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Afr. J. Biomed. Res. Vol. 23 (Special Edition, July, 2020); 93- 97

Research Article

The Awareness of Dental Check-Up and The Value of Aesthetic Restoration Amongst Undergraduates at the University of Ibadan, Southwest Nigeria

Amusa A.Y. and Sulaiman O.A

Department of Restorative Dentistry, College of Medicine, University of Ibadan. Ibadan, Nigeria.

ABSTRACT

The aim of the study was to create the need for awareness of dental check-up; and to access the value for aesthetic dental restoration. A descriptive cross-sectional study was done with the use of self-administered questioners designed in a clear message expressed in English language including 20 questions were distributed to undergraduate age range 16-30 years in the University of Ibadan. A total of 417 students responded to the questionnaire of which 92.1% are aware about dental check-up, 46.8% have had pain and discomfort from tooth, 19% have tooth fracture, 20% have tooth discolouration, 27% have visited a dentist, 2.9% have a tooth coloured filling, 7% are wearing removable denture. The result of this study shows an awareness of dental check-up and reduced value of aesthetic restoration among undergraduate students in the University of Ibadan. The study shows that despite being aware about dental check-up and having oral health problems this did not increase the practice of dental visit or increase in the value of aesthetic restoration among the University of Ibadan undergraduates.

Keywords: *Dental Awareness, check-up, aesthetics, dental visit*

*Author for correspondence: Email: tayooja@yahoo.co.uk; Tel: +234 8055066685

Received: September, 2019; Accepted: March, 2020; Published: July 2020

Abstracted by:

Bioline International, African Journals online (AJOL), Index Copernicus, African Index Medicus (WHO), Excerpta medica (EMBASE), CAB Abstracts, SCOPUS, Global Health Abstracts, Asian Science Index, Index Veterinarius

INTRODUCTION

Oral Diseases are a major public health concern owing to their higher prevalence and their effects on the individual's quality of life (Petersen, 2003; 2004). Literacy level in our environment is very low as compared with the western community (Freeman et al 1993) more so studies on different population groups in Nigeria indicate a low awareness and poor attitude to oral health care regardless of education (Kay and Locker 1998, Woolgrove 1987, Hamilton and Coulby 1991). The level of dental check-up as compared to medical check-up in our community is low (Rosenstock 1974). The greatest burden of oral diseases is on disadvantaged society and socially marginalized population (Freeman et al 1993). Oral diseases restrict activities in school, at work and at home, causing millions of school and work hours to be lost yearly (Freeman et al 1993), the magnitude of problems associated with oral diseases are largely more in low and middle income countries where cost of dental care is not affordable to most people (Bamise et al 2008). In addition, low income, countries have limited dental health care provision owing to the exorbitant cost of equipment (Scott and Smith 1994).

One of the priorities identified by the global strategy for the prevention of non-communicable disease (NCDs) is to increase public awareness and understanding of risk of oral health (Freeman et al 1993). Early detection of disease is in most cases crucial to saving life (Freeman et al 1993). Oral health means more than good teeth, it is integral to general health and essential for wellbeing (Petersen, 2003; 2004). According to the World Health Organization (WHO), promotion of oral health is a cost-effective strategy to reduce the burden of oral disease and maintain oral health and quality of life (Azodo et al 2010). Preventable dental diseases are common in the environment, perhaps as a result of low level of dental awareness (Klages et al 2004). Achieving optimal oral health through preventive efforts is a hallmark of the dental profession. A primary goal of a preventive-oriented dental practice is to encourage patients to practice appropriate oral self-care behaviour. When patients are asked to follow an oral self-care regimen, they are being given a target or goal (for example, brush twice a day) and their task is to control or regulate their oral behaviour to achieve that objective (Ventä et al 1992).

The cost of organising programmes to bring awareness for the community to appreciate dentistry and more

importantly, the value of aesthetic restoration is relatively expensive (Sofola 2010) and receive less attention as well as poor budgetary allocation by government. This relativity can partly be explained by relative lack of awareness and benefit of dental services and restoration compare to other aspect of health care. Studies about dental awareness; dental service utilization; dental aesthetics; perceived oral health status and treatment needs, have been conducted on various groups (Patil 2010). A study shows very low utilization of dental services by undergraduate students of Obafemi Awolowo University (Bashiru and Anthony 2014). The unwillingness to visit dental hospital, although located on the university campus, for treatment, despite having missing tooth or caries was attributed to inadequate awareness of importance of dental health care among students. This was evident from the low percentage of respondents who knew that dental check-up should be regular (Bian et al 1995). Similar findings have been reported in other parts of the world (Blinkhorn 1993), (Naheeda 2014).

