Oral Treatment Seeking Behavior Among Patients Attending Omdurman Military Dental Hospital/Sudan 2019

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***Abstract*—Background: Oral health diseases considered as a public health problem due to their high prevalence and incidence in the whole world. Oral treatment seeking behavior refers to the behavior of seeking professional medical help to curb symptoms already presenting. It is greatly influenced by various factors such as cost of treatment, accessibility to health facility, level of education, knowledge of oral diseases and severity of symptoms. Objectives: To describe the pattern of oral treatment seeking behavior, and the factors that influencing it among patients visiting Omdurman Military Dental Hospital. Methods: descriptive cross sectional study, hospital based. Interview administered questionnaire was distributed to 364 patients. Data was analyzed by using Statistical Package of Social Sciences version 25. Means and percentages were computed, and data was presented in form of tables and graphs. Results: 364 patients were participated in the study, 69.0% of them were females. The most common age group was 18-29 years. 52.2% of participants were graduated from a university. 51.9% had a job, out of them 76.9% their job in the day time. 40.9% of the participants didn't visit any dental facility during the last year, 89% came for treatment of pain and the main reason for delay in seeking oral treatment were lack of time and ignorance of symptoms. Conclusion: Most of the participants seeking oral care for treatment of pain only. The main reasons for delay were lack of time and ignorance of symptoms.**

Keywords—Oral health; Oral treatment seeking behavior .

Introduction

Oral diseases considered as a public health problem due to their high prevalence and incidence in the whole world (1) especially in the developing countries like Sudan.

The global burden of disease study 2016 estimated that oral diseases affected at least 3.58 billion people worldwide with caries of the permanent teeth being the most prevalent of all conditions assessed (2). Globally, it's estimated that 2.4 billion people suffer from caries of primary teeth (2).

In Sudan Dental caries and periodontal diseases constitute the most common oral health problems and they have high impact on individuals and communities due to pain, suffering, impairment of function and reduce quality of life (3). There was marked increase in the decayed, filled and missing teeth index- dmft (3.53) among Sudanese preschool children. The prevalence of dental caries increased significantly with age (3). Caries prevalence was high in Sudan, with 87.7% of teeth examined having untreated decay and the periodontal diseases increased in extent and severity with age (4). Moreover oral infections can kill people because of spread of infections all around the body, if it is not well treated (2).

Oral health is defined according to FDI as multifaceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow, and convey a range of emotions through facial expressions with confidence and without pain, discomfort, and disease of the craniofacial complex (5).

WHO defines oral health as "a state of being free from chronic mouth and facial pain, throat cancer, oral infections and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual's capacity in biting and psychosocial well-being (6).

Oral health should be considered as part of the general health. In order to achieve three of the millennium developmental goals (MDG): improving maternal and child health, combating HIV/AIDS, one of the proposed strategies are to improve general health

through oral health among vulnerable people: children and pregnant women. (1)

Good oral health is related to quality of life (7). Oral health affects people physically and psychologically and influence how they grow, enjoy life, look, speak, chew, taste food and socialize, as well as their feelings of social well-being. (8)

Care seeking behavior defined as patients' efforts to obtain care, advice or treatment from a health professional or health service. (7).

Oral treatment seeking behavior refers to the behavior of seeking professional medical help to curb symptoms already presenting like pain, bleeding, swelling, bad breath, developmental anomalies, mobile teeth, ulcers, caries, sensitivity and fractured teeth.(7)

Oral health services in Sudan are provided through the ministry of health, private sector, dental colleges and nongovernmental organizations in addition to institutionalized dental hospitals. The services are more curative in nature than preventive unless from the school health program.

Many people in Sudan do not receive regular dental care hence; having serious conditions when seen by a dentist. In Sudan the dentist-to-patient ratio is 1:33,000 compared with approximately 1:2,000 in most industrialized countries. (9)

Regular dental care helps patients to maintain dental health and allows potential dental problems to be identified early and eases the management of major dental occurrences (7). Dental diseases generally are not self-limiting and the personal cost of oral health neglect is evident; the increase in diseases such as oral cancer demonstrates the importance of seeking care. A lapse in care-seeking behavior increases the burden on the healthcare system and economy (10). The Center for Disease Control and Prevention in Atlanta (USA) estimates that, 164 million hours of work in the US are missed each year through dental issues (11).

