

Perspectives of Medical Students' Tendency toward Waterpipe Tobacco Smoking: A Qualitative Research

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Abstract

Background: Water pipe tobacco smoking is used as a traditional way of smoking, but its ascending trend and increasing consumption has become a global phenomenon, which has been associated with increased consumption of fruity or flavored tobaccos. Given the students' increasing tendency in this regard, this study aimed to explore the medical students' tendency toward using waterpipe tobacco smoking.

Methods: This is a qualitative study using a semi-structured interview with 16 medical students in Southeastern Iran (Zabol) from January to May 2020. The data were analyzed using a thematic analysis approach.

Results: Data analysis led to the extraction of 4 themes of "cultural/ family roots", "individual roots", "attraction of tobacco flavor and water pipe", and "misconception about health risks of water pipe tobacco smoking".

Conclusion: Waterpipe tobacco smoking has increased among students for leisure and entertainment. Given that waterpipe tobacco smoking is the basis for entering various opioid addictions and cigarettes, it needs more attention to students from the academic side of principals and families. It is recommended that national and academic authorities should consider the issues that attract the students toward water pipe tobacco smoking.

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Introduction

Tobacco smoking is one of the widespread issues, which has more or less affected all dimensions of human life in different forms.¹ Waterpipe tobacco smoking is used as a traditional way of smoking, but its ascending trend and increasing consumption has become a global phenomenon,^{2,3} which has been associated with increased consumption of fruity or flavored tobaccos.⁴ In the Eastern countries, water- pipe tobacco smoking has been known as a way of using tobacco for a long time, but its consumption has been tremendously increased in the last 20 years.⁵ The history of using tobacco in Iran goes back to the 15th century AD (Anno Domini), when Portuguese imported it. The Iranians invented

waterpipe smoking for using tobacco, and the oldest image of waterpipe tobacco smoking in Iran goes back to the 16th century AD.⁶

The prevalence of waterpipe tobacco smoking is different among American (10%), Britain (8%), Arab (6%), Syrian (15%), Lebanese (28%), and Pakistani students (33%).⁷ This rate has been increased from 4.1% to 9.4% among American youth between 2011 and 2014.⁸ In the Middle East, water pipe tobacco smoking rate is high among the youth and university students, due to flavored tobacco, fewer stigmas than smoking, and misconceptions about the water pipe tobacco smoking being less dangerous to health than smoking.⁹ Of Middle East countries, according to the Global Youth Tobacco Survey, the prevalence of

waterpipe tobacco smoking is 36.9% in Lebanon.⁸ Besides, the use of waterpipe tobacco smoking is 37.5% among non-medical students and 28.6% among medical students in Turkey.¹⁰ The prevalence of waterpipe tobacco smoking among Iranian youth was estimated 33.9%, which is higher than the number of people who smoke cigarettes.¹¹

Waterpipe tobacco smoking has been increased among students due to their attempts to gain personal and social identity, enjoyment, self-confidence, belief in safety or its fewer side effects, and lack of skills required to communicate with others.¹² However, the high prevalence of water pipe tobacco smoking in students can expose them to addiction to harmful substances. There are many complications of waterpipe tobacco smoking because tobacco smoke contains over 4000 different chemicals combined with over 40 cancerous substances. The blood nicotine in people who daily smoke waterpipe tobacco smoking is similar to that of those who smoke 22 cigarettes a day. Waterpipe tobacco smoking contains carbon monoxide with high concentration, nicotine, Tar, and heavy metals. Tobacco smoking is also associated with oral and lung cancer, decreased respiratory function, and decreased fertility.¹³

In America, waterpipe tobacco smoking is popular among students and has been recently doubled among young people. This increase is due to the control of cigarettes smoking. It has been shown in previous research that using tobacco smoking exposes people to toxins similar to cigarettes smoking and increased exposure to carbon monoxide.¹⁴

Given the increasing prevalence of using waterpipe tobacco smoking, changes in students' behavior when using waterpipe tobacco smoking, lack of awareness of the dangers of waterpipe tobacco smoking, and students' perception on smoking as a harmless entertainment, we decided to find out their perspectives through qualitative research. The aim of this study was to explore the perspectives of medical students who have a tendency toward water pipe tobacco smoking.

