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Oral health disease and library service delivery among library staff of the universities in Nigeria.

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Introduction

The sole mission of any organization especially in the service sector is to offer high quality and efficient service to its users. This service to a large extent depends greatly on the disposition of its employees since human resource propels both material and the financial resources. There is no doubt that the physical, mental, psychological and totality of human individual wellbeing has a major role to play in any setting and this ensures that individuals' health is very paramount. In other words, ill health in whatever form may likely affect the productivity of individual employees. Many authors who agreed to this include (Australia Public Service Commission, 2018; Gomes de Macedo and Paula Queluz, 2011 and European Commission, 2008).

Oral health means more than healthy teeth; the health of the gums, oral soft tissues, chewing muscle, the palate, tongue, lips and salivary glands (Petersen, 2009). Oral health does not just occur, certain health habits are determinants of oral health. It can be caused as a result of poor lifestyle, poor health habits, smoking, unhealthy diet such as excessive consumption of westernized food with sugar contents and harmful use of alcohol (World Health Professions Alliance, 2010).

There are different types of oral diseases, (Kuhnen, Peres, M, Masiero, A.V. and Peres, K.G. (2009) dealt on toothache, Jemal, Murray and Thun (2002) on oral cancer, Petersen (2009) dealt on tooth decay, periodontal (gum disease), dental erosion, Noma, cancer of the tongue etc. According to Petersen (2009) the most prevalent in human populations were tooth decay, gum disease and tooth loss. Oral health diseases whether as a toothache, gum disease or cancer cause discomfort to the patients and subject them to too much pain, Petersen (2003) which affects their daily activities and general well-being (Sheiham, 2005; Gomes de Macedo and Paula Queluz, 2011) ; Cohen, Harris, Bonito, Manski, Macek, Edwards and Cornelius 2007; and Kiyat, 2008).

Since oral health habits affect people irrespective of their professions in their daily activities, it is most likely that it might also affect those in the service sector such as librarians. Some of the job roles of librarians include behind the scene role such as cataloguing and classification which involves a lot of brain work, others include user services, reference services where users interact with librarians face to face in the traditional library setting etc. These roles or the services

librarians offer may likely suffer if they are not well disposed to offer them. The excruciating pain associated with toothache affect normal activities of individual such as their job, social activities, interaction among others (Cohen et al., 2007; Kiyat 2008). This will no doubt affect the performance and productivity of a worker in an organization (Australian Public Service Commission, 2018).

However, since human resource propels other resources, so anything that affects them should be handled with utmost care. In other words, oral health disorder which affect individual worker should be treated and prevented. One of the measures to prevent oral health disease is to live a healthy life and maintain good dietary habit.

Statement of the Problem

Libraries exist to provide information services to all and sundry hence every sector of the economy requires information for their advancement. And the well-being of library personnel is no doubt of paramount importance to these sectors of the economy because they are the gateways through which information is disseminated.

Given these vital roles the library staff play in the information sector in providing quick access to information resources in the various libraries, it is important that they should be mentally, physically, psychologically and spiritually stable, be free from any disease that can affect their job performance.

Going by the discomfort otherwise associated with oral health disease to the sufferers which no doubt may affect the productivity of worker in any workplace. Yet a peruse of literature on the oral health revealed dearth of studies that have focused on the oral health diseases and its effects on the library services delivery. However, this necessitated this study as it intends to fill the gap in the literature and also addresses certain issues as it concerns oral health and productivity among library staff as well as strategies on how to curb this problem.

Objectives of the Study:

The general purpose of this study is to find out the oral health disease and library service delivery among library staff of the universities in South East, Nigeria. Specifically, the objectives of this study include:

I To find out the status of oral health disease of library staff in Nigerian universities.

ii To find out the causes of oral health disease by library staff in Nigerian universities.

Iii To find out the effects of oral health disease on library staff in Nigerian universities

iv. To find out the effects oral health disease has on library staff in the delivery of library services.

v. To find out strategies to curb oral health diseases by library staff in Nigerian universities.

