



# Use of Smokeless Tobacco Among Students in the City of Chabahar: A Cross-Sectional Study

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## Abstract

The purpose of this study was to determine the prevalence of types of smokeless tobacco use between students in the city of Chabahar. A total of 105 students were selected from the schools of Chabahar city. The sample size was calculated using the G\*Power software. For a questionnaire by the test-retest exam for knowledge and attitude structures, the reliability of the test (Pearson correlation coefficient's) was 98% and 94%. The Cronbach alpha of these structures was about 74%. The CVR for these structures was 93% for knowledge and 88% for the structure of the attitude. Data was analyzed using the SPSS16 software. In this study, 14 students (13%) had a history of previous use and 48 students (45.7%) reported having had tobacco use at least once, 30 days before studying. The Pearson Correlation Test indicated a significant relationship between smokeless tobacco use with the family number (-0.224), mother's literacy (0.219), and father's literacy (0.224). The number of smokeless tobacco users who had consumed at least once in the last month of the study were Pan 26 (24.8%), Gutkah 9 (8.6%), and Biti 5 (4.8%). The results of the study show that the prevalence of smokeless tobacco use in students around the city of Chabahar is high.

**Keywords:** Knowledge, Attitudes, Tobacco, Smokeless

## 1. Background

Smokeless tobacco use, as a behavioral habit has caused a lot of health risks for people. One of these risks is the loss of soft tissue and tooth health, cancer, and so on. In recent years, many studies have shown an increase in smokeless tobacco and all kinds of tobacco use (1, 2).

At about 250 million smokeless tobacco users, 10% to 20% percent of users are students aged 13 to 15 years. An estimated 30% to 40% outbreak has been reported among students in some Asian countries (3, 4). Smokeless tobacco enters through the south-eastern border of Iran, due to its proximity to Pakistan; in border regions it due to communication of the people of the two countries. On the other hand, there are various beliefs about the use of smoke-free tobacco in these areas, sometimes these beliefs are false and incorrect (5, 6). The rate of consumption among Bangladeshi settlers in New York is reported to be between 45% to 67%, although they were aware of the dangers of consumption (4). Another study found a strong link between tobacco use and future dependence on these substances. Approximately 34% reported having started tak-

ing this drug since childhood (5). In a study conducted on students in Sistan and Baluchestan, it was shown that 11% of students had a history of consumption, of which 4.5% were recreational users and 6.3% were permanent users (7).

## 2. Objectives

Considering the harmful effects of a pan and the lack of studies in this field in the country, in this study, we aimed to determine the prevalence of types of smokeless tobacco use between students around the city of Chabahar.

## 3. Patients and Methods

In this study, 105 students were selected from the schools around the city Chabahar. The sample size was calculated using G\*Power software (8). The sample size required for research with a 95% confidence level and 0.95% test capability was considered as 105. The parameters for sample size were  $1-\beta$  (0.80),  $\alpha$  (0.05), and effect size (0.342). The samples were selected by cluster sampling method.

Two schools from two different locations are selected from 13 middle schools in Chabahar. A total of 105 middle school students completed the questionnaire. Our questionnaire included demographic characteristics, questions of knowledge (eight questions), attitude questions (question seven), and behavioral questions (one question), in total 16 questions.

The comments and articles of experts such as Fischer (9) and Ajzen and Drive's (10) were used to create a questionnaire (11,12). In this research, the views of 15 health education specialists were used for the validity of the questionnaire, content validity was used. The CVR for these structures was 93% for knowledge and 88% for the structure of the attitude. As a result, our questionnaire had an acceptable reliability and validity.

The reliability of the questionnaire with the participation of 20 students who completed the questionnaire within 10 days was tested again. Also, Cronbach's alpha was about 74%. The test-retest exam for knowledge and attitude structures states that the reliability of the test (Pearson correlation coefficient's) was 98% and 94%. By obtaining permission from the authorities of the Education Organization of Sistan and Baluchestan province and the city Chabahar for research work in schools and meeting with students to assure them that our study is confidential, they should not write their names in the questionnaires. The goals of the study and the way the questionnaire was completed were explained to the participants. Finally, students completed the questionnaires and collected information were analyzed using statistical software of SPSS 16.

