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Research Article

COMPLIANCE OF DENTAL SURGEONS TO ORAL HYGIENE¹ Dr. Gul Muhammad, ² Dr. Khadija Mushtaq, ³ Dr. Fatima Mahmood¹Senior Registrar Shahida Islam Medical and Dental College, Lodhran²Ex. House surgeon Punjab Dental Hospital, Lahore³Ex. Demonstrator Lahore Medical and Dental College, Lahore**Abstract:**

Objectives: To find out the standard of oral hygiene amongst dental surgeons of University faculty and study the practices regarding oral care in dental surgeons, themselves.

Methodology: This descriptive case study was done on dental surgeons of all cadres at Dental hospital, University of Lahore. The study was completed in 3 months after approval from the department. A total of 50 dental surgeons aged 23 – 48 years of either gender were taken. All data was entered and analyzed using SPSS version 22.

Results: The mean age of all participants in this study was 31.70 ± 7.49 with minimum and maximum age of 23 and 48 years. There were 30(60%) male and 20(40%) females in this study. In this study there were 29(58%) demonstrator, 5(10%) senior demonstrator, 4(8%) were senior registrar, 8(16%) were Asst. Prof, 3(6%) were associate professor and 1(2%) was professor. According to their education most of the participants [58%] were BDS while 21(42%) participants had post-graduation qualification. A total of 31(62%) were married and 19(38%) participants were unmarried. A total of 9(18%) subjects were used to brush their teeth once daily, 24(48%) were used to do 2 times while 17(34%) subjects brush their teeth 3 times per day. According to mode of brushing, 43(86%) had tooth brush and 7(14%) had miswak as mode of brushing. A total of 26(52%) dentist reported that they had intact teeth, 12(24%) had filled, 5(10%) had decayed and 7(14%) had missing teeth. Most of the subjects i.e 34(68%) were using floss.

Conclusion: This study concludes overall good oral health on oral examination. We found most of the dentist i.e. 26(52%) had intact teeth, only 10(20%) participants had bad smell, 17(34%) participants had deposits and 18(36%) subjects need scaling.

Keywords: Dentists, Oral health, decay, bad smells, caries, oral disease

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INTRODUCTION:

According to World Health Organization, Oral hygiene is the practice of keeping the mouth and teeth clean to prevent dental problems, most commonly dental cavities, gingivitis, periodontal (gum) diseases and bad breath [1]. American Dental Association's House of Delegates have adopted the definition of Oral health as a functional, structural, aesthetic, physiologic and psychosocial state of well-being and that it is essential to an individual's general health and quality of life [2]. Generally, dentists recommend that teeth to be cleaned professionally at least twice per year. Teeth cleaning is the removal of dental plaque and tartar from teeth to prevent cavities, gingivitis, gum disease, and tooth decay. Severe gum disease causes at least one-third of adult tooth loss. Tooth decay is the most common global disease. A variety of oral hygiene measures have been used for teeth cleaning. Many people use different forms of teeth cleaning tools[3].

Plaque is a yellow sticky film that forms on the teeth and gums and can be seen at gum margins of teeth. The bacteria in plaque convert carbohydrates in food (such as sugar) into acid that demineralises teeth, eventually causing cavities. The use of dental floss is an important element of oral hygiene, since it removes plaque and decaying food remaining stuck between the teeth [4].

Cleaning the tongue removes the white/yellow bad-breath-generating coating of bacteria, decaying food particles, fungi (such as *Candida*), and dead cells from the dorsal area of the tongue. Some dental professionals recommend oral irrigation as a way to clean teeth and gums. Oral irrigators reach 3–4 mm under the gum line. Oral irrigators use a pressured, directed stream of water to disrupt plaque and bacteria [5].