Research Questions

i What is the status of the oral health disease of library staff in Nigerian universities?

ii What are the causes of oral health disease of library staff in Nigerian universities?

iii What are the effects of oral health diseases on the library staff in Nigerian universities?

iv What effects does oral health disease have on library staff in the delivery of library service?

v What are the strategies to curb oral health disease by library staff in Nigerian universities?

Hypothesis

H_0 There is no significant relationship between the effect of oral health disease and productivity of the library staff in the federal universities in south east Nigeria

H_1 There is significant relationship between the effect of OHD and productivity of the library staff in the Federal universities in S.E. Nigeria.

Literature Review

Oral health is an important component of general health and quality of life (Petersen, 2003 & Sofola, 2010). Oral health is defined by Olusile (2010) "as a standard of health of the oral and related tissues which enables an individual to eat, speak and socialize without active disease, discomfort or embarrassment and which contributes to the general well being"(p.134).

At the global scene, oral health diseases have been mentioned as far back as 3700 BC in the Egyptian manuscripts known as Eber's Papyri. Tooth decay, Toothache, periodontal diseases and

premature tooth loss were documented in ancient Chronicles (Olusile, 2010). Hence, Petersen (2009) reported that oral disease remained a global quandary, particularly among the underprivileged populations in both industrialized and developing economies. According to the study dental decay is more prevalent among adults in industrialized countries than in the developing countries while oral cancer is more in the developing countries than the industrialized countries.

In developing countries Sheiham (2005) reported that there are few efficient dental care systems to cope with problems of dental disease and where there are, the cost is beyond most people's means.

In Nigeria according to Sofola (2010), 50 years of oral health was celebrated in 2010. Yet there is no structured oral health policy in Nigeria. Sofola (2010) and Olusile (2010) reported that priority attention is not yet accorded to oral health and this has continued to worsen oral health of the populace with soaring morbidity rate. This is caused as a result of low awareness and inadequate access.

Causes of Oral Health Diseases

Certain health habits are the main causes of oral disease. Poor or uncontrolled dietary habits, tobacco smoking, unhealthy lifestyle, avoidance of oral health checks etc. are all detrimental to the oral well- being of individual. Root caries (tooth decay) which causes loss of periodontal insertion and consequently causing root exposure to the oral cavity seems to be more associated with smoking. Riley, Tomar, Gilbert (2004) discovered in their study that there is a decrease in pain and decrease in oral disease of a smoker who stopped smoking. Again,(World Health Professions Alliance, 2010) attest that tobacco, unhealthy diet (particularly sugar and harmful use of alcohol) are largely the causers of oral disorder. Some adverse effects of tobacco on oral health include according to Reibel (2003): discolouration of the teeth and dental restorations, halitosis, effect on taste and smell acuity, periodontal disease, smoker's melanosis, oral cancer, caries and candidosis etc. Dental erosion is caused by gastric acid and soft drinks (Petersen, 2009). Moreover, the way in which individuals live may predispose them to behavioral patterns that are either beneficial or detrimental to health (Shekar & Babu, 2009).

Olusile (2010) also reported that a shift from traditional diet to more westernized diet through excessive sugar consumption has increased prevalence of dental caries especially in Nigeria and particularly among the younger people. Petersen (2009) also reported some common risks factors associated with oral diseases to include: dietary habits, use of tobacco and excessive consumption of alcohol and standard of hygiene. Improper oral health care practices are one of the causes of oral disease. Hence studies from American Dental Association (2016) and Bendall (2018) have recommended best ways to store and care for toothbrushes. Thus their studies implied that improper care and improper storage of toothbrush are one of the determinants of oral disease.

Effects or Oral Health Diseases

Oral health disorder, whether in the form of toothache, tooth decay, gum disease, oral cancer etc Petersen (2003) and Petersen (2009) recognized that oral diseases can cause excruciating pain, psychological suffering, social well being of individual leading to damage in an individual and collective level. Sheiham (2005) reported that it does not only cause too much pain to the patient but it also affects what people eat, their speech and their quality of life and well- being.

