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Research Article

PERCEPTIONS OF HEALTH PROFESSIONALS REGARDING CONSUMPTIONS OF WATERPIPE SMOKING AND ITS HARMFUL EFFECTS IN RELATION TO ORAL CAVITY IN BAQAI DENTAL COLLEGE, KARACHI

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Abstract:

Background: Tobacco is obtained from a plant of genus nicotiana and Solanaceae family, it contains alkaloid nicotine. It is consumed in smoking and smokeless forms amongst these water-pipe smoking(wps) is found to be second highest in gaining popularity mainly because it seems appealing to youth and is trending. The objective of this study is to assess knowledge, attitude and practices of water-pipe smoking among health professionals and its harmful oral effects. **Methods:** A cross-sectional study was conducted among health professionals in Baqai Medical University Karachi for the duration of six months from April 2018 to October 2018. Simple random technique was used and the inclusion criteria was students from first year to final year BDS, house officers and faculty members from Baqai dental college. 350 participants were included in this study and were informed about the questionnaire. Ethical approval was taken from the research department of Baqai medical university. The obtained data was analyzed using SPSS version 21.0. **Results:** Total 294 from 350 participants submitted the questionnaire after a review. In our analysis, 203 individuals were aware of the term water pipe smoking whereas 91 were unaware regarding WPS. In 226 participants, They have never consumed shisha; sixty-eight (68) health professionals were currently using it in which (16.0%) Of them were male and (7.1%) of them were female. About 4.1 % of the participants mentioned that they Started shisha Smoking at the age of 18 years. Majority (21.4%) of the members reported that they consumed WPS for **just** trend, and 10.9% because of stress. **Conclusions:** water-pipe smoking is common and teenagers use it more frequently as a trend, very less participants were aware about the health hazards and effects of water pipe smoking on oral cavity therefore health professionals should know and awareness should be spread to condemn the use of wps.

Keywords: water pipe smoking, health professionals, oral health hazards

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INTRODUCTION:

Consuming tobacco through shisha has been a traditional method since older times, there is evidence in the literature that suggest it was first invented in the subcontinent by an Indian physician during the Akbar era (somewhere in between 1556 - 1605). More often aged males were found to gather for relaxation, socialization and entertainment in streets and cafes where they consumed tobacco in hookah (shisha) which was then considered to be one of their favorite habits'. Later on a new term water pipe was introduced against shisha and has been used interchangeably since last two decades. Traditionally, it is consumed as smoking and smokeless forms. The smoking tobacco is the form of dried tobacco, leaves are consumed when incorporated in cigarettes, cigars, pipe smoking, shisha also known (hookah, narghile, Hubble bubble, goza & water pipe) bidi, and kreteks, whereas the smokeless tobacco is used as snuff, chewing, dipping. Amongst the two forms mentioned; the Smoking seems to be more famous and well liked variety of consuming tobacco by almost majority of the people throughout the world.

According to WHO (world health organization) there are approximately more than 1.1 billion smokers across the world off which up to 80% approximately live in countries where low and middle income population exists (1, 6) . Smoking tobacco has been linked with cancer formation and death. It is expected that by 2030 6.4 million to 8.3 million will die due to this habit. (1) Also these figures suggest more male predominance as compared to females.(5)

Water pipe smoking is a common trend now a days and has been reported to be spreading worldwide fearsomely (1, 5, 8). Actually, it is a filtration device that employs an indirect heat source which is used to burn tobacco leaves slowly while user draws smoke through water chamber located at the base and into their mouth via hoses. Maassel is the most famous type of shisha smoking in the present days, available in many flavors such as fruit, candy and chocolate, all these flavors produce aromatic smoke which seems appealing to youth and specially of our country.

HYPOTHESIS

Tobacco consumers assume that smoking tobacco through water pipe is less harmful and safe as compared to cigarette tobacco due to filter effect of water, though this assumption has been denied by studies which state that it is equally or more harmful because the toxic and carcinogenic substances are not filtered even when passed through water. There are studies which confirm that people who consume shisha regularly are at more risk of developing

respiratory diseases, cardiovascular diseases, lung cancers, low birth weight along with oral and dental health issues.

Therefore, our main aim and objective of this study

1. To determine the perceptions of water pipe smoking in relation to oral diseases amongst students, house officers and faculty in BDC, Karachi.
2. To improve their awareness regarding hazards of water pipe smoking and help them to promote healthy habits.

MATERIAL AND METHODS:

The study was conducted during 6 months period from April October 2018 in Baqai Medical University Karachi. All the dental students from first year to final year, house officers and faculty members from Baqai dental college participated and patients, non-teaching staff were not included in the study. A total of 350 participants were engaged in this study and all of them were briefed about the topic of the study before the distribution of questionnaires.

