



Smoking and the Risk of Oral Problems Among Afghan Adults

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Abstract

Objective: Oral disease is a term used to describe some of the more common dental problems. Affecting 3.9 billion people, with untreated oral disease worldwide. The most prevalent oral diseases globally are dental caries. Smoking cigarettes is associated with a variety of changes in the oral cavity.

Method: A review Study starts from 2022/3/20 – 2022/8/20 among Kabul province adults between 18 to 75 years old males and females. We use SPSS for analyses of data.

Result: In our study, the higher percentage 49.8% was aged between 18 to 29. The higher percentage was male. 83.3% were married and 13.8% were single. Of all participants, 74.4% are smokers and 68.4% smoke after meals. Of all participants 161 participants had the cough problem, 39 had chest pain, and 196 participants had a wound in their mouth due to smoke.

Conclusion: We found that 74.4% of our population are smokers, The 161 participants reported that have the cough problem due to smoke, and 39 had chest pain. 196 of participants had a wound in their mouth.

Introduction

Oral disease is a term used to describe some of the more common dental problems, people are experiencing nowadays, and these problems include dental cavities, gum disease, infectious disease, injury trauma, and oral cancers. Affecting 3.9 billion people, untreated oral disease is a worldwide issue affecting more than half of the population. The most prevalent and consequential oral diseases globally are dental caries, periodontal disease, tooth loss, and cancers of the lips and oral cavity. Globally, it is estimated that 2 billion people suffer from caries of permanent teeth and 520 million children suffer from caries of primary teeth. Server periodontal diseases are estimated to affect around 14% of the global adult population, representing more than one billion cases worldwide. The global incidence of cancers of the lip and oral cavity is estimated at 4 cases per 100,000 people, oral cancer is more common in men and older people, and it varies strongly by socioeconomic condition [1].

Several risk factors may contribute the oral problems, including, smoking cigarettes, drinking too much alcohol, not taking proper care of the mouth, and eating an unhealthy diet, age, and gender, for instance: Smoking cigarettes is associated with a variety of changes in the oral cavity, cigarette smoke has effects on saliva, oral commensal bacteria, and fungi, mainly candida, which causes oral candidiasis, the most common opportunistic fungal infection in man, how cigarettes smoke effects oral candida is still controversial, this brief overview is an attempt to address the clinical findings on the relationship between smoking and oral candidiasis and possible mechanisms of pathogenicity [2].

The cross-sectional study has indicated that smokers may present with lower levels of gingival inflammation to a specific level of plaque than non-smokers, this was evidenced by using both the gingival index and a dichotomous evaluation of bleeding on probing, furthermore development of gingival inflammation in response to experimental plaque accumulation was less pronounced in smokers than in non-smokers, this was observed despite of the lack of significant differences in plaque composition in smokers and non-smokers, an indication that cigarette smoking is an

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environmental exposure able to modulate gingivitis expression in response to dental plaque [3].

The cross-sectional study shows, the increased levels of debris that have been observed in smokers have been tentatively attributed to, personality traits leading to decreased oral hygiene habits, increased rates of plaque formation, or a combination of the above, in this respect, it is important to underline that plaque accumulation rate and plaque composition in healthy or gingivitis conditions do not seem to be different in smokers as compared to non-smokers [4].

The cross-sectional shows a large amount of data has been gathered on the association of measures of periodontal distraction and cigarette smoking, probing depths, clinical attachments loss, and alveolar bone loss have all been shown to be both more prevalent and more severe among smokers as compared with non-smoking controls [5].

The cross-sectional study shows tooth loss represents the ultimate outcome of untreated periodontitis, the relationship between tooth loss and cigarette smoking is therefore relevant to the discussion of the effects of tobacco smoking and periodontitis, it should however be emphasized smokers were less than half that observed in non-smokers [6].

The prevalence of oral disease in the USA, more than 1 in 4 (26%) adults in the USA have untreated tooth decay, gum disease, nearly half (46%) of all adults aged 30 years or older show signs of gum disease; severe gum disease affects about 9% of adults [7].

The prevalence of oral disease among Pakistan adults in the national survey shows the status of periodontal disease and report prevalence up to 98% and showed 31% with advanced periodontitis [8].

The prevalence of oral disease in Iran between 1990-2010 increased occurred in DALYs at all ages, attributed to dental caries (from 37230-56521) as well as periodontal disease (from 21482-43308) and decrease was found for edentulous (from 53134-47960). The most significant burden due to dental caries and periodontal disease was found in Iranians aged 15 to 49 and 50 to 69 years [9].