Some foods may protect against cavities by naturally containing fluorine, from which fluoride is derived. Foods that help muscles and bones also help teeth and gums. Breads and cereals are rich in vitamin B while fruits and vegetables contain vitamin C, both of which contribute to healthy gum tissue. Lean meat, fish, and poultry provide magnesium and zinc for teeth [6]. Smoking and chewing tobacco are both strongly linked with multiple dental diseases. Caffeine products are known to cause teeth to stain, though this can usually be cleaned by drinking fresh water after a caffeinated drink and also at the dentist by surface cleaning [7]. Regular vomiting, as seen in bulimia nervosa, also causes significant damage to

the Oral tissues [8]. Professional dental care is necessary to maintain oral health [9]. Oral Care gives the impression of overall personality of an individual and if neglected, it gives rise to other medical problems as well including those related with Cardiovascular system [10]. Research has shown that a great number of people in the developing world do not pay any attention to the oral hygiene, including those involved in the dental profession. This study aims to point out the negligence on part of the qualified dentists in a leading tertiary care University hospital [11].

Traditional treatment of oral diseases is extremely costly; it is the fourth most expensive disease to treat in most industrialized countries. In industrialized countries, the burden of oral disease has been tackled through establishment of advanced oral health systems which primarily offer curative services to patients. Most systems are based on demand for care and oral health care is provided by private dental practitioners to patients, with or without third-party payment schemes. Some countries, including those of Scandinavia and the United Kingdom, have organized public health services, providing oral health care, particularly to children and disadvantaged population groups. Traditional curative dental care is a significant economic burden for many industrialized countries where 5–10% of public health expenditure relates to oral health [38].

The improvements have not been the same in developing countries [41]. Factors like stress, alcohol consumption, smoking, and poverty are linked to a high prevalence of oral diseases. Limited access to oral health services is another factor that may contribute to the high prevalence. Treatment of oral diseases is costly and in most low income and middle income countries in Africa it is not possible [30]. Approximately 80 % of African countries are not materially equipped and privileged according to accessibility to oral health services.

Several studies in both developed and developing countries have shown that oral health care is being neglected and that oral health care in HIV/AIDS-infected patients is deficient [44]. One study in Sweden has showed that oral health care in nursing homes is insufficient and constitutes a low order of priority [45]. Hospitalized HIV-positive orphans and abandoned children in South Africa is another group that has reported to not get a proper oral care. The children suffered from different oral preventable diseases, such as caries, candidiasis and ulceration of the mucosa. The diseases are easy to detect but

caregivers do not seem to have the knowledge how to provide the children with adequate oral hygiene [46]. Explanations to why oral health is a low priority in health care facilities depend on several factors. One study in Sweden shows that a reason is lacking routines for assisting oral health care [45]. Evidence-based oral health promotion policy and practice are essential to effectively tackle oral health problems, addressing the widening inequalities in oral health within and between countries [24].

MATERIALS AND METHODS:

The chapter material and methods mostly deals with strategies and methods which were adopted by us during research conduction. This section included target population, study population, sample size, sampling procedure, instrument of data collection and techniques of data analysis. This study aims to assess the standard of oral hygiene amongst dental surgeons of the dental hospital. During this research probability technique was employed. It is one of the sampling technique types that provide selection opportunity to each population unit. Probability/random sampling is one of the sampling types in which investigators mostly requires population sampling frame. So simple random sampling was used during study.

Data collection procedure

Data was collected from 50 dental surgeons working in various health care facilities and fulfilling to meet our objectives. After obtaining written informed permission of all participants, their demographic data like age, sex and contact number was taken. Their designation, qualification and basement of oral health were obtained. Self-structured questionnaires were used.

RESULTS:

The mean age of all participants in this study was 31.70 ± 7.49 with minimum and maximum age of 23 and 48 years. There were 30(60%) male and 20(40%) females in this study. In this study there were 29(58%) demonstrator, 5(10%) senior demonstrator, 4(8%) were senior registrar, 8(16%)

were Asst. Prof, 3(6%) were associate professor and 1(2%) was professor. According to their education most of the participants [58%] were BDS while 21(42%) participants had post-graduate qualification. A total of 31(62%) were married and 19(38%) participants were unmarried.

