

AWARENESS OF RISK FACTORS AMONG MEDICAL STUDENTS OF PESHAWAR FOR USING ORAL SNUFF (NASWAR) IN CAUSING ORAL CANCER

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Abstract

Introduction: *Naswar* (in Pashto, Snuff in English) is a known risk factor in causing oral cancer. Many domestic and international studies have shown it to be associated with increased risk of developing oral cancer. *Naswar* addiction in men and women of Southern and Northern districts of KPK is considered a risk factor in causing serious health problems. This study aimed to evaluate the awareness level among medical students of Peshawar about the association of *naswar* with oral cancer.

Material & Methods: It was a cross-sectional study based on online administered questionnaire in which perceptions were taken. A total of 50 medical students from different medical colleges participated to complete the online survey, developed using Google Spreadsheet form. SPSS version 15 was used for data analysis.

Result: Out of 50 students n=45 (90%) were aware about the oral cancer. 68% (n=34) of students believed that *naswar* caused oral cancer and majority of the students (76%) thought *naswar* as social. Tobacco leaves were considered the main ingredient used in *naswar*, also 66% (n=33) of the students believed that it is not safe to use tobacco in some other form.

Conclusion: Majority of medical students were aware of oral cancer and health hazards of *naswar* and its association with oral cancer. However, lack of correct information was observed in both users and non-users of *naswar*. This has implication for raising the incidence of oral cancer and addiction rate among vulnerable population, especially children.

Keywords: Oral cancer; Risk perception; Snuff; Tobacco

INTRODUCTION

Dip snuff or smokeless tobacco, popularly called *naswar* in Pashto, is a known risk factor in causing oral cancer. Many domestic and international studies have shown it to be associated with increased risk of developing oral cancer (1,2). Tobacco addiction (*naswar* being one of the forms of tobacco) is high in South East Asia. Smokeless tobacco users in India and Pakistan together have been estimated to number 100 million (3). In Indo Pak region every year 40% of population became victims of oral cancer (4). In Khyber Pakhtunkhwa (KPK), Pakistan, tobacco is used in various forms e.g. smoking tobacco in *hookah*, *chilam* (Hubble bubble), as cigarettes or more commonly

especially in rural areas in the form of oral snuff, *naswar* (5). People feel encouraged to buy it since it is cheap and easily available (6). They also feel inclined towards it due to the misconception that it has medicinal value. There has not been a single effective campaign against its use. No public health campaign can succeed without raising awareness of risky behavior amongst the vulnerable population.

Purpose of this study is to collect data about perceptions of oral snuff (*naswar*) risk factors in oral cancer among medical and dental students at different medical colleges of Peshawar. No studies have been conducted in Pakistan regarding the medical students' perceptions of oral snuff (*naswar*). It will help in

determining the awareness level about such risk factors in causing oral cancer among the future doctors and dentists.

Objective: To find the awareness level among medical and dental students about the association of *naswar* with oral cancer.

MATERIAL & METHODS

The present study was assumed with medical and dental students of different medical colleges of Peshawar. All students were invited to voluntarily participate in this study however they were not forced to be a part of the study. The interested students were included in the study while those students were excluded who were not willing to take part in the study.

This study was based on online administered questionnaire. A total of 50 undergraduates from all batches took part in the study while 100 students were not interested in it because of their busy routine and were not included. We surveyed the convenient sampling approach to enroll the students.

The mailing lists of students were generated and they were asked to complete an online survey comprising of twenty questions. The results were developed using Google

Spreadsheet form. Summary analysis of responses was generated automatically. Responses were collected online and frequency and percentages were calculated using SPSS version 15.

RESULTS

This was a volunteer based survey in which 150 medical students were selected, out of which 50 participated in it. Table 1 shows the frequency and percent of the participants in which male frequency was n=20 (40%) while female frequency was n=30 (60%). The participant's age categorized in three groups shows that among 50 students, n=34 (68%) were between 18-20 years of age, n=13 (26%) students were between 21-23 years of age while n=3(6%) of students were equal or above 24. Further results denotes that n=45 (90%) of the students were aware about the oral cancer and n=5 (10%) were not.

The belief about *naswar* that it cause cancer was reported by n=34 (68%) of students, n=5 (10%) replied that they don't believe in it while n=11 (22%) of students reported that they do not know about such beliefs (Figure 1).