On a professional level, delay in seeking care does not benefit dentists. Not seeing a patient regularly or seeing a reluctant patient who has not attended for some time can bring problems. As well as complicating care and case management, regularly-attending patients make business sense (7).

Reasons for delay in seeking dental services have been classified by the Fédération Dentaire Internationale as related to: (a) individuals themselves such as lack of perceived need, anxiety or fear, financial considerations, and lack of access, (b) the dental profession such as inappropriate manpower resources, uneven geographical distribution, training in-appropriate to changing needs and demands and insufficient sensitivity to patient's attitudes and needs, and (c) society like insufficient public support of attitudes conducive to health, inadequate oral health care facilities, inadequate oral health manpower planning and insufficient support for research (12).

Most patients tend to ignore some symptoms hoping that the symptoms will go away by their own (13). Treatment is mostly sought when symptoms were worse and patients couldn't tolerate them anymore (13).

Delay in seeking treatment for ill health affects disease progression, management and outcomes. Most oral diseases are preventable by using cost-effective interventions and treatable at health facilities. There is scanty of information regarding the oral health seeking behavior of patients in the region (13)

It is important to know about oral health care seeking behavior before setting a health care facility or for evaluation of the same in a particular geographic area (14). Also education of the population on the importance of all symptoms regardless of the severity and elimination of some of the barriers to seek treatment, will improve the prognosis (14). This study may provide some information about oral treatment seeking behavior of patients visiting Omdurman Military Dental Hospital so as to encourage appropriate treatment-seeking behavior for uncomplicated infections and reduce disease burden.

MATERIALS AND METHODS

This study was descriptive, cross sectional, hospital based; conducted in Omdurman Dental Military Hospital which located in Omdurman city in Khartoum state/ Sudan. Study population consisted of all males and females adult patients above 18 years attending the dental hospital during the study period. Exclusions were patients who were severely ill.

The study was conducted among 364 patients.

Because the hospital don't have any records about the frequency of patients attending the hospital /month, we observed and recorded the number of patients attending the hospital every day for a week then multiply this number by four to estimate the average frequency / month to calculate the sample size of this study.

The sample size was calculated according to Yamane's formula:

$$\mathbf{n} = \frac{\mathbf{N}}{\mathbf{1+Ne2}}$$

n= corrected sample size

N= population size

e= margin of error= 0.05

The population size was calculated as follow:

Estimated weekly frequency of attended patients was 971 patients /week.

Estimated number of patients / month = 971*4= 3884 patients / month.

n= 3884/ (1+3884*.05*0.05) =362.7 which approximately was 364 patients.

The sampling technique was non probability convenient sampling. This was due to that there was no list for the attended patients.

Interview administered questionnaires were distributed to the participants to collect the data. The questionnaire was part of a thesis conducted in Nairobi in 2004 titled: Oral Health Status and oral health Seeking Behavior of a rural Community in Kenya.

The questionnaire consisted of fifteen questions to accommodate the objectives of the study.

Data was analyzed with the aid of statistical package of social analysis (SPSS) Version 25.
Ethical approval was taken from Faculty of Dentistry / University of Karary and from Omdurman Military Dental Hospital. Informed consent was obtained from each patient before distributing the questionnaire.

RESULT

Socio-demographic factors

A total of 364 patients attending Omdurman Military Dental Hospital were participated in the study. The response rate was 100%. Sixty nine percent of the participants were female, while there were only 31% males (Table 1). The most prevalent age group was from 18-29years old which constitute about 40.9% of the participants. The least age group was those above 50 years old.

