

# PREVALENCE OF GUTKA; A FORM OF SMOKELESS TOBACCO'S CONSUMPTION AMONGST PATIENTS SEEN AT BAQAI DENTAL COLLEGE HOSPITAL, KARACHI

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## ABSTRACT

*The objective of this survey was to determine the prevalence of the habit of gutka (a form of Smokeless Tobacco) use in different age groups of people, and also to assess the gender predilection; and most importantly to assess the reason of initiation of this habit. A Cross-sectional study was done and data were collected with the help of questionnaires (sample size: 500). It was entered and analyzed using SPSS version 20. Males developed this habit, mostly due to the influence of their friends. Females who consumed gutka were less in number, mostly belonging to low socioeconomic groups, and had indulged in this habit by seeing other family members. This habit can be controlled and reduced, if counseling sessions are held in areas where it is mostly found. People are willing to understand and quit this habit but, it is difficult, as the addiction is too strong. Long term consumption has led to oral submucous fibrosis in some people, due to which they are forced to leave this habit.*

**Key Words:** Use of Gutka (a form of smokeless tobacco), addiction, low socioeconomic groups.

## INTRODUCTION

Gutka (a form of smokeless tobacco) contains areca nut, catechu, slaked lime, condiments and powdered tobacco. It is relatively a dry, nonperishable commercial product.<sup>1</sup> After nicotine, ethanol and caffeine, it is the fourth most common publically used drug.<sup>2</sup> In the Asia Pacific Region, countries that come amongst the top ten fastest growing tobacco markets are: Pakistan, Malaysia, Indonesia and Vietnam.<sup>3</sup> The prevalence of smokeless tobacco, according to a nationwide survey conducted in 2012, was 1.8% for males and 4.6% for women.<sup>4</sup> Since then, there has been a rapid increase in the use of smokeless tobacco as well as its inhaled types.<sup>5</sup> Smokeless tobacco in Pakistan and other Asian countries is used in various socially acceptable forms such as: Naswar, Hookah, Gutka and Betel quid. That is why approximately 58% of mouth cancers are found in Southern Asia and South East Asia.<sup>6,7</sup> Smokeless

form of tobacco is also said to be the leading cause of head and neck carcinomas.

Gutka has an alkalinity of 8.5–9pH, which causes detrimental changes in the oral cavity. Basically, this form of smokeless tobacco is the combination of areca nut, tobacco and chemicals like calcium, ammonia and magnesium carbonates.<sup>8</sup> As per global estimation, about 600 million women and men use one or the other variety of gutka; the smokeless form of tobacco.<sup>9</sup>

According to a previously performed research, majority of the youth consumes smokeless tobacco products. Certain studies from Karachi have shown that, for both men and women, 7.5% of them consume gutka, altogether. According to the statistics reported by Pakistan Medical Association, approximately 1.5 million cases of oral cancer, including many noticed among young children, have resulted from consuming gutka and other forms of smokeless tobacco products.<sup>24,25</sup>

Various forms of tobacco are used in Pakistan by approximately 13% of females and 13% of males.<sup>13</sup> Betel quid (pan) combined with tobacco, gutka (special smokeless tobacco formulation), bidis, and packaged chewing tobacco preparations, are the major types of tobacco being consumed in South Asian countries including Pakistan.<sup>14</sup> 0.5% females and 13.5% males habitually consumed gutka<sup>6</sup>. Over 8% of males from rural areas and 10% from urban localities used pan masala or gutka, reported by Sushma et al<sup>15</sup>. More than 16.3% of Pakistani adolescent women used tobacco products alongside its smokeless form, Gutka. Youth,

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particularly are seen to be addicted to gutka.<sup>3,16</sup>

In many districts of Sindh, the rate of consumption of gutka and its addiction is notably very high in youth and women, specifically in low income groups and poor communities; meanwhile, more than 122 gutka brands are found in various market places across the province of Sindh in Pakistan.<sup>10,17,18</sup>

The objective of the study was to assess the prevalence of a form of smokeless tobacco, known as Gutka, in patients attending Baqai Dental College's Out Patient Department.