Aesthetic restoration is a restorative material used to project a better look of an individual that had compromised natural appearance (Sofola 2010). These materials mimic the natural shade of individual teeth. They could also be used to improve the value of an individual with a challenging psychology as a result of an embarrassment constituted by their dental outlook (Radha et al 2008) however the attitude of seeking cosmetic dental treatment in many communities in Nigeria is presumed to be low this may be due to high cost of treatment and the lack awareness of available treatment options (Barnabas 2012). However, information about awareness, attitude and its impact on utilization of dental health especially restorative treatment among Nigerians is scarce in literature. Therefore, this study was conducted to find out the awareness of the dental check-up and the overall effect of preventing dental diseases and to know the value of aesthetic dental restoration among the University of Ibadan undergraduates.

MATERIALS AND METHODS

Study Design: A descriptive cross-sectional study was conducted with the use of self-administered questionnaires designed in a clear message expressed in English language and distributed to undergraduate students in University of Ibadan.

Study Population, Area and Setting: The study was conducted among the undergraduates at the University of Ibadan campus. University of Ibadan is located five miles (8 kilometres) from the center of the major city of Ibadan in Western Nigeria. The University of Ibadan consist of about 10,000 students and about 8000 students reside inside the university campus where the university health center is situated. The health center does not have a dental center. The closest dental center is at the University College Hospital, which is about 5 kilometers from the University of Ibadan main campus and thus not easily accessible to the students.

Sample Size determination: The sample size for this study was determined using for estimation for single proportion $n = \frac{N \cdot e^2}{1 + N \cdot e^2}$ Where, n = required sample size N = population of undergraduate in selected faculties (5017), e = level of error

tolerance 5%. The total number of students from the selected faculties included 5017 with 1643 from the Faculty of Arts, 683 Faculty of Law, 1324 Faculty of Technology and 1367 Faculty of The Social sciences. n was calculated to be 372. Adjusting the sample size for 10% attrition, $n_1 = n / 1 - f$, therefore sample size was calculated to be 413. The sample size for each faculty was calculated to be 135 from the Faculty of Arts, 56 Faculty of Law, 100 Faculty of Technology and 113 Faculty of The Social sciences.

Sampling Method: A non-probability sampling technique was employed in selection of eligible participants. On each day of the data collection, students were asked to volunteer to fill the questionnaires. Participants who are Undergraduate students of the university of Ibadan and studying non-dental related courses were included in this study. All postgraduate students, dental students and students that were not in school as at the time of data collection were excluded from the study

Data Collection Instruments And Quality Controls: Questionnaire was adapted from WHO Oral Health Surveys Basic Methods. 5th Edition designed in English language, which contained 20 questions which include information on: - bio data; -their level of awareness of dental check-up; their experience about dental treatment; -their previous episode of dental diseases; -,their knowledge about aesthetic restorations; and -their perceived need for regular dental check-up. Each participant was given only one questionnaire, their participation in the research was voluntary and anonymous.

Data Analysis: The data was collected, collated, coded, double entered and analysed using SPSS Statistical Software for Windows, version 20 (SPSS Inc. Chicago, IL). The independent variables includes age, sex, faculty and level while the dependent variables included their level of awareness of dental check-up -oral hygiene practices and use of aids for oral hygiene; dental attendance and reason for dental attendance; -their previous episode of dental diseases; and -their exposure to risk for oral diseases, their knowledge about aesthetic restorations; and -their perceived need for regular dental check-up. Results were presented using tables and graphs. Strength of association between qualitative variables was tested using chi square test. Tests of significance was set at $P=0.05$.

Ethical consideration: Ethical clearance was obtained from the University of Ibadan Ethics Committee (UI/EC/15/0321). Consent form was signed by all students who agreed to participate. All information obtained in the course of this study was kept confidential. The names or any form of identification of participants were not needed, so they were not asked to offer them.