The questionnaire consists of four section, first section includes the recording of the socio-demographic characteristics such as age, gender, and group. The second section consisted of questions regarding the knowledge of health professionals about the hazardous effects of toxic substances in water pipe on oral health such as, oral disease, oral cancer, staining of teeth, halitosis, ulcerations and dental caries). The third section was totally about practice questions related tobacco/ water pipe consumptions (such as, since how long you have been consuming? How much you consume? And why do you consume it); the last section was meant for the evaluation of attitude of health professionals that includes open question recommendations.

The confidentiality of the study participants was ensured, ethical approval and informed consent was obtained by research committee of the institute. The questionnaires comprised of 20 questions, amongst which 18 were closed ended and 2 of them were open questions. The obtained data was then analyzed using (SPSS) program version 21.

RESULTS:

Out of 350 participants 294 filled and submitted the questionnaire, rest of the participants were not willing to fill and share their thoughts.

The sociodemographic characteristics of the participant are summarized in **table-1**, ranging from 19 to 26 years. 15% of the participants were found to be addicted to tobacco consumptions and 85% were

not addicted to it. Out of 294 participants 203 were aware of the term water pipe smoking. Two twenty six (64.5%) participants have not consumed shisha, only sixty eight (68) were found to be currently using it in which (16.0%) of them were male and (7.1%) of them were female. About 4.1 % of the same participants mentioned that they started shisha smoking at the age of 18 years. 49.7% have heard of secondary smoke and 50.3% didn't knew about it. One ninety one (65.0%) mentioned that water pipe smoking had harmful effects on health. The perception and belief of health professionals regarding the effect of shisha smoking on oral health are shown in (table-3). 32% agreed that WPS is less harmful than cig smoking and 68% disagreed to this statement. One hundred and two participants think electronic smoking was more harmful than WPS while 192 participants think opposite to it. 9.9% were current water pipe smokers and other percentage of tobacco consumers/non-consumers are mentioned in table2. Majority (21.4%) of the members reported that they consumed wps for trend, 10.9% because of stress, 3.7% of peer pressure. 195 participants were found to be in a favor of banning water-pipe smoking in public places such as cafes and most of the participants (72.1%) did not thought about stop consuming it.

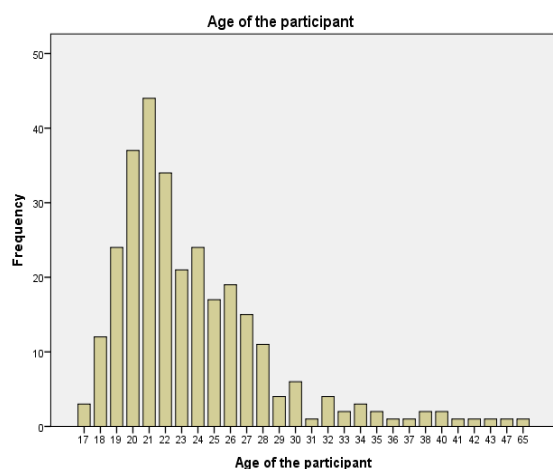


Table-1: Demographic Characteristics of Study Participants:

Gender	
Male	45.2%
Female	54.8%
Age	
Male mean	24.52
Female mean	23.14
Group	
Students	175
House officers	54
Faculty	65

Table 2: Percentage of Tobacco Consumers And Non-Consumers:

	Yes	No
Cigarette	17.0%	83%
Cigar	4.1%	95.9%
Wps	9.9%	90.1%
Electronic cig	6.1%	93.9%
Beedi	4.1%	95.9%

Table 3: Perceptions and Beliefs Regarding the Effect Of

Sheesha Smoking on Oral Health

Wps Effects	Yes	No
Teeth staining	48.3%	51.7%
Halitosis	34.0%	66.0%
Dental caries	20.4%	79.6%
Ulceration	40.5%	59.05%
Oral cancer	63.6%	36.4%

Table 4: % of participants consuming wps.

Since	%
<1year	13.9%
1-5 years	9.2%
>5 years	4.8%
10-15years	8.2%

DISCUSSION:

Globally tobacco smoking is a public health risk factor. In many countries especially, Middle East shisha smoking is a fashionable trend, now its consumption has been seen increasing on a daily basis with gaining immense popularity worldwide and in particular to our region of South Asia; Pakistan as well. Due to negligence of government policies in regard to water pipe smoking, its consumption is observed to be rising at an alarming rate and furthermore gaining more interest among youth population in contrast to elderly and above all that they assume it's a safe activity with less likely chances of developing any kind of disease which is highly worrying or disturbing⁽¹⁰⁾.