Methods

Design

This is a qualitative study conducted in Zabol (Southeastern Iran) from January to May 2020. Qualitative research is a field-based approach searching and describing the experienced phenomena in the natural environment of society. By field-based we mean deep investigation on the actions, behaviors, beliefs, and attitudes of individuals or groups just as they occur in real life.¹⁵

Participants and Recruitments

The participants were recruited from students who

study medicine in Southeastern Iran, with different fields (Nursing, Anesthesiology, Operating Room, Pharmacy, and Medicine) in different educational levels. The inclusion criteria were being medical science student, having a 6-month history of using waterpipe tobacco smoking either on a continuous program or as a hobby, and attending cafes for waterpipe tobacco smoking.

After submitting the project to the Ethics Committee, we enrolled the participants in the study based on the snowball and purposeful sampling. The first participant was a student who volunteered for participating in the study. Then, other participants were selected using snowball sampling method by introducing the participants based on the inclusion criteria.

Data Collection

The data were collected using semi-structured interviews. Participants were invited for interview in a quiet place and at a time that was appropriate for them. Most interviews were done in dormitories. Before the interview, informed consent was achieved from the participants.

The interviews were fully recorded. Each interview lasted between 45-60 minutes. Participants were interviewed around the main topic of the study to examine the participants' experiences of their tendency toward waterpipe smoking and its various aspects. The interview was conducted by a trained researcher who was aware of how to conduct the interview and was also in direct contact with participants. By providing her contact number and e-mail address, the researcher made it possible for the participants to declare their withdrawal from the study at any stage. The research results were available to them, if willing.

The interview questions began with open-ended questions such as "Please talk about your waterpipe tobacco smoking experiences" and "Talk about your tendency to smoke"; if needed, the probing questions such as "Please explain more about that ...", were used to resolve ambiguities and deepen the answers. The follow-up questions like "Is there any particular topic you want talk about?" was asked at the end of interviews. The analysis began after the first interview, and the researcher began coding after two interviews. In total, 16 participants were interviewed until we reached data saturation.

Data Analysis

The data were analyzed by the six-step method (Braun and Clarke) using thematic analysis. Braun and Clarke (2006) stated that thematic analysis was used for examining the communication of various groups to identify the patterns within the data. In addition, thematic analysis is a data-driven approach; thus,

themes could be directly formed from the original data.¹⁶

To analyze the obtained data, the interviews were first listened to several times by the researcher and then transcribed. Second, the initial encoding was performed. Third, the codes with similar meanings were placed in a subtheme with an appropriate label. Fourth, the subthemes with similar meanings were placed in a theme. Fifth, the initial codes, subthemes, and themes were reviewed and relabeled. Finally, the report was written. Lyric Maker App, Microsoft Word, and Microsoft OneNote software were used to record, transcribe, and analyze the data.

Trustworthiness

The rigor of the study was evaluated using the proposed criteria of Guba and Lincoln.¹⁷ The researcher attempted to add credibility to the study by long-term participation and sufficient association and interaction with participants, gathering valid information, and verifying the information from participants. The dependability of the data was increased by repeated step-by-step data collection and analysis, using review of professors and experts. The confirmation of university academic staff and their supplementary comments were used, in order to increase the data confirmability. Transferability of the study was examined in order to evaluate and apply the research in other fields, by trying to provide a rich description of the research report.

Ethics Considerations

This study was approved by the Ethics Committee of Zabol University of Medical Sciences with the code of IR.ZBMU.REC.1397.108. Prior to the interviews, the researcher tried to create an appropriate relationship with the participants by introducing herself and her academic degree, and by explaining the purpose of the study. The participants were also assured about the confidentiality of their name and recorded conversations, and the reason they were

selected; their consent for recording their voices was obtained from them.

Results

The study included 16 male participants, with a mean age of 20.3 years, of whom 47% had a history of regular waterpipe tobacco smoking, and 23% smoked twice a week, and 30% smoked as a hobby. Participants were nursing, paramedical, pharmacy, and medical students.

In this study, 4 themes were extracted as family/cultural roots, individual roots, waterpipe and tobacco flavors attraction, and misconception of waterpipe tobacco risks (Table 1).