Gomes de Macedo and Paula Queluz (2011) recognized that oral health disorder affect workers negatively in their daily activities and quality of life. Normal activities of individuals such as their job, housework, social activities, sleeping, talking and eating interactions were all affected as a result of toothache pain. Rate of absenteeism and presenteeism of workers increases as a result of sickness and this affects productivity of individual as well (Hafner, van Stolk, Saunders, Krapels and Baruch, 2015 & Australian Public Service Commission, 2018). It also caused depression on the sufferer (Cohen et al, 2007). Thus this implies that a person is simply not well systematically if they are not well orally (Sofola, 2010).

Report by Black and Frost (2011) approximated the cost of sickness absence to the British business at £15bn annually. The same report also showed that 140 million working days are also lost and 300,000 individuals leave the workplace each year due to ill-health. The same way HSE (2014) recorded approximately 28.2 million days lost due to work-related ill health or injury. According to Australian Public Service Commission (2018), poor employee health and wellbeing affect organizational productivity of workers through absence from work as a result of ill health.

Prevention of Oral Health Disease

Sofola (2010) reported that one of the strategies to maintain oral health habit is the acquisition of knowledge of oral diseases and their prevention, knowledge of acceptable oral health behaviour and utilization of available facilities. Another strategy is the treating of oral diseases when dictated so that it does not led to other health challenges.

Knowledge and application of good oral health practice is another way of preventing oral health. Bendall (2018) opined that the best way to store and care for the toothbrush is to store in the open where there is good air circulation, keeping it away from the toilet and sink area and to store toothbrush in an upright position among others. According to American Dental Association (2016) clinical studies have shown that chewing sugarless gum for 20 minutes after meals can help to prevent tooth decay because increased salivary flow from the chewing neutralizes and washes away the acid that are produced when food is broken down by the bacteria in plaque on the teeth. Replacement of toothbrush every 3-4 months or more often when the bristles are visibly worn using toothpaste with fluoride are all recommended too.

Scaling and polishing of teeth which is one of the preventive measures of oral disease is unfortunately perceived by policy makers in Nigeria as simply aesthetic treatment which shows lack of ignorance (Sofola, 2010).

Since studies have shown that oral diseases can link to other health challenges like cardiovascular diseases, diabetes mellitus, pretem low birth weight as well as myocardial infarction. Sofola (2010) and Olusile (2010) it is important therefore to prevent oral health disease. Again, Maeley and Rose (2008) from their study demonstrated that treating periodontal disease can stabilize glucose status of the patients.

Methodology

This study adopted a descriptive design. The study was carried out in five federal universities in the South East of Nigeria namely Michael Opara University of Agriculture Umudike, Umuahia (MOUA); Nnamdi Azikiwe University, Awka (NAU); University of Nigeria Nsukka (UNN); Alex Ekwueme Federal University Ndufu-Alike, Ikwo (AE-FUNNAI) Abakaliki Ebonyi State

and Federal University of Technology, Owerri (FUTO). The population was made up of all the library staff drawn from these five institutions. The total number of staff in these institutions is 353: MOUA (62); NAU (61); UNN (82); AE- FUNNAI (31) and FUTO (117) respectively. Questionnaire was the instrument used for this study. It was divided into five sections. Section one was on bio-data and status of oral disease of library personnel, section two on causes of OHD, section three on prevention of OHD; section four and five on Effect of OHD on staff and effect on library service respectively. A total of three hundred and fifty three copies of questionnaire were distributed by the researcher with the help of the librarian in charge of research in each of the institutions studied in accordance to the number of library staff in each of the universities studied. The collation was done by the staff in the research unit as designated by the research librarian. Out of the three hundred and fifty three copies of the questionnaire distributed only 325 were dully completed and returned thus a response rate of 92.07%. Both the distribution and the collation of the instrument were completed within five weeks: two weeks for the distribution and three weeks for the collation of the instrument from these universities.