Medicine department of the dental hospital of Sir Seyed College of Medicine Sciences for girls, Karachi on world oral health day 2015. A total of 77 patients with age range from 8 to 75 years were examined clinically, gingivitis (50.7%) was the most commons disease among all patients followed by irreversible pulpitis (19.4%), periodontist (18.2%), BDRs (3.9%), reversible pulpitis (2.9%), tobacco stunning (1.3%), caries teeth (1.3%) and traumatic ulcers (1.3%). Overall gender distribution of 77 patients indicates a high prevalence in males 58% as compared to females (41%) patients [10].

A hospital-based cross-sectional study shows that Oral soft tissue lesions were found in 4.1% of the study subject, the prevalence of leukoplakia, OSF, and oral lichen planus was 0.59%, 0.55%, and 0.15% respectively, the prevalence of smoking drinking alcoholic beverages and chewing was 15.02%, 8.78%, and 6.99% respectively [11].

The 1998 adult dental health survey is the first of the decennial series of UK adult dental health surveys to use and report a measure of self-perceived impact on people with the dental and periodontal disease and other oral conditions. Over half (51%) of dentate adults said they had been affected in some way by their oral health, and in 8% of cases, the impact was sufficient to have reduced their quality

Table 1: Variables frequency and percentages.

Variable		Frequency	Percentages
Age	18-29	191	49.8
	30-39	92	24.1
	40-49	71	18.6
	<50	29	7.8
Gender	Boys	362	94.5
	Girls	21	5.5
Material statues	Single	53	13.8
	Engaged	9	2.3
	Married	319	83.3
	Diverse	1	0.3
	Widow	1	0.3
Education	Bachelor	102	26.6
	Diploma	276	72.1
	Illiterate	5	1.3
Nationality	Pashtun	292	76.2
	Uzbek	1	0.3
	Tajik	88	23.0
	Hazara	2	0.5
Family residents	2-10	285	74.5
	11-20	90	28.4
	21-26	8	2.2
Family member working	1-4	365	95.3
	5-8	18	4.6
Job	Doctor	59	15.4
	Nurse	4	1.0
	Engineer	8	2.1
	jobless	3	0.8
	teacher	26	6.8
	Student	1	0.3
	Worker	282	73.6

of life [12].

Descriptive study in geriatric nursing homes, the prevalence of dental and oral disease was 44.9% and 86.1%, the most frequent oral disease was dry mouth (42.1%) fissure tongue (25.9%), atrophic of the tongue (25%), sublingual varicosity (22.7%), burning sensation (16.7%) and varix (15.3%), the prevalence of edentulousness was (56%), and the odds of oral mucosal disease in females were significantly more than in males [13].

Nearly 13 of every 100 US adults aged 18 years or older (12.5%) currently smoked a cigarette. This means an estimated 30.8 million adults in the USA currently smoke cigarettes more than 16 million Americans live with a smoking-related disease, the average cost for a pack of cigarette is across all states is 6.96\$ per pack [13].

In a cross-sectional study in Kabul city the prevalence of cigarette smoking among men aged 15 years and older in Kabul city estimated to be 35.2%, the study finding shows that 46% of respondents were smoking at some point in their life, a totally 85.4% of participants were somehow exposed to cigarette smoke, the average cost for a pack

Table 2: Frequency and percentage of smoke and related risk.

Smoker	Yes	285	74.4
Have you use sedative drugs	Yes	382	99.7
Type of cigarettes	Pen	173	45.2
	Seven star	108	28.2
	Esse Change	3	0.8
At which time d you smoke	After food	262	68.4
	Always	22	5.7
You sick	Yes	21	5.5
Do you know about haram of cigarettes	Yes	381	99.5
What changes occur in your mouth because of smoking	Block teeth	72	18.8
	Halitosis	79	20.6
	In faction teeth	10	2.6
	Tough infection	1	0.3
	Stomach ulcer	2	0.5
	Yellow teeth	117	30.5
Do have chest problem	Asthma	82	21.4
	Chest pain	40	10.4
	Chough	162	42.3
Who else smoke in your family	My brother	122	31.9
	Father	71	18.5
	Husband	4	1.0
	Me	88	23.0
Do you smoke at home or with friend	Yes	284	74.2
Smoking in front of friend	Yes	380	99.2
Mood changes if you don't smoke	Can't eat	1	0.3
	Feeling pain	4	1.0
	Fighting	1	0.3
	Tension	279	72.8
Mood during smoking	Feeling happy	284	74.2
Reason of starting smoking	Economic	4	1.0
	Family problem	120	31.3
	Smoker fiend	160	41.8
Smell mouth after smoking	Yes	176	46.0
Satisfy whit smoking	Yes	283	73.9
Using material for cleaning	Mouth wash	1	0.3
	Brush	61	15.9
	Water and salt	222	58.0
Have you ever seen any wound in your mouth	yes	198	48.3

of cigarette in Afghanistan is 70 AFG per pack [14] (Table 1, 2).

