	786	
chi square= 24.9, p< 0.001, CI =95%, 0						

The chi-square value here is 24.9 and the p-value associated with the chi-square value is less than 0.001, indicating a highly significant association between class level and knowledge level at a 95% confidence level. The confidence interval (CI) is also provided, which is 95% in this case. The range is from 0 to 0, indicating perfect agreement between class level and knowledge level. Based on this analysis, there is a significant relationship between class level and knowledge level among the students in the study. This suggests that as students' progress to higher class levels, their knowledge levels tend to increase.

Table 10: Relationship between Age and Practice of the students

Age and Practice						
		Practice				Total
			Poor Practice	Moderate Practice	High practice	
Age	18 – 23yrs	Count	4	24	195	223
	24-29yrs	Count	2	27	240	269
	Above 29yrs	Count	2	17	135	154
	Less than 18yrs	Count	0	12	128	140
Total	Count	8	80	698	786	
chi square= 4.9, p< 0.615, CI =95%, 0.606 – 0.625						

The chi-square value here is 4.9 and the p-value associated with the chi-square value is 0.615, which is greater than the typical significance level of 0.05. This suggests that there is no significant association between age group and practice level at a 95% confidence level. The confidence interval (CI) is also provided, which is 95% in this case, with a range of 0.606 to 0.625. Based on this analysis, there is no

significant relationship between age group and practice level among the students in the study. This means that age group does not seem to influence the practice levels of the students.

Table 11: Relationship between Gender and Practice of students

Gender and Practice						
	Scorepractice1					Total
			Poor Practice	Moderate Practice	High practice	
What is your gender	female	Count	4	46	385	435
	male	Count	4	33	313	350
	Trans gender	Count	0	1	0	1
Total		Count	8	80	698	786
chi square= 4.9, p< 0.175, CI =95%, 0.168 – 0.183						

The chi-square value here is 4.9 and the p-value associated with the chi-square value is 0.175, which is greater than the typical significance level of 0.05. This suggests that there is no significant association between gender and practice level at a 95% confidence level. The confidence interval (CI) is also provided, which is 95% in this case, with a range of 0.168 to 0.183. Based on this analysis, there is no significant relationship between gender and practice level among the students in the study. This means that gender does not seem to influence the practice levels of the students.

Table 12: Relationship between Class level and Practice of students

Level and Practice						
	Scorepractice1					Total
			Poor Practice	Moderate Practice	High practice	
What is your year/level of study?	Year I/100L	Count	0	12	95	107
	Year II/200L	Count	4	31	178	213
	Year III/300L	Count	2	16	258	276
	Year IV/400L	Count	2	21	167	190
Total		Count	8	80	698	786
chi square= 14.9, p< 0.05, CI =95%, 0.025 – 0.032						

The chi-square value here is 14.9 and the p-value associated with the chi-square value is less than 0.05, which suggests that there is a significant association between class level and practice level at a 95% confidence level. The confidence interval (CI) is also provided, which is 95% in this case, with a range of 0.025 to 0.032. Based on this analysis, there is a significant relationship between class level and practice level among the students in the study. This indicates that students in different class levels tend to have varying levels of practice habits.

## DISCUSSION

The findings of this study of oral health knowledge among students from a state university in Enugu state revealed that 34% of students possess inadequate oral health knowledge. Contrary to expectations, given their level of education, it was surprising to discover that the outcome suggests otherwise, indicating a deficit in oral health awareness among university students. However, a study by Tadin, *et al.*, (2022), on Oral Hygiene Practices and Oral Health Knowledge among Students in Split, Croatia, is not in agreement with this study by saying that there is a good oral health knowledge among tested university students.

However, on oral health practice among state university students in Enugu state, the outcome of this study showed lesser percentage of students 1% with poor oral health practice compared to students' total population. These outcomes showed that there was higher percentage of students in that practiced oral health. Fortunately, this outcome is not surprising, as it was expected that university students based on their level of education should have good oral health practice. Besides, this outcome of another study done by Alakija (1981) on oral hygiene practice in primary schools in Benin City, Nigeria showed that Girls had higher oral hygiene scores than boys, and there was little difference between the scores of girls in the two schools and that oral health practice can be achieved through good oral hygiene.

Furthermore, the socio-economic status in this study presents a complex picture that could potentially impact students' oral health knowledge and practices (Aslan et al., 2022). While a significant portion of parents have attained tertiary education, suggesting a higher level of education within households, disparities in parental education levels and occupations between genders could influence the transmission and reinforcement of oral health knowledge within families. Additionally, the amount received for upkeep may reflect financial constraints that could limit access to oral health services or products. Moreover, the diverse living arrangements, with a substantial portion of students living off-campus, could affect their access to and engagement with oral health resources and practices (Nayee, *et al.*, 2018). These factors collectively suggest that socio-economic status may indeed play a role in shaping students' oral health knowledge and practices, potentially warranting targeted interventions to address disparities and promote oral health equity among university students.

The chi-square analysis reveals varying associations between demographic variables and knowledge or practice levels among the students. Gender shows no significant association with knowledge or practice levels, with p-values of 0.47 and 0.175, respectively. Likewise, age group exhibits no significant association with practice level ( $p = 0.615$ ). However, age group displays a highly significant association with knowledge level ( $p < 0.001$ ), indicating that older students tend to have higher knowledge levels. Additionally, class level demonstrates a highly significant association with both knowledge and practice levels ( $p < 0.001$  for both), suggesting that as students' progress to higher classes, their knowledge and practice levels increase. Therefore, while gender does not seem to influence knowledge or practice levels, age group and class level significantly impact students' knowledge and practice habits.

## CONCLUSION

The findings of this study on oral health knowledge among students in Enugu state university reveal a concerning inadequacy, with 34% exhibiting insufficient awareness. Despite expectations of higher knowledge levels among university students, this deficit suggests a need for improved oral health education. Conversely, oral health practices show a more positive trend, with only 1% exhibiting poor habits, aligning with the anticipated higher standards among educated individuals. However, disparities in socio-economic status highlight potential influences on knowledge and practices, indicating a need for targeted interventions. While demographic factors like gender and age show varied associations with knowledge and practice levels, class level emerges as a significant predictor, underscoring the importance of educational progression in fostering oral health literacy and behaviors among students.

## Competing Interests

Authors have declared that they have no competing interests

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