The data collected from the questionnaire except section A was on four point rating scale of strongly agree (SA); Agree (A); Disagree (D); Strongly disagree (SD) and Very high extent (VHE); High extent (HE); Low extent (LE) and Very low extent (VLE) respectively were analysed using descriptive statistical technique of mean and standard deviation. The scale used was based on Gregory and Ward (1978) formula for determining the lower and upper limits at cut-off point for the item and SD. Thus this formula:

SA/VHE = 3.50-4.00points
A/HE = 2.50-2.49points
D/LE = 1.50-2.49points
SD/VLE= 0.5-1.49points

Frequencies and percentages were used to analyse data on the bio-data of the respondents and the status of the respondents on OHD.

Regression analysis in which model summary was generated was used to analyse the null hypothesis (H_0) formulated for this study. The (H_0) was tested for significance difference at 0.05.

Results

Table 1: Gender/ Oral Health Status of Library Staff

	OHD Status of Library Staff	Gender (No and %) Male	Female
	Yes n=235	15 (4.62)	220 (67.70)
	No n= 90	78 (24)	12(3.70)
Total	**325**	325(100%)	

Source: Field Data

Table1 presents data on the OHD of library staff. Out of the 325 respondents who completed the filling of the questionnaire, slightly over three quarter of the respondents 235 (72.3%) had suffered from OHD while 90 (27.7%) have not. Out of 235 respondents that suffered from OHD 15 (4.6%) were males while 220 (67.7%) were females. Conversely, 78 (24%) males and 12 (3.7%) females have not suffered from OHD.

Causes of Oral Health Disease (OHD) (N=325)

Table 2: What is your agreement on the following statements as causes of oral health disease (OHD)

s/n	Causes of Oral health disease	SA	A	D	SD	Mean	SD±
1	Excess use of candy causes oral health disease (OHD)	234	91	0	0	3.72	110.50
2	Non replacement of tooth brush as when due (3 to 4 months) causes OHD	245	80	0	0	3.75	115.50
3	Saliva contact through lip balm, drinking glasses or bottles causes OHD	231	71	23	0	3.64	104.12
4	Storing of tooth brush in an upright position after use with the bristles facing downwards is not a good way to store toothbrush.	130	125	25	45	3.05	54.06
5	Storing of family members toothbrush together in a closed container does not cause OHD	91	84	150	0	2.82	61.73
6	Storing toothbrush in a closed container is not one of the causes of OHD	83	92	150	0	2.79	61.77
7	Drinking of acidic beverage by sipping causes OHD	50	53	162	60	2.29	54.00
8	Drinking of acidic beverage e.g. citric juice by swallowing it at once does not cause OHD	162	30	34	99	2.78	62.44
9	Non regular brushing and flossing of teeth causes OHD	325	0	0	0	4.00	162.50
10	Avoidance of oral health checks by dentist causes OHD	10	15	295	5	2.09	142.56
11	Excessive sugar consumption causes OHD	200	120	5	0	3.60	96.64

12	Absence of structured oral health policy in Nigeria makes people to suffer OHD	105	60	153	7	2.81	62.39
13	Non rinsing of mouth immediately after eating sweets causes oral disease	66	63	192	4	2.59	79.16
14	Tobacco smoking causes oral health disease	295	29	1	0	3.90	143.13
15	Excessive use of alcohol causes OHD	162	33	130	0	3.10	77.09
16	Poor oral hygiene causes oral health disease	324	1	0	0	4.00	161.83
17	Unhealthy diet causes oral health disease	320	5	0	0	3.98	159.18
18	Sharing of toothbrush even among family members causes OHD	201	91	20	13	3.48	87.26
	Significant mean score					3.24	

Source: Field Data

Table 2 presents data on the library staff knowledge of the causes of OHD. The mean score was highest 4.00 on those who agreed that non regular brushing and flossing of teeth and poor oral hygiene causes OHD followed by unhealthy diet 3.98, tobacco smoking 3.90 etc. Also those who agreed that storing of tooth brush in an upright position after use is not a good way to store toothbrush, storing of family members toothbrush together in a closed container and storing toothbrush in a closed container were not one of the causes of OHD have the mean scores of 3.05, 2.85 and 2.79 respectively. The total mean score for those who have the knowledge that drinking of acidic beverage by sipping causes OHD has the lowest mean score of 2.09. Holistically, the significant mean score of the knowledge of library staff on the causes of OHD was 3.24.