## MATERIALS AND METHODS

A cross sectional study was conducted during the period January 2017 to March 2017, in the Out-Patient Department of Periodontology and Oral Medicine, Baqai Dental College and Hospital, Karachi, Pakistan; approved by the Ethical Committee of Baqai Medical University.

Total number of 500 patients visiting Baqai Dental College and Hospital were included in the study as subjects.

**Inclusion Criteria:** Healthy subjects, both habitual users of chew-able form of tobacco (Gutka) and non-chewers were included in this study, to evaluate the prevalence of consumption.

**Exclusion Criteria:** Subjects consuming other forms of smokeless tobacco, and patients suffering from immune related disorders were excluded from the study.

A structured questionnaire was designed, focusing on demographic characteristics, history of consumption of the specific form of chew-able tobacco; Gutka, frequency of its daily consumption, alongside inquiring about the reasons behind the addiction.

Subject's knowledge regarding the specific sub-

stance abuse and the urge to either quit or continue the habit was duly assessed.

**Sampling:** Sample size was calculated by taking the prevalence rate and computed using the EPI Info version 6 statistical package at 95% confidence interval and  $\alpha=5\%$ .

Descriptive statistics (Frequencies and percentages) were analyzed, whereas Chi-square test was performed to analyze the association of gutka (smokeless form of tobacco) chewing with gender as a variable, by using SPSS version 20. P-value was kept at 0.05.

## RESULTS

The present study showed that 245(84.5%) males and 45(15.5%) females consumed Gutka (smokeless tobacco), i.e; males had a higher ratio of gutka consumption, whereas female gutka consumers were less in number. (Table 1)

One hundred and sixteen (32%) males and eleven (8%) females consumed gutka, under the influence of their friends, making this the most common reason behind the initiation of this habit. (Table 2)

One hundred and twenty nine (35.6%) males and 26 (18.8%) females reported that, they were using it for over 7 years. Seventy eight (21.5%) males and 13(9.4%) females reported that, they used it 3-5 times per day. (Table 3)

Three hundred and eight (85.6%) males and 95(72.5%) females reported that, they were aware of the harmful effects of this specific form of smokeless tobacco. One hundred and forty six (58.9%) of males and 26(59.1%) females reported that, they thought of quitting the habit of chewing gutka. One hundred and ninety two (77.4%) males and 40(91%) females noticed changes occurring in their oral cavities after gutka consumption.

TABLE 1: FREQUENCY OF GUTKA (SMOKELESS TOBACCO) CONSUMPTION.

Variables	Do you consume gutka?		Total
	Yes	No	
Gender			
Males	245(84.5%)	117(32.3%)	362(100%)
Females	45(15.5%)	93(67.4%)	138(100%)

TABLE 2: COMMON REASONS RELATED TO GUTKA (SMOKELESS TOBACCO) CHEWING.

Gen- der	Reasons of gutka chewing						Total
	Because of friends	Because of family influ- ence	Just for fun	Because of good taste	Because of depres- sion	Because of treatment(for numbness)	
Males	116 (32%)	39 (10.8%)	65 (18.0%)	16 (4.4%)	9 (2.5%)	0 (0%)	362
Fe- males	11 (8%)	19 (13.8%)	7 (5.1%)	4 (2.9%)	2 (1.4%)	1 (0.7%)	138

TABLE 3: DURATION OF GUTKA (SMOKELESS TOBACCO) CONSUMPTION.