Family/Cultural Roots

The theme of family/cultural roots consisted of four subthemes including water pipe tobacco family fun, preparing waterpipe tobacco with children, institutionalizing cultural mentality, and creating a positive mentality from childhood about waterpipe tobacco. Participants emphasized that using tobacco and waterpipe tobacco smoking is a cultural issue, which had been received from generation to generation, and is used when people are tired, visit each other or gather to celebrate a ceremony.

“When my father was tired of work, my mother made him a waterpipe tobacco smoking and we all sat and watched them using it, but they did not let us use it. If there were a ceremony at home, waterpipe tobacco smoking was used... Since then, there had been a positive image from it in my mind, and at the dormitory when the kids were made one ready, I used it and loved to enjoy it; it’s not strange; it was related to that positive feeling...”(p2)

Preparing waterpipe tobacco smoking for use at home for parents or guests was children’s responsibility. They sometimes used it while preparing, which led to a positive feeling in the children’s minds.

“As kids, when we had guest or my dad was tired

Table 1: Themes and sub-themes from the participants’ perspectives

| Theme | Subtheme |
|---|--|
| Family/cultural roots | Water pipe tobacco as a family fun Preparing water pipe tobacco with children The institutionalization of cultural mentality Creating a positive mentality from childhood to water pipe tobacco |
| Individual roots | Show off Leisure filler Water pipe tobacco as a social prestige Water pipe tobacco as emotional motivation |
| Water pipe and tobacco flavors attraction | Variety of tempting greed Tastes remembering different things Academic Prestige Flavors |
| Misconception of water pipe tobacco risks | Wrong health beliefs Advertisements as the wrong mindset source The lack of visible complication causes the tendency |

of work, he told me to prepare waterpipe tobacco smoking. Thus, I was acquainted with waterpipe tobacco smoking, and I enjoyed how it smelled and how it made me feel. Even when I walked past the cafe near our dormitory, the smell of waterpipe made me feel good. I went and used it when my friends suggested, and now I go alone if I am alone ...”(p6)

“... I think family and positive cultural views are why so many young people smoke waterpipe tobacco.”(p7)

Waterpipe tobacco smoking is more acceptable to families than cigarettes smoking. Families allowed us to use waterpipe at parties, travelling, and even visiting each other, but cigarettes were banned.

“I can’t use cigarettes at home because my parents fight me, but when I use water pipe tobacco with them, they are cool. In a trip, my father and I went to a cafe for breakfast. He ordered serving a waterpipe tobacco; when it was prepared, my dad told me, “You have got tired, use it ...” (p13).

Individual Roots

The theme of individual roots consisted of four subthemes including show off, filling the leisure time, waterpipe tobacco as an allowed social pleasure, and feeling great after waterpipe tobacco smoking.

Attitudes toward waterpipe tobacco smoking were different among individuals. Most of them mentioned the lack of good amusement as the reason of their tendency to smoke waterpipe smoking. Most of the times in dormitory are spent on sleep and lack of activity, and studying does not take much time because they feel that future is ambiguous after graduation. Most are thinking about just passing the courses. They postpone the exam preparation to the night before the exam. Even sometimes they smoke waterpipe tobacco smoking to look cool when faced with their friends. Water- pipe tobacco smoking brings about a feeling of being grown up among some participants.

“We have to go to class after getting back from internship, and we get really tired. Waterpipe smoking is one way to relieve fatigue and spend our leisure time. When you are with your friends, you should not bow out; but you should smoke waterpipe tobacco, and I even think it kind of makes look cool to others. Also, I feel like girl classmates pay more attention and talk more about you.”(p3)

When students come from different cities and gather in a classroom together, they have their own cultural perspectives which make them affect each other and transmit different habits to each other. Some behaviors include not being downplayed by other classmates, which can be accomplished by waterpipe tobacco smoking with friends.

“As far as I remember, there were only adults in cafes in our city and there was no kid, so I feel grown

up when I go to a cafe and smoke waterpipe.” (p6)

Students felt grown up and prestigious when they used waterpipe tobacco.