Effect of OHD on Library Staff (N=235)

Table 3: What is your agreement on the following statements on the effects of OHD on you as a library Staff?

s/n	**Effects of OHD**	**SA**	**A**	**D**	**SD**	**Mean**	**SD±**
1	It gives me a lot of pains	200	35	0	0	3.85	95.60
2	It gives me discomfort	191	34	0	0	3.69	91.25
3	It makes me lack concentration	211	24	0	0	3.90	102.13
4	It gives me sleepless nights	99	136	0	0	3.42	69.50
5	The pains makes me depressed	101	134	0	0	3.43	69.16

6	It affects my speech and makes me ashamed even to talk	15	200	20		2.98	94.55
7	It makes me unable to chew food and bones.	210	25	0	0	3.89	101.52
	Significant Mean					**3.59**	

Source: Field Data

Table 3 presents data on the effects OHD has on 235 library staff out of 325 staff who had suffered from OHD. All the respondents (235) agreed that OHD affects them. The rate at which it affects them has high mean scores on the each of the items listed. Those who OHD makes to lack concentration has the highest mean score of 3.90 followed by those who said that it does not allow them to chew food and bones (3.89) and those it gives lots of pains (3.85). The least of the mean score was 2.89 in which only 20 respondents disagreed that OHD does not affect their speech and it does not make them to be ashamed.

Effects of Oral Health Disease on Service delivery. (N=235)

Table 4: To what Extent does OHD affect you in the delivery of library service.

S/N	ITEMS	VHE	HE	LE	VLE	Mean	SD±
1	OHD lowers my productivity at work	225	10	0	0	3.96	110.93
2	I took days off when the pains of OHD becomes too much to bear	200	34	1	0	3.85	95.48
3	Even if I manage OHD to work my performance at work is usually affected	201	34	0	0	3.86	96.18
4	OHD affects my emotional, mental, psychological and general well-being and this affects my productivity	230	5	0	0	3.98	114.19
5	Because of the discomfort my interaction with users is slowed down and this affects the quality of service I offer.	225	10	0	0	3.96	110.93
6	OHD frustrates my effort to give quality service to users	231	4	0	0	3.98	114.85
7	I am depressed when I notice that library patronage is poor as a result of oral health challenge	36	97	102	0	2.72	49.34
	Significant mean score					**3.76**	

Source: Field Data

Table 4 presents data on the effect of OHD on the productivity of library staff. All the 235 respondents who have suffered from OHD responded that OHD affects their library service with the significant mean score of 3.76. The individual mean scores were 3.98 for those OHD frustrates their effort to give quality service and those it gives mental and emotional torture; 3.96 for those it slowed down their productivity as well as interaction with users etc.

Prevention of Oral Health Disease (N=325)

Table 5: What is your level of take on the following strategies as a preventive measure of Oral health disease?