RESULTS

Four hundred and seventeen undergraduates of University of Ibadan were involved in the study. The age ranged between 16 and 30 years. 48.7% were males and 51.3% were females. The Mean age of the participants was 20.24 and average for the number of teeth reported by participants was 30.75

Table 1:
Socio demographic characteristics

	Variables	Frequency	Percentage
Faculty	Engineering	114	27.3
	Law	68	16.3
	Social Science	92	22.1
	Education	33	8.0
	Art	110	26.4
Gender	Male	203	48.7
	Female	214	51.3
Level	100	81	19.4
	200	70	16.8
	300	146	35.0
	400	100	24.0
	500	20	4.8
Age Mean (SD)		20.42(2.9)	
Number of teeth reported Mean (SD)		30.75(3.6)	

Table 2:
Percentage distribution of oral health behaviour

	Variables	Frequency	Percentage
Frequency of tooth cleaning	once daily	256	61.4
	Twice daily	121	29.0
	Others	13	3.1
	Don't want to say	27	6.5
Use of tooth paste for oral hygiene	Yes	365	87.5
	No	32	7.7
	Don't want to say	20	4.8
Use of mouth wash for oral hygiene	Yes	143	34.3
	No	94	22.5
	Don't want to say	180	43.2
Use of dental floss for oral hygiene	Yes	56	13.4
	No	89	21.3
	Don't want to say	272	65.2
Have you use tooth paste containing fluoride	Yes	345	82.7
	No	36	8.6
	Don't want to say	36	8.6
Level of awareness	Aware	384	92.1
	Not aware	33	7.9
Have you visited a dentist before	Yes	114	27.3
	No	290	69.5
	Don't want to say	13	3.1

Table 3:
The shows percentage distribution of the reason for dental visit

Reason for dental Visit	No	%
Scaling and polishing	27	23.5
Extraction	35	30.4
Filling	12	10.4
Others	38	33.0
Scaling/ polishing and extraction	1	0.9
Extraction ant filling	1	0.9
Scaling, polishing, extraction and filling	1	0.9

The result from the responses of 417 respondents about awareness of dental check-up indicated that 92.1% were aware about dental check-up and 7.9% aware not aware about dental check-up.27.3% have visited a dentist before, 69.5% have not visited a dentist before and 3.1% didn't want to say.

Table 4:
Percentage distribution of Aesthetic dental restoration among undergraduate

	Variables	Frequency	Percentage
Any tooth replaced?	Yes	16	3.8
	No	396	95.0
	Don't want to say	5	1.2
Previous tooth colored filled done in the past	Yes	12	2.9
	No	395	94.7
If yes, which teeth?	Don't want to say	10	2.4
	Front tooth	5	45.5
Any prosthesis in the mouth with tooth coloured materials	Back tooth	7	54.5
	Yes	6	1.4
If yes, which teeth?	No	401	96.2
	Don't want to say	10	2.4
	Front tooth	2	33.3
Any wearing of removable denture	Back tooth	4	66.7
	Yes	4	.7
If yes, which teeth?	No	408	97.8
	Don't want to say	5	1.4
Any wearing of removable denture	Front tooth	1	25.0
	Back tooth	3	75.0

16 participants have had their tooth replaced,12 participants have had a tooth coloured filling, 6 participants have had a tooth coloured prosthesis on their tooth,mostly back tooth(33.3%),and four participants wore removable denture (75%) mostly on back tooth.

Table 5:
Percentage distribution of risk factors that lead to tooth pathology

Variables	Frequency	Percentage	
Experience of reduced quality of life due to oral health problem	Yes	31	7.4
	No	353	84.7
	Don't want to say	33	7.9
If yes, what reason	Odour	3	11.5
	Colour	11	42.3
	Arrangement	4	11.5
	Lost	8	30.8
	Don't want to say	5	30.8
Experience of pain/ discomfort from teeth and mouth	Yes	195	46.8
	No	222	53.2
Consumption of sugary foods and drink	Yes	383	91.8
	No	13	3.1
	Don't want to say	21	5.0