A total of 9(18%) subjects were used to brush their teeth once daily, 24(48%) were used to do 2 times while 17(34%) subjects brush their teeth 3 times per day. According to mode of brushing, 43(86%) had tooth brush and 7(14%) had miswak as mode of brushing. A total of 26(52%) dentist reported that they had intact teeth, 12(24%) had filled, 5(10%) had decayed and 7(14%) had missing teeth. Most of the subjects i.e 34(68%) used to floss while 16(32%) did not.

When their oral health 19(38%) told they need scaling, 36(72%) said their teeth are aligned, 13(26%) had gum bleeding, 11(22%) had bad smell, 18(36%) told they had stain or deposit, Ulcer on buccal mucosa was told in 14 (28%) subjects, 27(54%) thought they had Gingivitis or periodontics and only 10(20%) subjects felt they had dry mouth. Only 2(4%) dentists thought they had abrasion, 4(8%) had erosion and 4(8%) had Bruxism. Most of dentists i.e. 36(72%) dentists had tooth ache very rarely, 10(20%) had tooth ache after hot and cold food and one dentist had tooth ache daily. In this study 20(40%) were smokers, no one was using alcohol, 38(76%) were used to eat junk, 37(74%) were Fond of foods and cold drinks, 8(16%) used tea once, 36(72%) used tea 2 times and 6(12%) were used to take tea 3 or more times daily. Only 10(20%) dental surgeons had habits of betel nut or betel quid/niswar and gutka.

Oral examination

On oral examination we found intact teeth in 26(52%), 12(24%) had filled, 5(10%) had decayed and 7(14%) had missing teeth. We found 10(20%) participants had bad smell, 17(34%) participants had deposits and 18(36%) subjects need scaling .

Table-1:Descriptive Statistics of age (years)

<i>Mean</i>	31.7000
<i>Std. Deviation</i>	7.48945
<i>Range</i>	25.00
<i>Minimum</i>	23.00
<i>Maximum</i>	48.00

The mean age of all participants in this study was 31.70 ± 7.49 with minimum and maximum age of 23 and 48 years.