#### 4. Results and Discussion

A total of 105 participants in the study completed the questionnaire. The means ages of students were 13.41 ± 0.74 and the family number mean was 7.54 (2.882). A number of students reported that smokeless tobacco users were Pan 26 (24.8%), Gutkah 9 (8.6%), Biti 5 (4.8%), and Nas 4 (3.8%), which had consumed at least once in the last month of the study (Table 1).

According to the above table, the Spearman correlation test indicates a significant non-linear relation among smokeless tobacco consumption with the family number, mother's literacy, and father's literacy (P value < 0.05) (Table 2). In this study, 14 students (13.3%) had already consumed as recreational and 48 students (45.7%) reported having had smokeless tobacco use at least once, 30 days before studying (Table 1). In another study in Iran, 19.9% of students reported having smokeless tobacco use at least once, 30 days prior to the study. This indicates the high involvement of students in the use of this substance in Sistan

Table 1. Demographic Information of Students and Types of Smokeless Tobacco Use

	Frequency (%)
<b>Father's literacy</b>	
Illiterate	39 (37.1)
Elementary, secondary	42 (40.0)
High school	13 (12.4)
Academic	11 (10.5)
<b>Mother's literacy</b>	
Illiterate	64 (61.0)
Elementary, secondary	30 (28.6)
High school	9 (8.6)
Academic	2 (1.9)
<b>Father's job</b>	
Employee	34 (32.4)
Free	45 (42.9)
Worker	11 (10.5)
Unemployed	15 (14.3)
<b>Mother's job</b>	
Employee	8 (7.6)
Homework	97 (92.4)
<b>Types of smokeless tobacco use</b>	
No use	61 (58.1)
Pan	26 (24.8)
Gutkah	9 (8.6)
Biti	5 (4.8)
Nas	4 (3.8)
<b>Consumption times</b>	
No use	21 (20.0)
Only 1 or 2 times	22 (21.0)
Recreational	14 (13.3)
Current users	48 (45.7)

and Baluchestan (6, 13, 14). Our study showed that smokeless tobacco users such as Pan 26 (24.8%), Gutkah 9 (8.6%), Biti 5 (4.8%), and NAS 4 (3.8 %) had used at least once in the last month of the study (Table 1). In the study by Jalilvand et al., held at Sistan and Baluchistan University students, results showed that Pan (7.63%) was the form of smokeless tobacco further used, followed by Nas (3.38%), about 21 (78%) Paan users belonged to the college of Engineering, while 7 (52%) of the Nas users studied psychology, coinciding with the relationship of our study to a certain extent (7).

In South Africa, 1.3% of participants reported smokeless tobacco use at least once, 30 days before the study (15). In addition, it was also 6.4% in Karachi, Pakistan (16). Con-

**Table 2.** Family Number, Mother's Literacy, Father's Literacy, Age, Father's Job, Mother's Job

Smokeless Tobacco Use	Father's Literacy	Mother's Literacy	Age	Family Number	Father's Job	Mother's Job
<b>Correlation</b>	0.244*	0.219*	-0.067	-0.285**	-0.173	-0.066
<b>P value</b>	0.012	0.025	0.495	0.003	0.078	0.502

trary to our study, these studies have been less frequent than consumption in the last 30 days. In our country, there has not been enough research into the use of smoke-free tobacco. Therefore, we consider this point as a limitation of our study. In the study by Rakhshani and colleagues, poor awareness and attitude have reported, which almost confirms the results of our study (2, 17). In another study, Fattahi et al., assessed the impact of education on prevention and also reported low knowledge about pan in students (18, 19). To obtain more complete results, future research is needed in Sistan and Baluchistan, more specifically among students around the Chabahar city (20).

We suggest that another study be conducted in non-educational settings, to see tangible and realistic reports from students and other people. The main limitation of our study was that our students were male, we suggest that studies be conducted for female students as well. Another limitation of our study was that, despite the choice of two schools in the two different districts, more students were living in the suburbs of Chabahar.

Overall, the results of the study indicated that the prevalence of smokeless tobacco use in students around the city of Chabahar is high, which requires appropriate interventions to prevent it.

**Footnotes**

**Authors' Contribution:** Study concept and design: Esmail Fattahi and Mahnaz Solhi. Analysis and interpretation of data: Sedighe Rastaghi. Drafting of the manuscript: Esmail Fattahi and Fardin Mehrabian. Critical revision of the manuscript content: Esmail Fattahi, Mahnaz Solhi and Fardin Mehrabian. Statistical analysis: Sedighe Rastaghi.

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