

Shisha use and trends in Pakistan: A narrative review

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A B S T R A C T

Shisha smoking is a growing global epidemic and a preventable cause of mortality and morbidity. Shisha use is popular among youth worldwide constituting a voguish social trend. It is widely regarded as less hazardous and more acceptable than cigarette smoking. However, research evidence has highlighted numerous harmful effects of shisha smoking. A literature review was conducted to identify all available research related to shisha smoking in Pakistan. "Pubmed" and "Google Scholar" were employed as search engines. This review presents and evaluates evidence regarding trends, patterns, knowledge, beliefs and usage of shisha in Pakistan. It culminates with recommendations to increase awareness of shisha and preventive strategies to combat this significant public health issue in Pakistan.

Keywords: *Shisha, Sheesha, Hubble bubble, Hookah, Waterpipe, Smoking*

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Introduction

Shisha smoking is a centuries old practice with high prevalence in the Eastern Mediterranean Region [1]. Rising exponentially over the past decade, shisha smoking is now a worldwide epidemic [2]. It is known by different names across the world including "sheesha", "water pipe", "hubble bubble", "hookah" and "narghile" [3]. Although it is more prevalent in males [2] its usage has been increasing in females [4]. Shisha use is the highest among school and university students globally [5]. Shisha smoking has become a social event with people gathering to smoke in cafes and restaurants [6]. Adding to its appeal and popularity is the fact that shisha is available in sweetened form and in a variety of flavours [7,8].

A common misconception is that shisha smoking is less harmful than cigarette smoking to health [9]. Research has demonstrated that smoke from Shisha comprises of a cocktail of lethal toxicants present in cigarettes including nicotine, aromatic hydrocarbons, volatile aldehydes and carbon monoxide [10]. Shisha smoking can also serve as a precursor to future cigarette use among youth [11]. According to the World Health Organization, tobacco causes greater 7 million deaths annually worldwide [12].

The components of shisha or a waterpipe include its body, tobacco bowl, water bowl, hose and a mouthpiece [13]. The tobacco is placed in the tobacco bowl and the smoke passes through water before it is inhaled through the mouthpiece [13]. The mouthpiece is often shared between people which can facilitate the spread of communicable diseases such as tuberculosis [14]. Shisha smoking increases the risk of certain types of cancers, including lung and oesophageal cancer [15]. A substantial body of literature has established a positive association between shisha smoking and respiratory diseases such as chronic obstructive pulmonary disease and bronchitis, low birthweight, cardiovascular disease and metabolic syndrome [16]. Second hand smoke from shisha also poses health risks to the general public [17,18]. Current policies and regulations regarding the control of shisha are inadequate and insubstantial, which has propagated its spread [19, 20].

In Pakistan, smoking is a significant public health issue and shisha use is ubiquitous [21]. Shisha smoking is deemed culturally and socially acceptable [21]. According to results of Global Adult Tobacco Survey, there were about 3.7 million shisha users in Pakistan in 2014 [22]. The aim of this review is to find all published literature on

shisha smoking in Pakistan to highlight its prevalence, sociodemographic characteristics, age and gender distribution, reasons for smoking, patterns of usage and trends.

Methodology

Articles were searched using the search engines of "Pubmed" and "Google scholar" by employing the terms "shisha", "water pipe", "hubble bubble", "hookah" "narghile" and "arghile". The reference list of retrieved articles was surveyed to find articles related to the topic. Variant spellings of key words for example "sheesha" and "hukka" were also used. No time limit was imposed while searching. All search results comprising published original articles and reviews in the English language are included.

Results & Discussion

Prevalence:

The prevalence of shisha usage is high in Pakistan. A large scale cross-sectional survey conducted on 7582 students aged 20-25 years belonging to various institutions from multiple cities of Pakistan determined the overall prevalence of shisha smoking as 19.7% [23]. In another cross-sectional study conducted among 450 students at two medical and two non-medical universities in Karachi, 53.6% students were shisha smokers [24]. Two studies carried out in medical students in Pakistan reported prevalence rates of 21.5% [25] and 19% [26]. Other studies conducted among university students cited frequencies of 45.2% [27] and 48% [28]. In Pakistani adolescents aged 13-17 years the rate of shisha smoking was 39% [28]. In a study involving medical practitioners in Pakistan, 29.5% admitted to shisha smoking at some point in their lives [29]. A cross-sectional descriptive study executed in four cities of Pakistan including Karachi, Islamabad, Rawalpindi and Peshawar at shisha cafes, shopping malls and restaurants found a higher prevalence of 61% [30]. A study performed in a small semi urban community of Karachi revealed that 13% adults smoked shisha [31].