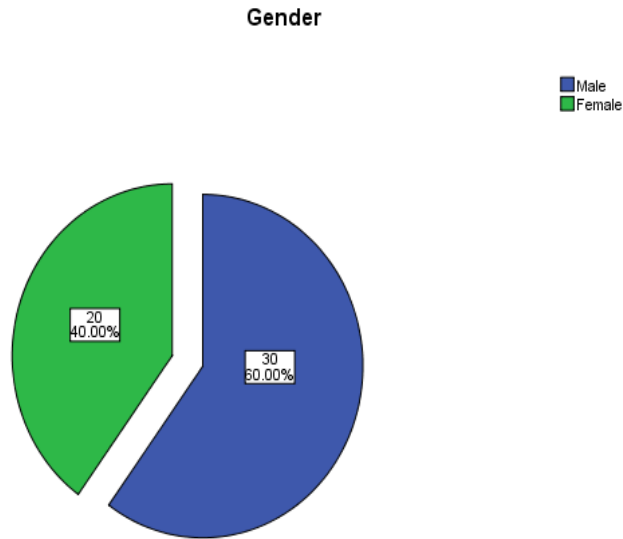


Fig-1: Gender distribution

There were 30(60%) male and 20(40%) females in this study

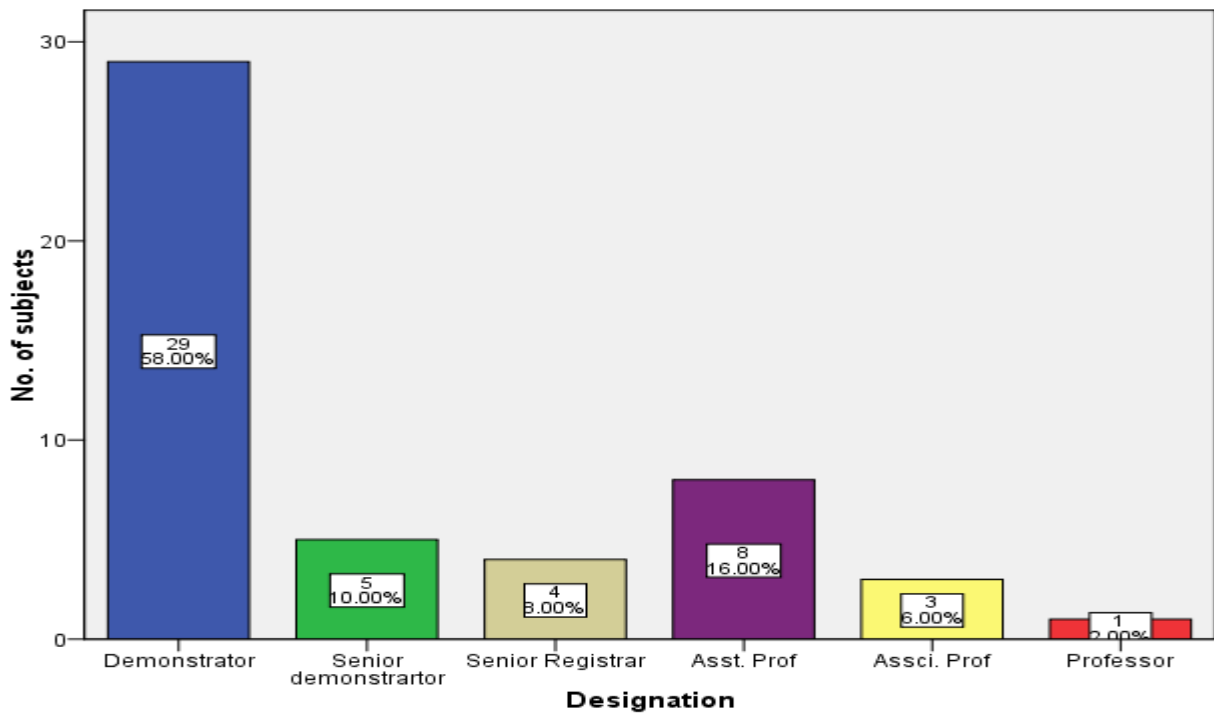


Fig-2: Designation

In this study there were 29(58%) demonstrator, 5(10%) senior demonstrator, 4(8%) were senior registrar, 8(16%) were Asst. Prof, 3(6%) were associate professor and 1(2%) was professor.