Discussion

We can say with great conviction that there is an association between smoking and risk of oral problem among Afghan population. According to recent studies, the observational study in China shows, overall, 14.9% of participants (19.7% in rural areas and 8.8% in urban areas) reported poor oral health at baseline. After 4,602,743 person-years of follow-up, we identified 23,805 new cancer cases and 11,973 cancer deaths, respectively. Poor oral health was associated with higher risks of total cancer incidence (HR: 1.08, 95% CI: 1.04-

1.12) and death (HR: 1.10, 95% CI: 1.05-1.16). For the site-specific cancers, poor oral health was significantly associated with higher risk of stomach cancer incidence (cases: 2964, HR: 1.10, 95% CI: 1.00-1.22), esophageal cancer incidence (cases: 2119, HR: 1.19, 95% CI: 1.07-1.33), esophageal cancer death (cases: 1238, HR: 1.29, 95% CI: 1.12-1.49), liver cancer incidence (cases: 2565, HR: 1.18, 95% CI: 1.06-1.32), and liver cancer death (cases: 1826, HR: 1.20, 95% CI: 1.05-1.36). This positive association was stronger among rural residents compared to urban residents (interaction test $P < 0.01$) [15].

A random sample of 5,000 veterans with service after November 11th, 2001, participated in a survey assessing health care needs and barriers to care, shows, findings indicated a significant gender by smoking interaction on moderate/severe musculoskeletal pain, adjusting for age, self-reported race/ethnicity and weight status, combat exposure, probable PTSD, depressive symptoms, service-connected injury during deployment, and VA health care service utilization. Deconstruction of the interaction indicated that female veteran smokers, relative to female nonsmokers, had increased odds of endorsing moderate to severe musculoskeletal pain (Odds Ratio [OR]: 2.73, 95% Confidence Interval [CI] = 1.16-6.41), whereas this difference was no significant for male veterans (OR: 1.03, 95% CI = 0.69-1.56) [16].

This article reviewed smoking related systemic diseases and oral diseases shows, smoking is related to lung cancer, cardiovascular diseases, and many other systemic diseases. Cigarette smoke affects the oral cavity first, so it is evident that smoking has many negative influences on oral cavity, for example, staining of teeth and dental restorations, wound healing, reduction of the ability to smell and taste, and development of oral diseases such as oral cancer, periodontitis, smoker's palate, smoker's Melanesia, hairy tongue, leukoplakia, oral candidiasis, and implant survival rate. The article also discusses the relationship between smoking and dental caries in detail [17].

The cross-sectional study shows, the average cigarettes consumption per person-day was the same as that in 1996 -- 14.8 cigarettes/day, which cost 2.73 RBM/day. The cost was various in different groups of population with a 15 times difference. The level of exposure for passive smokers was not improved, as well, the prevalence of passive smoking in nonsmokers were 53% in 1996 and 52% in 2002 [18].

The observational study shows, the prevalence rate of periodontitis, dental caries, and peri-implant pathology was 17.6%, 36.6% and 13.9%, respectively. The systemic compromised status was associated with the prevalence of the three chronic oral diseases in the general models. The systemic condition-specific models yielded diabetes [OR: 1.49, 95% CI (1.24-1.79)] and HIV+ [OR: 4.37, 95% CI (1.05-18.24)] as risk indicators for periodontitis; cardiovascular conditions [OR: 1.10, 95% CI (1.01-1.20)], diabetes [OR: 1.24, 95% CI (1.05-1.46)] and neurologic conditions [OR: 1.84, 95% CI (1.32-2.57)] as risk indicators for dental caries; and smoking habits as a risk indicator for all three oral diseases [OR: 1.90, 95% CI (1.74-2.07) for periodontitis; OR: 1.18, 95% CI (1.09-1.27) for dental caries; OR: 1.84, 95% CI (1.64-2.07) for peri-implant pathology]. Attributable fractions estimated a potential reduction of 12.2% of periodontitis, and 4.3% of dental caries cases if the exposure to systemic conditions was prevented; while the prevention of exposure to smoking alone would result in a potential reduction of 37%, 7%, and 39% of periodontitis, dental caries, and peri-implant pathology cases, respectively [19].

Limitations and Strengths

At the time of data collection, the participants did not give responses for filling the questionnaires, it was very default to fill the questionnaires from women, and the study has shown that the finance were problems for collection the data. The strength of study shown that it was first to research on this topic, our society is conservative and it is default to collect data from women but we have collected data from 4 women, and the effect of smoking was in high percentage of that people who had oral problems.

Conclusion

For the decoction of oral problems from smoking among Kabul adults we have distributed questionnaires than we found that, 74.4% of our population are smoker, the 161 participants reported that have the cough problem due to smoke, and the 39 had chest pain. 196 of participants had the wound in their mouth.

Ethical Approval Statement

This study was ethically approved by the medical bioethics committee of the SIHE ethics committee (code: 1386-1411). The patients/participants provided their written informed consent to participate in this study.

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