TABLE 1: GENDER AND AGE DISTRIBUTION AMONG THE PARTICIPANTS

		Frequency	Percent
Gender	male	221	60.7
	female	143	39.3
Age in years	18-29	148	40.9
	30-49	148	40.7
	50- more than 60	67	18.4
Total		263	100

Fifty two point two percent of participants were graduated from a university, while only 3.6% were illiterate (Figure 1).

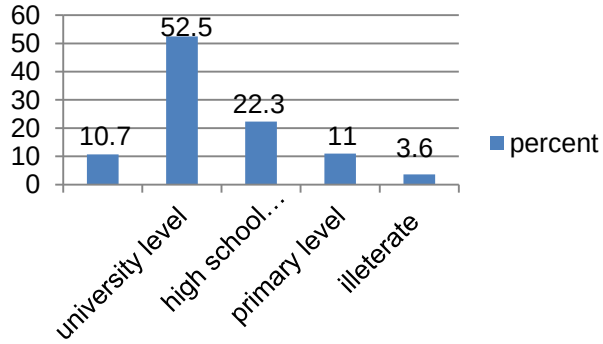

FIGURE 1: DISTRIBUTION OF PARTICIPANTS BY LEVEL OF EDUCATION

Fifty one point nine percent of participants have job, out of them 76.2% work during day time (table 2)

TABLE 2: WORKING PATTERN OF THE PARTICIPANTS

		Frequency	Percent
Job status	Have a job	189	51.9
	Don't have job	175	48.1
Working time	Day	144	76.2
	Day and night	45	23.8

The majority of the participants 80.8%were live within Khartoum.

Number of dental visits in the past year:

About 40.9% of participants didn't visit the dentist during the past year, while 29.7% had one visit and 29.4% had two or more visits. (Table 3)

TABLE 3: FREQUENCY OF DENTAL VISITS DURING THE PAST YEAR

Number of visits during the past year	Frequency	Percent
Once	108	29.7
Twice or more	107	29.4
Not at all	149	40.9
Total	364	100

Duration of symptoms before seeking treatment:

About one third of the participants (33.2%) experienced their symptoms 2-4 weeks before visiting the dental hospital while 16.2% waited more than six months with their symptoms before visiting the dental hospital (Figure 2).

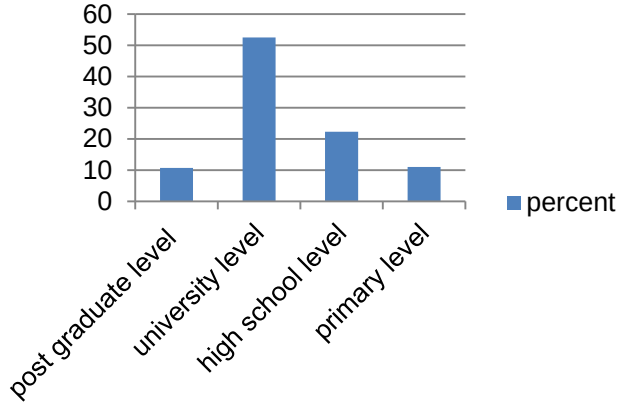

FIG.2: DURATION OF SYMPTOMS BEFORE SEEKING TREATMENT

More than half of the participants (68.3%) experienced pain before seeking treatment and curative measures was the major reason for seeking dental care (87.9 %.)(Figure 3)

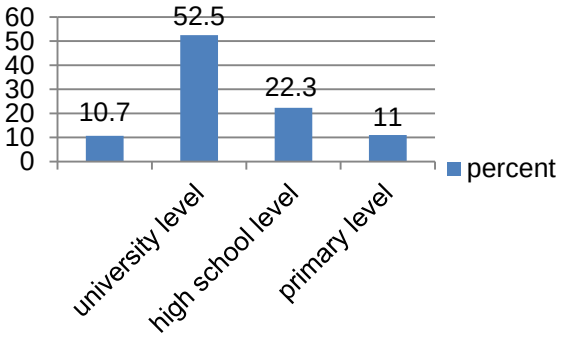

FIG.3 REASONS FOR SEEKING ORAL TREATMENT

Reasons for delay in seeking treatment:

Most of the participants 41.4% said that lack of time was the main reason for the delay,35.6% were delayed because their symptoms were not severe, while 22.4% ignored their symptoms, 8.4% were afraid. (Figure .4)

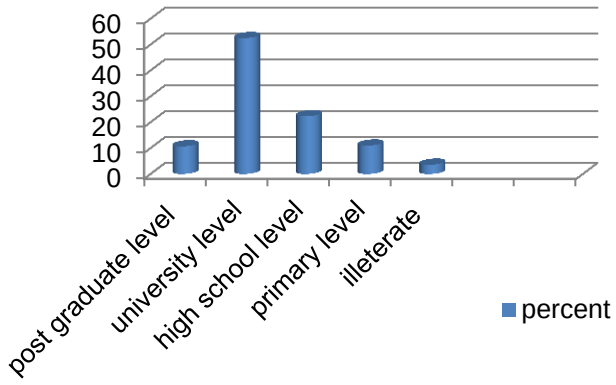

FIG .4 REASONS FOR DELAY IN SEEKING ORAL TREATMENT

Perception of cost of dental treatment

When asked about their perception on the cost of dental treatment, about half of the participants (57.1%) perceived cost to be fair, 28.6% high, and14.3% to be low.

Discussion

Three hundred and sixty four patients were participated in this study; the rest were females. This may be due to that females used to take care of their oral health more than males. Same result was found in a study done in Nairobi by Godriver M in2013 which stated that the percentage of females was higher than for males 57.3%, 42.7% respectively (15).

The results of the current study showed that the frequency of dentist visits is low among elderly populations. This is supported by a study conducted by Lu Liu et al in Northern China in 2015 (16). The high burden of oral diseases and limited oral health care resources in Sudan are preventing the dental care needs of elderly individuals from being adequately met.

Level of education may influence treatment seeking behavior. Half of the participants (52.5%) in this study had attained University level of education and 22.3%finished high school level. Same result was found in a study conducted in kerala by Dona Boban in 2014(17) and orchestrated with the result from a study conducted by M.W Mwacharo in Nairobi 2004(14). Well educated patients have good awareness about the importance of seeking treatment in early stages. Also may have better incomes that encourage them to attend dental clinics.

Only half of the participants in this study have a job (51.9%). Unlike the results found by Godriver M in 2013that, more than half of the participants (63%) had a job (15).

As a current result stated, the majority of the participants seek oral treatment after a symptom had a considerable amount of time (1 – 6 month). This long duration before seeking treatment might contribute to lack of time or ignorance of symptoms. Study done in Malaysia in 2012 (4) showing that most of the patients ignore their symptom.

Eighty seven point nine percent of the participants were seeking curative measures (treatment) while only 3.0% seeking preventive measures. Unlike in a study done by Al-Shammari K.F in 2007(12) showing that at least 1/3 of the population were visiting a dentist regularly and seeking preventive care. This disappointed result may be refereed back to that the participants didn't aware about oral health problems and its effect.

Factors that influenced oral treatment seeking behavior are cost of treatment, symptoms, accessibility to dental facility and fear of pain. In this study the main reasons for delay in seeking care were lack of time and ignorance of the symptoms followed by inaccessibility to the health care facility, while the least important reason was cost of treatment. These results were opposite to those found by Maubi Godriver in Nairobi in 2013 which stated that patients deterred from seeking treatment due to its high cost (14) and findings by Cecil G.Helman's (18) about the main reasons of delaying in seeking treatment for the same reason. The cost of the treatment is not an issue for our participants because all of them are medically insured.

Conclusion

Based on the findings from this study, out of 364 patient 69% were female ,the most common attended age group from 18-29, the majority were well educated and half of the participants have a job. Treatment of pain was the main reason for seeking dental care and lack of time and ignorance of symptoms were the major reason for the delay in seeking oral treatment.

Recommendations

1. Developing oral health education program to raise population awareness about the importance of regular attendance to different oral health facilities.
2. Similar studies should be carried out in other dental facilities public and private in order to give a true country wide picture.

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