If yes, frequency			
	<i>Regularly</i>	141	33.8
	<i>Occasionally</i>	151	36.2
	<i>Seldom</i>	47	18.7
	<i>Don't want to say</i>	44	11.3
Use of tobacco			
	<i>Yes</i>	15	3.6
	<i>No</i>	380	91.1
	<i>Don't want to say</i>	22	5.3
Type of tobacco			
	<i>Cigarette</i>	12	2.9
	<i>Pipe</i>	3	1.2
	<i>Don't want to say</i>		
Frequency of taking tobacco			
	<i>Regularly</i>	5	28.6
	<i>Occasionally</i>	9	64.3
	<i>Seldom</i>	1	7.1
Consumption of alcohol			
	<i>Yes</i>	106	25.4
	<i>No</i>	283	67.9
	<i>Don't want to say</i>	389	93.3
Frequency of taking alcohol			
	<i>Regularly</i>	21	19.0
	<i>Occasionally</i>	47	44.8
	<i>Seldom</i>	38	36.2

DISCUSSION

The aim of this study was to describe the awareness of dental check-up and the value of aesthetic dental restoration among the University of Ibadan undergraduates. Results from the study showed that most of the participants (92%) were aware about dental check-up. Despite the increased oral health campaign in the community at large, it appears that there has not been much of a positive change in attitude and knowledge of people to Dentistry (Sofola 2010, Patil 2010). This was also reflected in the study that showed only 114(23.7%) participants had ever visited the dentist for dental check-up/treatment, similar to the report of Bashiru et al (Bashiru and Anthony 2014) who noted that 71.6% of the 360 studied undergraduate students in southern Nigeria never visited a dentist before although a study in china revealed that the dental self-awareness campaign done improved oral health knowledge from 37% in 1989 to 79.2% in 1992 and the people's will in dental prevention was strengthened (Bian et al 1995).

Achieving optimal oral health through preventive efforts is a hallmark of the dental profession. A primary goal of a preventive-oriented dental practice is to encourage patients to practice appropriate oral self-care behaviour. When patients are asked to follow an oral self-care regimen, they are being given a target or goal (for example, brush twice a day) and their task is to control or regulate their oral behaviour to achieve that objective (Blinkhorn 1993).

The study showed that (29%) of the participants clean their teeth twice daily and more than half of the participants (61.4) clean their teeth once daily which is improved oral hygiene practice as compared to a study done in the University of Portharcourt where (90%) of the study participants brushed once daily (Bashiru and Anthony 2014). Some other studies

(Naheeda 2014, Radha et al 2008, Barnabas 2012) in the scientific literature had shown that most people brush once daily. This may be due to the poor attitude of people to their oral health, busy schedule and poor dental awareness.

Flossing has been encouraged as an adjunct to tooth brushing as it helps prevent interdental caries and periodontal pocket formation (Folayan et al 2014). In this study use of other aids for oral hygiene such as dental floss (13.4%) and mouth wash (34%) an observation higher than what was observed in University of Portharcourt (Bashiru and Anthony 2014) where the participants use of dental floss (5.8%) and mouth wash (4.2). The study showed a reduction in practice of risk factors that lead to tooth pathology 3.6% of the participants take tobacco and 25.4% take alcohol and 33.8% take refined carbohydrate regularly.

In a study in 2008 in India showed that less than half (47%) of the study participants were aware of any of the good practices of dental health e.g. brushing the teeth, periodic dental check-up etc. 35.5% of the participants know about practices that are bad for the teeth such as eating of too much sweet, excess sugar and sweetened drinks (Bayat 2008).

The value of aesthetic dental restoration was observed to be reduced despite having tooth pathologies e.g. fracture (19.9%), tooth discoloration (20%) and experience of pain and discomfort from the mouth, only a few participants have had restorative treatment e.g. (3.8%) have had tooth replacement, 1.4% have prosthesis in the mouth and 2.9% have had a tooth filling done

Acknowledgement

This research was funded by Medical Education Partnership Initiative in Nigeria (MEPIN). We thank our colleagues from College of Medicine, University of Ibadan who provided insight and expertise that greatly assisted the work. The authors thank Dr. F B Lawal; for assistance with particular technique, methodology, and Prof. Orimadegun for comments that greatly improved the manuscript. Professors Farombi, Omigbodun and Olaleye are appreciated for sharing their pearls of wisdom with us during the course of this research. We are also immensely grateful to Mr. Falayi Medical Education Partnership Initiative in Nigeria (MEPIN) program for his support throughout the course of the research.

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