“I feel grown up among other classmates when I use smoke waterpipe tobacco with coconut flavor ...”(p5)

Waterpipe and Tobacco Flavors Attraction

The theme of waterpipe and tobacco flavors attraction consisted of three subthemes including variety of tempting greed, tastes remembering different things, and academic prestige flavors. Students were attracted to waterpipe tobacco and charcoal flavors. There were a variety of tobacco and charcoal flavors, which students were keen to test and use whenever they went to cafes.

“When we go to a cafe for serving waterpipe tobacco smoking with different fruit flavors and with lemon and quince-flavored charcoals, we try to get two or three waterpipe tobacco with different flavors to test. Every time, we like to test a new flavor.”(p1)

“Sometimes when I go to the cafe, I prefer waterpipe tobacco with blueberry taste to remember my girlfriend, or with apple flavor that reminds me of my mother; we used to have apple flavor at home...”(p4)

Advertisements were also a tempting factor which attracted them to waterpipe tobacco. The design, shape, and decoration of waterpipe and outlet pipes, as well as tobacco flavors, are attracting factors for using waterpipe tobacco in the participants.

“Generally, I like the shape of waterpipe tobacco. It is decorated very well and attracts people. I think there are fewer complications in smoking waterpipe because the distance between the tobacco tank and the outlet is long, so that I prefer to choose a long outlet pipe (14).”

“Ads play an important role in everything. Our tobaccos are very simple, but foreign tobaccos are joyful.”(p15).

Misconception of Waterpipe Tobacco Risks

The theme of misconception of water pipe tobacco risks consisted of three subthemes including wrong health beliefs, advertisement as the agent of creating a wrong mindset, and the lack of visibility of the complications which objectively cause the tendency.

Participants had wrong conceptions and beliefs about smoking. Some stated that the smoke from the burning tobacco and charcoal reduced the risk of tobacco due to passing through the water tank. In addition, the body repels potential toxins of tobaccos because they are not used regularly like cigarettes or other narcotics.

“I don’t think it has complications as much as

people say. The smoke of charcoal and tobacco that burns together go through water; it doesn't have much harm like cigarettes."(p9)

"I think that smoking waterpipe tobacco is safer than smoking cigarettes because I don't use it permanently; the body can also remove the possible harms as well."(p11)

The participants believed that there was no evidence that showed the harmfulness of waterpipe tobacco in patients.

"So far, I haven't seen any patient in hospital because of using the waterpipe tobacco smoking, but the effect of cigarettes and other narcotics are observable. That's why I don't believe in the complications and diseases due to waterpipe tobacco smoking."(p16)

Discussion

This study aimed to explore the students' tendency toward smoking water pipe tobacco. The results showed a variety of factors related to smoking in students. One of the most important factors to use water-pipe tobacco was easy accessibility of it at homes, dormitories, and cafes. The families play a crucial role for using water pipe tobacco. The parents allow the children to prepare waterpipe tobacco for them, and consequently they use it during preparation. Therefore, it leads to acquaintance and tendency toward smoking waterpipe tobacco in children. Peers were other important motivators for using waterpipe despite the lack of experience in using it at parents' home. Students are more inclined to smoking waterpipe tobacco, especially when they feel grown up and there is no parents' supervision.

Cafes are the main place of smoking waterpipe tobacco. Participants mentioned cafes as a space for show off in free time because of no having another amusement places to spend time.

Some participants consider hedonism, filling character gaps, improving prestigious, and practicing modernism as the reasons of their tendency to water pipe. The other reasons for using waterpipe are curiosity, advertisements, attractive fruit-flavored tobacco packs, fancy tobacco smoking, and lack of awareness of the risks of tobacco.

Family/Cultural Roots

Family recreation, children's participation in preparing waterpipe tobacco for smoking, and cultural institutionalization of tobacco smoking are forms of family roots. Smoking waterpipe tobacco has social and cultural aspects, is rooted in the customs and culture of the people,^{18, 19} and has been accepted as a sign of social prestige in formal or informal meetings²⁰ Besides, access to waterpipe tobacco smoking is one of the most important reasons for young boys'

tendency toward it, and this acquaintance is provided through the family since childhood.²⁰ The results of another study also indicate that smoking tobacco is rooted in people's beliefs, and this belief can be formed in childhood when they are exposed.²¹

Individual Roots

The results of the study showed looking cool to friends, filling free time, being like a grown up, and filling mental, social and academic deficiencies have made young people more attracted to water- pipe tobacco smoking.