Gender and age distribution:

A sizable majority of studies have indicated that shisha smoking is significantly more common in males than females in Pakistan [23-27, 30- 32]. The literature body has also demonstrated that shisha smoking is

primarily associated with youth in Pakistan. This finding is corroborated by studies in other parts of the world [33]. Shisha smoking in Pakistan usually starts in adolescence and early twenties and the average age of initiation varying from 14 years [34] to 24 years [26]. Most studies conducted in Pakistan cite a mean age of around 18 years [23, 24, 26].

Socio-demographic distribution:

According to the results of a large scale study involving 71 educational institutions in multiple cities of Pakistan, the highest prevalence of shisha smoking is in Federal Capital Islamabad [23]. Shisha smoking rates were more in professional and private educational institutions and students belonging to higher socio-economic class while students studying in religious institutes or madrasas did not smoke shisha at all [23]. In a study conducted at several multidisciplinary colleges, higher rates of shisha smoking were seen in non-medical students as compared to medical students [24]. In another study comparing public and private medical colleges, shisha use was significantly higher in private institutes [25]. A research study carried out on adolescents aged 14-19 years revealed that shisha smoking was more common in those who belonged to higher socio-economic background [34]. The association between Shisha use and higher socio-economic class may be attributed to its perception of a status symbol as well as its accessibility and cost.

Reasons for shisha smoking:

The most commonly quoted reasons for shisha smoking among students and youth are pleasure-seeking [23, 24, 27,30, 32], curiosity [23, 24, 26, 27, 30, 32], peer-pressure [23, 24, 25, 26, 27, 28, 30, 32], boredom [23, 24, 27, 30, 32] and stress [24, 27, 30, 32]. Other given reasons are influence of media [23], easy availability of shisha [24], considering shisha smoking as more tolerable than cigarette smoking [28] and cogitating it as a status symbol [28]. In a study conducted in two medical universities in Karachi, some students voiced that they were influenced by family members while others thought it was glamorous to smoke shisha [25].

Knowledge, Attitude and Practices:

Similar to research results in other parts of the world [35], shisha smoking is perceived as less harmful than

cigarette smoking in Pakistan [23, 24, 27, 28, 30, 32, 34]. In only two studies the majority of participants regarded the hazards of shisha comparable to that of cigarettes [25, 26]. In a large scale multicentre study involving over seven thousand students only 3% were aware of the constituents of shisha [23]. In another study carried out at four different universities, around 17% of the study participants were unable to recognize a single harmful consequence of shisha smoking [24]. However, research revealed that the common misconception that shisha is filtered due to water in the shisha pipe was generally regarded as false in Pakistan [25, 26].

The most common place where shisha is smoked are shisha bars or cafes [23, 25, 26, 34] which demonstrates that shisha smoking is considered a social event in our population and shisha bars play a vital role in promotion of shisha smoking. This is in agreement with findings from other parts of the world [35]. A single waterpipe is frequently shared between shisha smokers [24, 26, 27, 34] which constitutes an important health hazard. Flavour is an important attribute of shisha which is liked by our youth [24, 34]. An alarming trend in Pakistan is that parental approval is usually given to youth for shisha smoking [23, 24, 26, 27]. This is likely due to the fact that shisha is not considered harmful to health by parents.

Research has demonstrated that higher rates of shisha smoking are found in those individuals who smoke cigarettes [23, 25, 27, 28, 30]. Smoking either shisha or cigarettes can act as a gateway to the other substance. A study comprising of randomly selected students from various institutions in Karachi divided them into two groups; the first group comprised students aged 13-17 years and the second group encompassed 23-27 years old university students. In the first group, among the students who smoked both cigarettes and shisha, the majority started shisha first and then proceeded on to cigarettes whereas in the second group most students started cigarettes which then led to shisha smoking [28]. In other studies, respondents stated that they started shisha smoking because they were previous cigarette smokers [27, 30]. In a study involving medical students, it came to light that shisha users abused harmful substances such as narcotics and cannabis in addiction to tobacco in water-pipes [26].

A study conducted among medical students in Karachi found out that the majority was unaware of a legislation prohibiting shisha smoking in Pakistan, and even after being informed about the legislation only 22% students voiced their intention to quit or decrease shisha use [25]. Similarly, in other studies only a minority of students had any intent to stop shisha smoking [24, 30]. Even among shisha-using medical practitioners, the majority was not ready to quit [29].