Table 1: Demographic data of students (n=50)

Variables		Frequency (f)	Percent (%)
Gender	Male	20	40%
	Female	30	60%
Age	18-20	34	68%
	21-23	13	26%
	24-26	3	6%
Awareness about oral cancer	Yes	45	90%
	No	5	10%

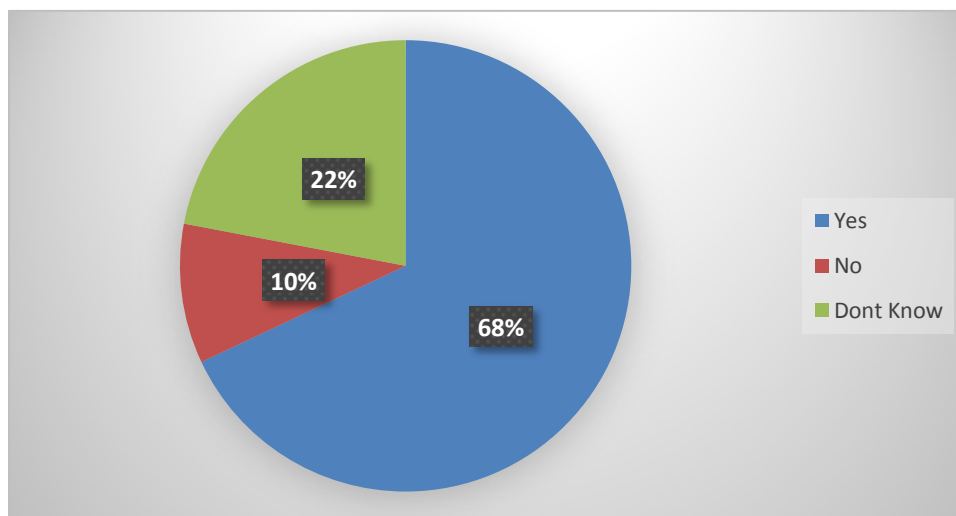


Figure 1: Students' responses to whether they believed Naswar caused cancer or not? (n=50)

When the students were asked about the ingredients present in *naswar*, n=45 (90%) of the students reported tobacco leaves as main ingredient in *naswar*, n=5(10%) reported that gums are added as ingredient, n=27 (54%) of students replied that slake lime is used as

ingredient in *naswar*, wood ash was reported by n=19 (38%) of students while n=23 (46%) students stated that flavoring agent is used in *naswar* and n=22 (44%) of students quantified that coloring agent is added in *naswar* as ingredient (table 2).

Table 2: Students' knowledge regarding the ingredients present in Naswar (n=50)

Ingredients Present in Naswar	Response	Frequency (f)	Percent (%)
Tobacco Leaves	Yes	45	90%
	Don Know	4	8%
Gums	Yes	5	10%
	Don Know	44	88%
Slake Lime	Yes	27	54%
	Don Know	22	44%
Wood Ash	Yes	19	38%
	Don Know	30	60%
Flavoring Agent	Yes	23	46%
	Don Know	26	52%
Coloring Agent	Yes	22	44%
	Don Know	27	54%

The students were asked about Naswar that whether it is social or not? n=38 (76%)

responded that it is social while 12 (24%) were not in its favor (figure 2).

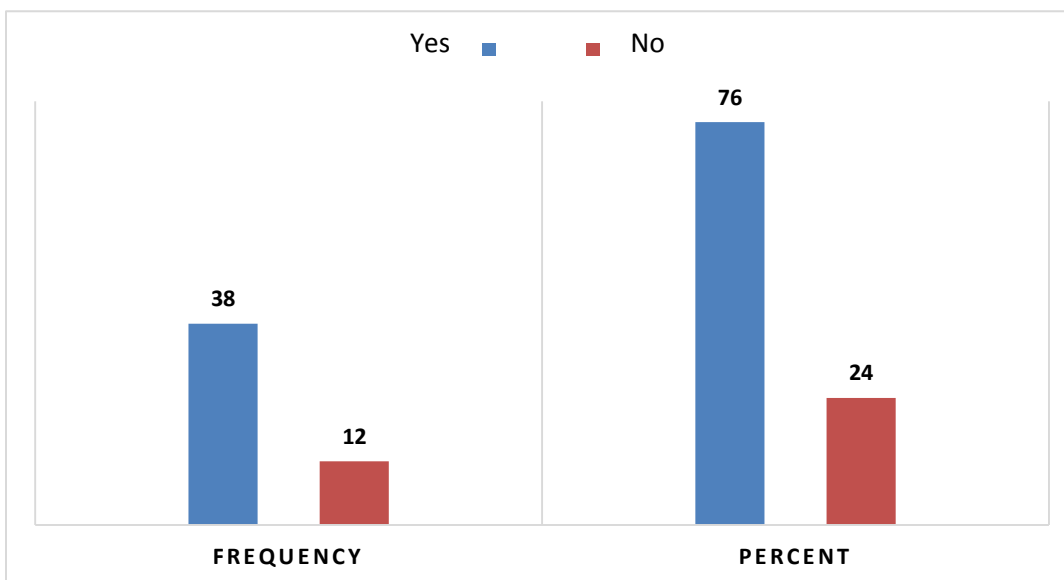


Figure 2: Students' responses to whether Naswar was social or not? (n=50)

Students were asked about the use of tobacco in other form whether it is safe or not, 20% (n=10) reported that it is safe to use

tobacco in other forms, 66% (n=33) responded that it is not safe while 14% (n=7) do not know about it (figure 3).