s/n	**Strategies to Prevent of Oral health disease**	SA	A	D	SD	Mean	SD±
1	Controlled use of candy	303	23	0	0	3.94	148.06
2	Replacement of tooth brush as when due (3 to 4 months)	295	30	0	0	3.91	143.20
3	Avoidance of Saliva contact through lip balm, drinking glasses or bottles	130	100	40	55	2.94	41.31
4	Storing of tooth brush in a downward position	145	120	40	20	3.20	60.60
5	Storing of family members toothbrush together in a closed container.	120	100	56	49	2.90	34.31
6	Storing toothbrush in a closed container	83	109	65	68	2.64	20.11
7	Drinking of acidic beverage by sipping	70	150	70	35	2.78	48.71
8	Drinking of acidic beverage e.g. citric juice by swallowing it at once	101	58	81	85	2.54	17.75
9	Regular brushing and flossing of teeth	300	25	0	0	3.92	146.31
10	Visiting of dentist for oral health checks	220	105	0	0	3.68	104.91
11	Controlled consumption of sugar	320	5	0	0	3.98	159.18
12	Nigeria to formulate structured oral health policy	118	201	6	0	3.34	96.53
13	Rinsing of mouth immediately after eating sweets	100	120	50	55	2.82	34.25
14	Putting a stop to tobacco smoking	250	70	5	0	3.75	116.93
15	Controlled use of alcohol	240	85	0	0	3.74	113.16
16	Maintenance of good oral hygiene	300	25	0	0	3.92	146.31
17	Maintenance of healthy diet	249	76	0	0	3.77	117.43
18	Non sharing of lip balm	49	266	10	0	3.12	124.97
19	Non sharing of toothbrush even among family members.	255	59	6	5	3.74	118.55

20	Scaling and polishing of teeth	90	235	0	0	3.28	110.93
	Significant mean score					3.40	

Table 5 presents data on the knowledge library staff has on prevention of OHD. The significant mean score is 3.40. Highest in the individual mean scores for the strategies to prevent OHD were 3.98 for those who agreed that controlled consumption of sugar prevents OHD; 3.94 for controlled use of candy; 3.92 for regular brushing and flossing of teeth and maintenance of good oral hygiene. On the other hand, those who agreed that the following: downward storing of toothbrush, storing of family toothbrushes together in a closed container, storing individual toothbrush in closed container and drinking of acidic beverage by sipping are ways of preventing OHD have the mean scores of 3.20; 2.59; 2.64 and 2.78 respectively.

Hypothesis Testing

The study tested the null hypotheses (H_0) using regression analysis, tested for significance difference at 0.05 level:

H_0 = There is no significant relationship between the effect of OHD and productivity of the library staff in the federal universities in South East Nigeria

$H_{1=}$ There is significant relationship between the effect of OHD and productivity of the library staff in the federal universities in S.E. Nigeria

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Table 6: Regression Analysis on the Relationship between OHD and Productivity of Library Staff

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.781[a]	.609	.605	.45090	.609	12.279	1	5	.003

a. Predictors: (Constant), Effect of OHD

Table 6 presents data on the relationship between OHD and productivity of library staff. This was subjected to a regression analysis, to find out if there is any significant relationship between the effect of OHD and productivity of library staff. Table 6 depicts a very strong relationship

between effect of OHD and productivity of library staff. It shows that 78.1% level of coefficient exist between effect of OHD and productivity of library personnel. The coefficient of multiple determination denoted by R-Square is therefore strong thus indicating that the data does fit well in the statistical model (60.9%). Since it is very near to 100%, therefore a reasonable amount of productivity of library staff is being determined by the effect of OHD. This therefore appears to be useful for making predictions since the value of *R-Square* is close to 1.

Also when the R-Square was adjusted for possible error in fitness an Adjusted error of 60.5% was observed, this normally do serve as an indication that some other explanatory variable(s) by which without them the dependent variable (productivity of library staff) cannot be fully measured. Therefore, other predictor variables are needed to be sourced out in order to fully measure the dependent variable (productivity of library staff).

An F-test was also performed to determine if the model is useful for prediction at 5% level of significance.

The F-ratio was calculated of the predictor variable to be 12.279 with an alpha value of 0.003 which was found to be less than f-tabulated value at 0.05 and df= 1 and 5 is 4.06. This therefore shows that the model is useful for predicting productivity of library staff based on effect of OHD.

On these bases we therefore reject the null hypotheses that say “Oral Health Disease does not significantly affect the productivity of library staff.” and accept the Alternate Hypothesis.

Discussion

Human resources propel all other resources of any organization and library personnel (professionals and non-professionals) of the federal university in the South East of Nigeria are not left out. Since this study revealed that majority of the library staff suffer from OHD, it is of necessity that they should have knowledge of the causes, effects and prevention of this disease so as not to affect them in their job or jeopardize their general well being. More importantly, librarians are the information purveyors and therefore should be knowledgeable in every aspect of information they disseminate, be it health information, politics, agricultural, sports etc.