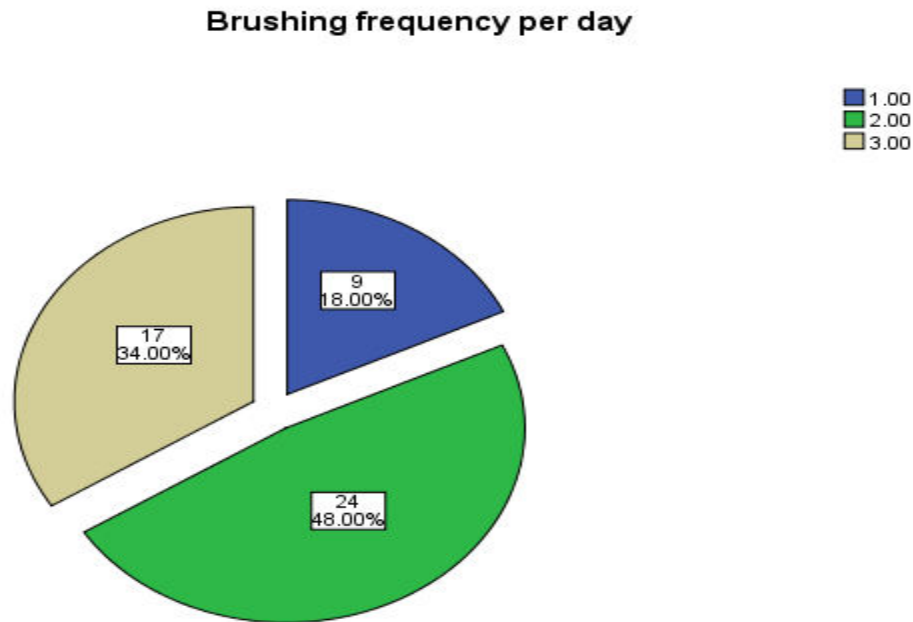


Fig-3: Brushing frequency

A total of 9(18%) subjects were used to brush their teeth once daily, 24(48%) were used to do 2 times while 17(34%) subjects brush their teeth 3 times per day.

Table -2: Tooth condition

		Frequency	Percent
<i>Tooth condition</i>	<i>Intact</i>	26	52
	<i>Filled</i>	12	24
	<i>Decayed</i>	5	10
	<i>Missing</i>	7	14
	<i>Total</i>	50	100

A total of 26(52%) dentist reported that they had intact teeth, 12(24%) had filled, 5(10%) had decayed and 7(14%) had missing teeth.

DISCUSSION:

Dentists as well as other health professionals realize that oral health cannot be separated from the general health of the hospitalized patients. Many oral conditions are intimately related to systemic diseases. Optimally, total health care requires the combined efforts of the medical and dental professions [52]. Dentists play an important role in the improvement of the public's oral health education. Therefore, acquiring knowledge and attitudes related to dental health and the prevention of oral diseases is very

important during the future dentists' training period [53]. One of the main objectives of dental education is to train students who can motivate patients to adopt good oral hygiene. They are more likely to be able to do this if they themselves are motivated.⁵⁴ Moreover, dental students should be able to apply this knowledge and attitude to their own dental care [55].

A study was done to compare the self-reported oral health behavior of first year dental students in the University of Sharjah with their actual oral hygiene

and gingival conditions, 93 volunteers who participated in the study completed the Hiroshima University-Dental Behavioral Inventory (HU-DBI) questionnaire. They reported that 29% of the participants reported bleeding gums; 83% were concerned by the color of their gums while 63% reported that it was impossible to prevent gum disease with brushing alone; and only 10% noticed some sticky white deposits on their teeth. However, approximately 92% were not in agreement that they would have false teeth when they grew older. 56% mentioned that they used dental floss regularly and 86% brushed twice daily or more. Male students had higher bleeding and plaque scores than female students [56].

A cross-sectional study was done on 161 health professionals consisting of doctors, nurses, pharmacists, technicians and medical students was carried out using a structured, self-administered, close-ended questionnaire. They reported comparison of oral health knowledge scores among the different types of health professionals yielded statistically significant differences ($P < 0.05$). The attitude towards visit to the dentist varied; 52.7% of nurses and 50% of technicians said that they would like to visit the dentist regularly. 66.7% of the medical students visit the dentist whenever they get pain in their tooth. 54.5% doctors and 45.8% pharmacists are likely to visit the dentist occasionally. For 60% medical students, tooth ache was the driving factor for their last visit. Majority of the health professionals said that the fear of drilling was the main reason for avoiding the dentist. Almost all the health professionals said that they cleaned their tooth by toothbrush and toothpaste. Less than 50% of the health professionals used mouth wash and dental floss. Less than 10% used Miswak and toothpick as part of their oral hygiene [57]. A study was done to compare oral hygiene practices, oral health status and behavior of graduate (group-A) and postgraduate dentists (group-B) of North India. They took 727 dentists of which 446 were graduate and 281 post-graduates participated in the survey. Smoking was reported by 11.2% and 4% of dentists in Group A and B respectively. They reported that all the respondents used toothpaste along with a tooth brush for cleaning their teeth and the majority of them used fluoridated toothpaste [58].