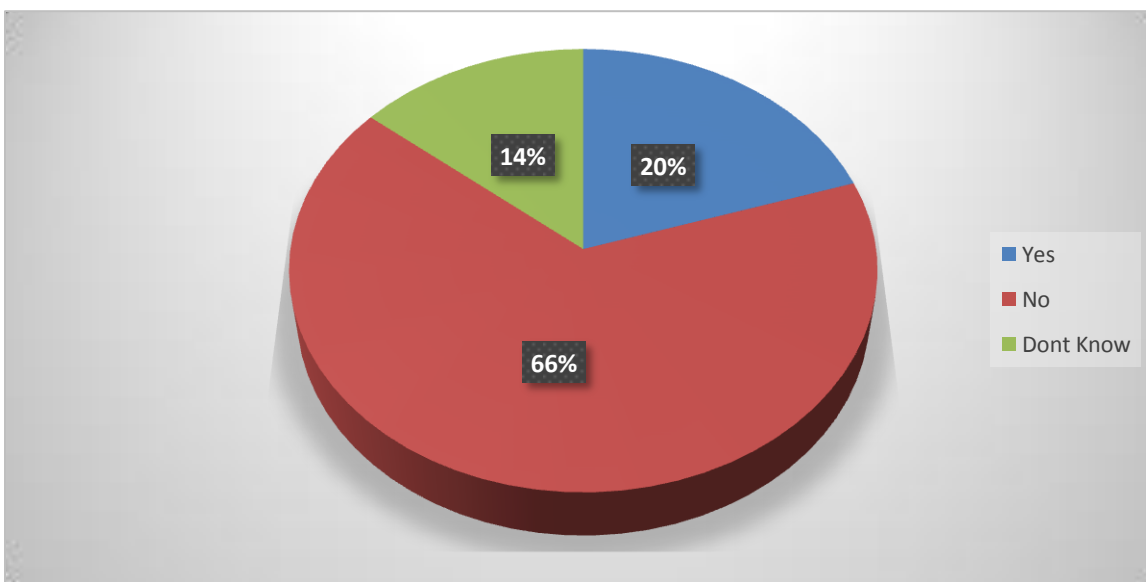


Figure 3: Students' response to whether they believed other forms of tobacco was safe or not? (n=50)

DISCUSSION

Most studies carried out in Pakistan have focused on the patterns of cigarette smoking only. However, there is not enough literature on the use of smokeless tobacco.

There are two studies which investigate the use of smokeless tobacco in the general population. One being a study published in 1982 from a population in Karachi [4], reported that 21% of the people used betel quid (*paan*), but the study made no distinction between non-tobacco and tobacco-laden *paan* consumption. A recent study from a Karachi squatter settlement reported a 40% prevalence of use of smokeless tobacco [10]. Various studies in the Indo Pak region [10,11] [12,13] have shown that the use of smokeless tobacco is inversely associated with the level of education and this might explain the lower prevalence reported by our study since our population comprised medical students who were likely to be aware of the hazards of smokeless tobacco than a common man. Higher rates of tobacco use have been reported from rural areas [14]. This may also have contributed to our lower figure since all three medical colleges.

More significantly, it was seen that 87.9% of *naswar* users belonged to KPK while 80% of *paan* users were from Karachi. This is because people in KPK have cultural practices and preferences similar to those of Central Asia

and Afghanistan, where *naswar* is in common usage [5,6,7]. Higher rates of tobacco use have been reported from rural areas [14]. This may also have contributed to our lower figure since all three medical colleges.

More significantly, it was seen that 87.9% of *naswar* users belonged to KPK. This is because people in NWFP have cultural practices and preferences similar to those of Central Asia and Afghanistan, where *naswar* is in common usage [5, 6, 7].

Conclusion

Lack of correct information in both users and non-users of *naswar* has implication for raising the incidence of oral cancer and addiction rate among vulnerable population specially children and calls for launching appropriately targeted public health campaign.

The low risk perception of *naswar* in users calls for aggressive advocacy campaign in electronic and print media in order to help the people gain awareness and choose healthier options. Also, the local authorities should make sure that production, packaging, sale and consumption of *naswar* should be regulated so as to protect the public from the health hazards associated with its consumption.

Limitations: The limitation in this study was it being limited to medical students, excluding the majority of the population. Hence, a larger study involving general population is warranted.

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