Nafae et al, 1973 was the one who confirmed deleterious health hazards of wps. Previous literature tells us regarding the knowledge and attitude of people on wps and its effects on general health but very less studies have focused its effects on oral cavity^(11,12,13,14).

The results of our study showed that majority of dental health professionals had knowledge of wps.

W. Maziak and F. M. Fouad did a study among students in university of Syria found that 7.0% of the men used wps daily from which 62.6% were men and 29.8% were women. We concluded that 11.2% of our participants consumed it daily in which twenty two (7.5%) were male participants.

Twenty nine 29 (9.9%) out of 294 participants reported to have smoked wps and 265 (90.1%) haven't smoked it ^(14,15).

Present study indicated that 105(35.7%) were female (students) water pipe consumers, hence a study held in 2008 at university of Jordan which indicated that their female (students) water pipe smokers were 10.7% ⁽¹⁶⁾ In our study 21.4% of the participants were consuming it because of social trend/fun And it has been reported to be the most common factor for initiation of shisha, these findings correlates with the findings of M. Haroon, A. Munir, W. Mahmud, et al ⁽¹⁴⁾ as their reason of wps smoking was more because of trend. According to a study held in Agha Khan hospital Karachi Pakistan it was found that the students consuming hukka was due to pleasure-seeking, peer-pressure, stress and curiosity was most common among these ⁽¹⁰⁾.

It is also stated that there is an association between chewing and smoking tobacco if they are used together at the same time, some people have habit of chewing tobacco along with pipe smoking this is the reason they are at higher risk of developing mucosal dysplasia ⁽¹⁷⁾

In our study Sixty five percent of the participants believed that it is injurious to health and 84.7% participants agreed that wps is linked with oral diseases. Similarly Nazeer Khan, Muhammad Umer Siddiqui* estimated that near around eighty one percent of respondents admitted that sheesha smoking was harmful and twenty eight percent of the respondents believed an association between sheesha and oral cancer ⁽¹²⁾. 3.4% participants were having sheesha only once in a week, although the figures in the study done by Obeidat et.al. Were found to be the opposite of our study, they suggested that majority of their participants who were water pipe smokers more often consumed it as twice per week ⁽¹⁸⁾.

Another similar study in 2012 was conducted to know the prevalence, knowledge and practices of hookah smoking in university of Florida by Shams Rahman, his results were a bit surprising suggesting that hookah is a safer alternative to cigarette smoking, why the concept of participants was unclear and their believe

that it is safer alternative than cigarette is still unclear. The outcome of our study was similar, 200 participants' thought water pipe smoking is less harmful than cigarette smoking however interestingly almost all of the health professionals were aware that it can cause oral cancer; 15.3% of health professionals were unaware of the fact that WPS can cause oral diseases out of which 51.7% did not know that it can cause teeth staining, 66% were unaware that it can cause halitosis, 79.6% had no idea about the link between wps and dental caries and 59.5% were clueless that it can cause oral ulcerations as well. ⁽¹¹⁾.

Although there are other studies in the literature available that have already indicated that the hose tip of Hukka smoking is one of a source to spread cross infections and chances of microbiological risk increases because many people use it at the same time without changing the hose tips and water present in the base of hukka device. ⁽¹⁹⁾ Habibi et al. also reported that using same hose tip of pipe smoking can be a source of transmitting hepatitis c virus with gingivitis, ulcerations or many other oral disease ⁽²⁰⁾.

Obeidat et al and Al Nomay et al. described similar findings in regard to health professionals point of view thereby declaring higher percentage of awareness related to problems associated with oral health ^(18,21). An article published held in 2015 in Qassim university of Saudi Arabia mentioned that the non-smokers are often exposed to health hazards due to second hand smoke ⁽²²⁾. In present study 48.6% participants assumed that they are exposed to secondary smoke in which 49.7% have knowledge about environmental tobacco and 50.3% were unaware of it.

CONCLUSION:

The results of this study depicted higher ratio of non-tobacco consumers whereas only a fraction of the participants consumed tobacco. Most of the participants were aware with the term water pipe smoking but very few of them knew that it is more harmful than cigarette smoking. We found that they have a strong belief that it is much lighter and less effective as compare to cigarette or electronic cigarettes. Our results also show that Wps stood second highest when compared with the other form of tobacco usage and when precisely talking about the youth the results showed wps as the most likely trend of the day. Surprisingly majority of the participants already knew that it can cause oral cancer but many of them were unaware that it can lead to development of other oral diseases. Amongst 294 participants only 82 had ever thought of stop consuming wps. Thus proper campaigns, awareness programs should be conducted

in regards of oral health issues related to wps and it is very important to address this spreading threat to public.