Variables	Gender		p-value
Since how long have you been using gutka?	Males	Females	
1-3 years	47 (13%)	10(7.2%)	
3-5 years	38 (10.5%)	8(5.8%)	.000
5-7 years	31(8.6%)	0(0%)	
>7 years	129 (35.6%)	26(18.8%)	
How frequently do you use it?	Males	Females	
<3 times/day	74 (20.4%)	22(16%)	
3-5 times/day	78(21.5%)	13(9.4%)	.000
5-10 times/day	46(12.7%)	8 (5.8%)	
>10 times/day	47(13%)	1 (0.7%)	

TABLE 4: AWARENESS ABOUT HARMFUL EFFECTS OF GUTKA (SMOKELESS TOBACCO) USE.

Variables		Males	Females	p- value
Do you know about the harmful effects of gutka?	Yes	308 (85.6%)	95(72.5%)	.001
	No	52 (14.4%)	36(27.5%)	
Have you ever thought of leaving this habit?	Yes	146(58.9)	26(59.1%)	.558
	No	102(41.1%)	18(40.9%)	
Have you noticed any changes in your oral cavity after gutka consumption?	Yes	192(77.4%)	40(91%)	.027
	No	56(22.6%)	4(9.1%)	

## DISCUSSION

A common form of smokeless tobacco called Gutka is widely used in certain areas of Pakistan, since long. This health hazardous product is available almost everywhere, packaged in attractive sachets, being sold at very economical prices.

Dere K et al<sup>19</sup> in a study reported that, the beginning age of chewing of this hazardous tobacco product, was conservatively 11 years corresponding to 5th grade, unfortunately, there were some participants who started the usage at the age of about 7 years. While in the study done by Joseph et al<sup>20</sup> age of starting the habit in majority of areca nut users (34.7%) was 13 years and the majority of gutka (smokeless tobacco) users (66.7%) was 13-14 years. The present study results showed that participants started consuming gutka at the age of 6; whereas 46 (88.5%) of the males and 6 (11.5%) of females were habitually chewing gutka. After reviewing the previously performed researches and the current study's results, it was revealed that, the main reason behind succumbing to this unhealthy habit is largely based upon peer pressure and the availability of this substance at an affordable price.<sup>21</sup>

Dere K et al<sup>19</sup> reported that, the majority of boys (65.75%) first became aware of such substances through

their friends, while most girls (66.7%) came to know about it from their family members. Nayak S<sup>22</sup> reported that 180 (60%) of the respondents used gutka (smokeless tobacco) under the influence of friends and 18 (6%) of the respondents used gutka as a family habit.

The present study reported that 116 (32%) males and 11 (8%) females used gutka (smokeless tobacco), under the influence of friends; whereas, 39 (10.8%) males and 19 (13.8%) females indulged in this habit due to family environment.

Usman G et al<sup>23</sup> in a study reported that 187(51.8%) of males and 21(12.28%) of females were addicted to gutka chewing. Gender distribution in this study showed male dominance (67.7%) whereas the percentage of female subjects was 32.6%.

This product and other associated substances are openly marketed and advertised in Sindh region. Health authorities should formulate strategies to educate these communities and motivate them to opt for a healthier lifestyle, by overcoming this deadly habit.

## CONCLUSION

Present study concluded that the adults and youngsters both can get addicted to this habit of consuming gutka. Such substance dependency is potentially

harmful and can lead to debilitating diseases of mouth, therefore compromising the overall status of general health. Awareness programs should be planned in affected areas to educate people and concerned authorities should take strict measures to control this menace.

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## CONTRIBUTIONS BY AUTHORS

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|-------------------------------|---|
| <b>1 Sarosh Khan Afridi:</b>  | Overall Write Up, Questionnaire Development, Data Collection, Statistical Analysis. |
| <b>2 Mehak Sukaina Afzal:</b> | Write Up, Questionnaire Development, Data Collection.                               |
| <b>3 Sadia Naqvi:</b>         | Write Up.   |
| <b>2 Faisal Rehan:</b>        | Overall Supervision.  |
| <b>3 Aisha Wali:</b>          | Questionnaire Development, Statistical Analysis.                                    |