In another study it was reported that 55% of the dentists used fluoride containing toothpaste on a daily basis. They reported that 55.9% of all respondents brushed twice a day, 59.4% consumed sugar containing snacks less than once daily and 55.1% of

them used fluoride containing paste regularly while brushing. 81.1% of the 700 dentists never used tobacco products. In all, 19.6% of the practicing general dentists followed recommended oral self-care.⁵⁹ In current study a total of 9(18%) subjects were used to brush their teeth once daily, 24(48%) were used to do 2 times while 17(34%) subjects brush their teeth 3 times per day. These findings are comparable with above study.

Tseveenjav *et al.* revealed in their study that 62% of the Mongolian dentists were using fluoridated toothpaste always or almost always.⁶⁰ We in this study found mode of brushing, 43(86%) had tooth brush and 7(14%) had miswak as mode of brushing. We in this study had higher brush rate as compared to miswak and results are different to above study. Almost similar result are found in an Iranian study where 74% were found to use fluoridated toothpaste regularly.⁶¹ Similar results were reported by Doshi *et al* [62] and Vaish *et al* [63].

The removal of interproximal plaque is considered to be important for the maintenance of gingival health, prevention of periodontal disease and the reduction of caries. Unfortunately, the toothbrush is relatively ineffective at removing interproximal plaque, and therefore, patients need to resort to additional techniques. Floss, wood sticks, rubber tips and interdental brushes currently represent the primary methods available for interproximal cleaning.⁵⁸ Floss is the most widely used method of interdental cleaning and the American Dental Association reports that up to 80% of interdental plaque may be removed by this method.⁶⁴ Gopinath 2010; however, in his study reported that quite a low number i.e., around 9.2% of the Indian dentists used floss⁵⁹ 54% of the Iranian dentists were found to use floss at least once a day [59].

Singh *et al* reported significantly more number of under graduate dentists had dental diseases such as dental caries, bleeding gingiva and halitosis when compare to post graduate dentists. The results of Singh *et al* study this study are in accordance with the study of Almas *et al.*, who reported that forty-four percent of male and 32% of female students reported the self-perception of breath odor. Self-treatment was sought by 12% male and 22% female. Six percent of males and 4% of females experienced bad breath interference at their work. Seventy-eight percent of male and 62% of female students experienced bad breath after waking up. Brushing was prevalent among 81% of male and 99% of female students. Both miswak (chewing sticks) and tooth brushing

were used by 53% male and 83% female students. Fifty-seven percent of male students and 44% of female students reported caries. Bleeding gingiva was experienced by 26% of males and 14% of females. Dry mouth was common among 14% of males and 17% of females, while smoking was prevalent among 13% of males and 2% of females. Tea drinking was common among 44% of males and 37% of females, while tongue coating was equally common among both males and females (21% and 20%), respectively. The results indicate female students had better oral hygiene practices, significantly less self-reported oral bad breath, and smoked less compared to male students [65].

Maatouk et al. (2006) emphasized that dental students achieved better oral health practices and status at the end of their 5 years of their course, highlighting the importance of dental studies on motivation and attitude towards treatment. Periodontal troubles, malocclusion and dental decay affected 84.3%, 80.0% and 43.0% of the students respectively. The students were periodontal diseases (88.4%), dental caries (70.3%), malocclusion (62.6%) and fluorosis (52.3%).¹⁹ At the same time, the lack of knowledge among the dental students can be gauged by the fact that less than 1/3rd of the dental students have never been taught professionally how to brush their teeth and 15.6% of them have never used a dye to check for the plaque levels. 41.7% of the dental students put off going to the dentist until they have a toothache and 16.4% of them used toothbrushes with hard bristles [66]. On oral examination we found intact teeth in 26(52%), 12(24%) had filled, 5(10%) had decayed and 7(14%) had missing teeth. We found 10(20%) participants had bad smell, 17(34%) participants had deposits and 18(36%) subjects need scaling.

CONCLUSION:

This study concludes overall good oral health as on oral examination we found most of the dentist i.e. 26(52%) had intact teeth, only 10(20%) participants had bad smell, 17(34%) participants had deposits and 18(36%) subjects need scaling.

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