REFERENCES:

1. Rami K, Makvana B, Thakor N. Knowledge, attitude and practices of hookah smoking among medical students in Gujarat, India: a cross sectional study. *International Journal of Advances in Medicine*. 2015;397-400.
2. Neergaard J, Singh P, Job J, Montgomery S. Waterpipe smoking and nicotine exposure: a review of the current evidence. *Nicotine & tobacco research*. 2007;9(10):987-94.
3. Mohammed J, Rana C, Reem W. The prevalence and trends of waterpipe tobacco smoking: A systematic review. 2018.
4. Nakkash R, Khalil J. Health warning labelling practices on narghile (shisha, hookah) waterpipe tobacco products and related accessories. *Tobacco control*. 2010;19(3):235-9.
5. Ahsan M, Saad M, Jawed M, Akhtar S, Haseeb A, Bilal M, et al. Impact of tobacco health warnings on smokers in Pakistan. *Age (years)*. 2016;20(30):375.
6. Alzyoud S, Kheirallah KA, Weglicki LS, Ward KD, Al-Khawaldeh A, Shotar A. Tobacco smoking status and perception of health among a sample of Jordanian students. *International journal of environmental research and public health*. 2014;11(7):7022-35.
7. Allam MF, Elaziz KMA. Waterpipe smoking: Are we facing a new global epidemic? *Edorium™ Journal of Public Health*. 2015;2:11-4.
8. Cobb C, Ward KD, Maziak W, Shihadeh AL, Eissenberg T. Waterpipe tobacco smoking: an emerging health crisis in the United States. *American journal of health behavior*. 2010;34(3):275-85.
9. . http://www.gbebund.de/pdf/Faktenblatt_KiGGS_Welle_1_Mediennutzung_E.pdf
10. Sadiq MA, Parekh MA, Zubairi ABS, Khan J, Frossard PM. Cross-sectional study identifying forms of tobacco used by Shisha smokers in Pakistan. *JPMMA The Journal of the Pakistan Medical Association*. 2012;62(2):192.
11. Rahman S, Chang L, Hadgu S, Salinas-Miranda AA, Corvin J. Peer reviewed: Prevalence, Knowledge, and practices of hookah smoking among university students, Florida, 2012. *Preventing chronic disease*. 2014;11.
12. Khan N, Siddiqui MU, Padhiar AA, Hashmi SAH, Fatima S, Muzaffar S. Prevalence, knowledge, attitude and practice of shisha smoking among medical and dental students of Karachi, Pakistan. *J Dow Univ Health Sci*. 2008;2(1):3-10.
13. Jawaid A, Zafar A, Rehman T, Nazir M, Ghafoor Z, Afzal O, et al. Knowledge, attitudes and practice of university students regarding waterpipe smoking in Pakistan. *The international journal of tuberculosis and lung disease*. 2008;12(9):1077-84.
14. Haroon M, Munir A, Mahmud W, Hyder O. Knowledge, attitude, and practice of water-pipe smoking among medical students in Rawalpindi, Pakistan. *J Pak Med Assoc*. 2014;64(2):155-8.
15. Jaffri SB, Yousuf A, Qidwai W. Water pipe smoking amongst the University and College Students of Karachi, Pakistan. *Pakistan Journal of Chest Medicine*. 2015;18.
16. Dar-Odeh NS, Bakri FG, Al-Omiri MK, Al-Mashni HM, Eimar HA, Khraisat AS, et al. Narghile (water pipe) smoking among university students in Jordan: prevalence, pattern and beliefs. *Harm reduction journal*. 2010;7(1):10.
17. Ali AA. Histopathologic changes in oral mucosa of Yemenis addicted to water-pipe and cigarette smoking in addition to takhzeen al-qat. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology*. 2007;103(3):e55-e9.
18. Obeidat SR, Khabour OF, Alzoubi KH, Mahasneh AM, Bibars AM, Khader YS, et al. Prevalence, social acceptance, and awareness of waterpipe smoking among dental university students: a cross sectional survey conducted in Jordan. *BMC research notes*. 2014;7(1):832.
19. Blachman-Braun R, Del Mazo-Rodríguez RL, López-Sámamo G, Buendía-Roldán I. Hookah, is it really harmless? *Respiratory Medicine*. 2014;108(5):661-7.
20. Habib M, Mohamed MK, Abdel-Aziz F, Magder LS, Abdel-Hamid M, Gamil F, et al. Hepatitis C virus infection in a community in the Nile Delta: risk factors for seropositivity. *Hepatology*. 2001;33(1):248-53.
21. Al-Nomay NS, Ahmed AE. Water pipe use and the awareness of its effect on oral health in Riyadh, Saudi Arabia. *J Oral Hyg Health*. 2015;3(6):1000191.
22. Naeem Z. Second-hand smoke-ignored implications. *International journal of health sciences*. 2015;9(2):V.