Conclusion

Shisha smoking is widespread among youth and students in Pakistan and it is considered a trendy social and recreational practice. Knowledge regarding shisha and its hazardous effects is deficient in our country. More worrisome is the fact that awareness levels are low in the educated population. A commonly held belief is that shisha smoking is less harmful than cigarette smoking. Pakistani youth are usually given parental approval for shisha smoking and the age of initiation of shisha use is low which can potentially cultivate a lifelong harmful habit. Attitudes towards quitting this addiction are largely negative. Regulations against shisha use are lax and there is lack of awareness among the public regarding its legislation.

There is a pressing need to raise awareness and impart health education about the dangers and hazards of shisha smoking. This can be done through public awareness programs and targeted campaigns for high risk groups. Since boredom and pleasure-seeking are commonly cited factors for shisha smoking, it is imperative that healthy forms of entertainment are available for youth in our country. Surveillance and monitoring of shisha use and enforcement of strict legislation is necessary to address this growing public health concern. Further research should also be conducted to help develop appropriate interventions and policies to tackle the menace of shisha smoking in Pakistan.

References

1. Maziak W, Jawad M, Jawad S, Ward KD, Eissenberg T, Asfar T. Interventions for waterpipe smoking cessation. *Cochrane Database Syst Rev.* 2015; 7: CD005549
2. Maziak W, Taleb ZB, Bahelah R, Islam F, Jaber R, Auf R, Salloum RG. The global epidemiology of waterpipe smoking. *Tobacco control.* 2015; 24(S1): i3-12.