Consequently, the result of this study though agreed in most of the causes of OHD but ignorance of the library personnel on how best to care and store toothbrush after use and the technique of drinking acidic beverage are not to be applauded. This is so because lack of this knowledge if not corrected may likely affect not only their oral health but their job as well. Their rate of ignorance on care and toothbrush storage is as high as 2.79 mean score and above, while lack of knowledge that sipping of acidic beverage causes OHD is as low as 2.29. Hence their responses are both contrary to the study conducted by American Dental Association (2016), Bendall (2018) and the study by Petersen (2009) who recommended swallowing of acidic beverages. This study showed that most of the library personnel are unaware that poor storage of toothbrush i.e. storing in closed container or storing toothbrush together without spacing them out could give room to bacteria accumulation and invasion. Again they are unaware that sipping instead of swallowing acidic beverage could cause dental erosion.

According to Sofola (2010) one of the strategies to maintain oral health habit is the acquisition of knowledge of oral diseases and their prevention, knowledge of acceptable oral health behaviour and utilization of available facilities. The result of the findings also revealed that just as librarians are unaware of some of the causes of OHD they are also unaware of some preventive measures to take to avert OHD. For instance, the study revealed their response to be in the affirmative that storing tooth brush in a downward position 3.20, storing tooth brush either together 2.90 or singly 2.64 in a closed container are all preventive measures of OHD. These preventive measures are poor and contrary to the study conducted by Bendall (2018) who recommended upright storage of toothbrush and storing it in the open where there is good air circulation.

This study also revealed that OHD affects not only the library staff but also their service delivery. In other words, it affects their productivity. There is no doubt that poor library service gives room to poor patronage. Again incessant absenteeism of library staff especially those in the service areas as a result of ill health limits the number of staff and this affects quick service delivery. This study agrees with the following studies that: OHD gives excruciating pain Petersen (2009) and Petersen (2003), affects general quality of life and well being Sheiham (2005) and Gomes de Macedo and Paula Queluz (2011), depression Cohen et al., (2007) to the sufferer. Again OHD destabilized attendance to work and this lowers productivity of workforce.

This study agrees with Gomes de Macedo and Paula Queluz (2011) and Hafner et al.(2015) and Australian Public Service Commission (2018) that absenteeism and presenteeism (being on duty without working) affects productivity of individual and daily activities of a worker. Hence, OHD no doubt affects the rate at which library service could be delivered by the library personnel.

The finding on the hypothesis that guided this study revealed that oral health disease affects the productivity of the library personnel. Hence, the implication is that library staff should adopt and apply good oral health practices to avoid being infected by oral disease that hampers their services they need to offer.

Recommendations

Librarianship being the mother of other professions, it is recommended that library personnel should read widely on any health information. If possible they should attend health conferences and workshops to be more enlightened and be aware of causes and preventive measures to take to avoid the diseases. In effect they should not restrict themselves to only the trainings that has to do with only library background.

Library personnel should be conscious of how they care and store their toothbrushes and the techniques in drinking acidic beverages so as not to be affected by OHD.

Library management should try as much as possible to close the gap should any section of the library lack staff as a result of OHD. Hence, library services will not be affected as to warrant low patronage which signaled negative impression to the library.

Conclusion

Any organization whose human resources are hampered is doomed to collapse if not handled carefully. This is so because human resources drive other resources. In this study, evidences have shown that oral health disease affects not only the library personnel but also the services they

offer. The implication being that the productivity of library staff is affected as a result of OHD. This study has also shown that not only all the causes and preventive measures of OHD are known by library personnel. On this premise therefore library personnel, who are the information purveyors should as a matter of urgency subject themselves to the acquisition and application of more oral health knowledge and disseminate same to the library patrons they serve. This way they will avert the pains of OHD which affects efficiency, effectiveness, and quick library service of delivery.

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