The results of this study are in line with those of a study conducted in Pakistan showing that students' tendency toward waterpipe tobacco smoking is due to filling free times, being under classmates' pressure, and relieving fatigue and stress.²² The results of another study also showed that friends, equalitarianism among classmates, hedonism, free time pattern change, and stress and helplessness lead them to smoke water-pipe.²³ Convenient access to waterpipe tobacco smoking in officially licensed cafes lead young people to waterpipe tobacco smoking compared to cigarettes and other narcotics.^{24, 25} Waterpipe smoking is a popular recreational activity in Iran, like many other Middle Eastern countries. Enjoyment and filling spare time are strongly associated with smoking waterpipe tobacco in adolescents and young people.²⁶

Waterpipe and Tobacco Flavors Attraction

The results of the study indicated that flavored tobaccos are tempting, cause remembrance, and make false personality for students. There is a connection between addition of flavors to tobacco and the factors of the youth's tendency toward it; in fact, flavored tobacco is a motivator to start smoking waterpipe tobacco. In addition, these flavors improve tobacco products. A study also showed that flavored tobacco products could hide the spicy taste of tobacco, especially for young people, and encourage them to test new flavors.²⁷ Smoking waterpipe tobacco also shows social prestige. Thus, even the type of the waterpipe tobacco smoking (fruity or traditional) is a metaphor for different types of youth's lifestyles and identities.²⁸

The results of studies introduced different uses of tobacco flavors in attracting the youth, arousing the feeling of curiosity, attracting new users, revising cigarette smokers' minds to be attracted to waterpipe tobacco smoking, having a sense of masculinity in men, inducing anesthesia, reducing pain, changing blood pH, stimulating the nervous system, inducing more tobacco impact, and inducing newly discovered feelings.²⁹⁻³¹

Misconception of Waterpipe Tobacco Risks

The results showed misconceptions in participants

about waterpipe tobacco smoking. They believed waterpipe tobacco smoking is safe and harmless because they did not observe any complications in their peers. Participants declared that the complications or addiction to drugs are not related to water-pipe tobacco smoking, or it is very difficult to find out any correlation. The findings are in line with the results of Auf et al.'s study.³² As the health issues such as lung and heart problems regarding smoking manifest in old ages, young people misunderstand the harmfulness of waterpipe tobacco smoking.^{33, 34} Besides, a study in Canada revealed that the lack of training about the risk of waterpipe tobacco smoking led to unawareness and misconception on using and tendency to water pipe tobacco smoking in medical students.³⁵

It is also suggested that such more attention should be paid to the students' leisure time, entertainment facilities in dormitories and university campuses, cafes, family backgrounds, social relationships, and critical affective events such as love and engagement.

One of the major limitations of this study was the reluctance of female students to interview. Recruiting the participants from a geographical area is another limitation of the study. Another limitation was the reluctance of people to interview. They each sought to escape the truth by trying to finish the interview as quickly as possible. To overcome this, we attempted to ask more questions and conduct more interview sessions. Despite these limitations, the present study also had some highlights, such as the fact that the participants were high-water hookah drinkers, which makes them rich in experience. Students sought to come from different disciplines of medical sciences to gain richer results from their experiences. The large volume of data and convergence of most of the themes extracted with the findings of other studies in Iran and other countries reinforce the findings of this study. It is important that future studies identify the causal factors of the tendency for hookah.

Conclusion

The results of the current study show the reason of tendency toward using waterpipe tobacco in medical students. The availability of conditions for students from family, social, and lack of awareness of the risks of waterpipe and seductive advertisements on tobacco and waterpipe, taste and smell of fruity tobacco, lack of conditions for filling out leisure times in cases where they tend to increase the tendency of young people toward waterpipe. Future youth are community-makers whose physical and mental health are effective in the future of their work and their lives and can best be useful in society. Therefore, there is a need that state and university authorities should contribute to the society in order to meet the above needs and provide incentives for the future in students. Families also contribute to

helping the youth to reduce their desire to use waterpipe from childhood to youth with their support and distance them from drugs to foster healthy youth.

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