3. Dar-Odeh NS, Abu-Hammad OA. Narghile smoking and its adverse health consequences: a literature review. *Br Dent J*. 2009; 206: 571-3
4. Neergaard J, Singh P, Job J, Montgomery S. Waterpipe smoking and nicotine exposure: A review of the current evidence. *Nicotine Tob Res*. 2007;9: 987-94
5. Agaku IT, King BA, Dube SR; Centers for Disease Control and Prevention. Current cigarette smoking among adults-United States, 2005–2012. *MMWR Morb Mortal Wkly Rep*. 2014; 63: 29–34.
6. Mugenyi AE, Haberer JE, O'Neil I. Pleasure and practice: a qualitative study of the individual and social underpinnings of shisha use in cafes among youth in the UK. *BMJ open*. 2018; 8(4): e018989.
7. Maziak W, Ward KD, Soweid RA, Eissenberg T. Tobacco smoking using a waterpipe: a re-emerging strain in a global epidemic. *Tobacco control*. 2004; 13(4): 327-33.
8. Rastam S, Ward KD, Eissenberg T, Maziak W. Estimating the beginning of the waterpipe epidemic in Syria. *BMC Public Health*. 2004; 4(1): 32.
9. El-Zaatari ZM, Chami HA, Zaatari GS. Health effects associated with waterpipe smoking. *Tobacco control*. 2015; 24(S1): i31-43.
10. Eissenberg T. Tobacco smoking using a waterpipe (hookah): what you need to know. *AANA journal*. 2013; 81(4): 308-13.
11. Mzayek F, Khader Y, Eissenberg T, Al Ali R, Ward KD, Maziak W. Patterns of water-pipe and cigarette smoking initiation in schoolchildren: Irbid longitudinal smoking study. *Nicotine & Tob Res*. 2011; 14(4): 448-54.
12. Organization WH. Tobacco, Key Fact. [Online].; 2018 [cited 2018 August 4. Available from: <http://www.who.int/news-room/fact-sheets/detail/tobacco>
13. World Health Organization. Fact sheet: waterpipe tobacco smoking & health. [online] 2015 [cited 04 August 2018] Available from: http://apps.who.int/iris/bitstream/handle/10665/179523/WHO_NM_H_PND_15.4_eng.pdf?sequence=1
14. Akl EA, Gaddam S, Gunukula SK, Honeine R, Jaoude PA, Irani J. The effects of waterpipe tobacco smoking on health outcomes: a systematic review. *Int J Epidemiol*. 2010; 39(3): 834-57.
15. Montazeri Z, Nyiraneza C, El-Katerji H, Little J. Waterpipe smoking and cancer: systematic review and meta-analysis. *Tob control*. 2017; 26(1): 92-7.
16. Waziry R, Jawad M, Ballout RA, Al Akel M, Akl EA. The effects of waterpipe tobacco smoking on health outcomes: an updated systematic review and meta-analysis. *Int J of Epidemiol*. 2016; 46(1): 32-43.
17. Zhang B, Haji F, Kaufman P, Muir S, Ferrence R. 'Enter at your own risk': a multimethod study of air quality and biological measures in Canadian waterpipe cafes. *Tob control*. 2015; 24(2): 175-81.
18. Al Mulla A, Fanous N, Seidenberg AB, Rees VW. Secondhand smoke emission levels in waterpipe cafes in Doha, Qatar. *Tob control*. 2015; 24(e3): e227-31.
19. Maziak W, Nakkash R, Bahelah R, Hussein A, Fanous N, Eissenberg T. Tobacco in the Arab world: old and new epidemics amidst policy paralysis. *Health policy plan*. 2013; 29(6): 784-94.
20. Martinasek MP, McDermott RJ, Martini L. Waterpipe (hookah) tobacco smoking among youth. *Curr prob pediatric and adol health care*. 2011; 41(2): 34-57.
21. Shah N, Siddiqui S. An overview of smoking practices in Pakistan. *Pak J Med Sci*. 2015; 31(2): 467.
22. World Health Organization. Pakistan Tobacco Free Initiative [online] 2018 [cited 04 August 2018] Available from: <http://www.emro.who.int/pak/programmes/tobacco-free-initiative.html>
23. Habibullah S, Ashraf J, Javed R, Naz S, Arain GM, Akhtar T. Prevalence of Shisha smoking in college, university and Madarsa Students aged 20-25 years in Pakistan. *Pak J Med Res*. 2013; 52(1): 3.
24. Jawaid A, Zafar AM, Rehman TU, Nazir MR, Ghafoor ZA, Afzal O, Khan JA. Knowledge, attitudes and practice of university students regarding waterpipe smoking in Pakistan. *The Int J tubercul and Lung Dis*. 2008; 12(9): 1077-84.
25. Zavery A, Qureshi F, Riaz A, Pervez F, Iqbal N, Khan JA. Water pipe (shisha) use and legislation awareness against shisha smoking among medical students: a study from Karachi, *Pak J Com Health*. 2017; 42(3): 461-5.
26. 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.
27. Jaffri SB, Yousuf A, Qidwai W. Water pipe smoking amongst the University and College Students of Karachi, Pakistan. *Pak J Chest Med*. 2015; 18(2): 13-19.
28. Basir F, Khan MS, Ahmed B, Farooq W, Virji RN. The frequency of shisha (waterpipe) smoking in students of different age groups. *J Coll Physicians Surg Pak*. 2014; 24(4): 265-8.
29. Kumar A, Ghazal S, Malik M, Rizvi N, Ismail S. Knowledge Attitudes and Practices of Shisha Smoking Among Medical Practitioners in Karachi, Pakistan. *J of Smok Cess*. 2015; 10(1): 44-9.
30. Sadiq MA, Parekh MA, Zubairi AB, Khan J, Frossard PM. Cross-sectional study identifying forms of tobacco used by Shisha smokers in Pakistan. *J Pak Med Asso*. 2012; 62(2): 192.
31. Nisar N, Qadri MH, Fatima K, Perveen S, Nisar N, Qadri MH, Fatima K, Perveen S. A community based study about knowledge and practices regarding tobacco consumption and passive smoking in Gadap Town, Karachi. *J Pak Med Asso*. 2007; 57(4): 186.
32. Masood Z, Sohail K, Rauf A, Majeed M, Ashraf K, Abbas S. Preceptions of shisha smoking among university students in Pakistan. *J Univ Med Dent Coll*. 2013; 4: 9-15.
33. Jawad M, Charide R, Waziry R, Darzi A, Ballout RA, Akl EA. The prevalence and trends of waterpipe tobacco smoking: A systematic review. *PLoS one*. 2018; 13(2): e0192191.
34. Anjum Q, Ahmed F, Ashfaq T. Knowledge, attitude and perception of water pipe smoking (Shisha) among adolescents aged 14-19 years. *J Pak Med Asso*. 2008; 58(6): 312.
35. Akl EA, Jawad M, Lam WY, Obeid R, Irani J. Motives, beliefs and attitudes towards waterpipe tobacco smoking: a systematic review. *Harm Reduc J*. 2013; 10(1): 12.