



**ATTITUDES AND PRACTICES OF GUTKA CHEWING AMONGST PATIENTS ATTENDING DENTAL TEACHINGS HOSPITALS-KARACHI**

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**ABSTRACT**

A cross sectional study was conducted for the duration of three months to assess Attitudes and Practices of gutka chewing amongst patients attending dental teaching hospitals. The study was conducted in the Out Patient Department of Oral Diagnosis of Baqai Dental College (BMU) and Dow International Dental College (OJHA campus, DUHS). Three hundred and eight (97.2%) of males chew gutka daily, 5(1.6%) weekly and 4(1.4%) occasionally whereas 64(95.5%) of females chew gutka daily and 3(4.5%) weekly. Data was analyzed for Descriptive statistics (frequency and percentages) for each variable. Chi-square test was performed to analyze the association of gender with gutka chewing by using IBM SPSS version 22.

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**INTRODUCTION**

Gutka is a form of smokeless tobacco and Pakistan, Malaysia, Indonesia and Vietnam are among top ten fastest growing tobacco markets in Asia pacific region (Usman *et al*, 2015). It is a mixture of sweeteners, catechu, or spices such as cardamom, saffron, cloves, anise seeds, turmeric and mustard and is available in a powdery, granular light brownish or white form (Qazi, 2011). In Pakistan about 34% of males and 13% of females used tobacco in different forms (NHS, 1990-94). Currently, major forms of tobacco that are being used in South Asian countries including Pakistan are betel quid with tobacco, gutka, packaged chewing tobacco products and bidis. Gutka is a new, sweetened form of smokeless tobacco, legally sold packaged in bright foil that is raising major health concerns (Rozi *et al*, 2007).

Most of the people used paan and gutka due to a lack of awareness and education as they are not aware of the harmful effects associated with the use of these substances. It has been reported that these products are consumed for perceived beneficial effects, such as mouth freshener, helps in digestion, germ-killing, astringency, mood enhancement, tension relief, and oral cleaning (Banerjee *et al*, 2014). The use of paan and gutka is difficult to control in most countries where it is widespread, and their extensive use leads to oral cancer (Shah *et al*, 2012).

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Factor affecting gutka chewing includes age, friends and family peer pressure (Chu *et al*, 2006), taste, lack of awareness in low socioeconomic areas (Shah *et al*, 2008). Age determines the level of maturity to be influenced by others and teenagers are considered to be more influenced to initiate this habit and then the habit can get converted into addiction as the time passes (Oakley *et al*, 2005). The literacy rate of Indo-Pak region is very low and mostly illiterate communities are more in this habit due to lack of awareness of hazards of such kind of addictions to their health (Shafiq *et al*, 2006). It is known that adults are indulged in gutka chewing (Shah *et al*, 1998) and this may lead to serious oral health conditions such as oral submucous fibrosis, mouth ulcers, staining of the teeth and gums, leukoplakia and other precancerous lesions which lead to oral cancers (Parmar *et al*, 2008), (Farzeen and Humera 2011).

The aim of the present study was to assess the Attitude and Practices of gutka chewing amongst patients attending Dental Teaching Hospitals of Karachi.

**MATERIALS AND METHODS**

A cross sectional study was conducted for the duration of three months to assess Attitudes and Practices of gutka chewing amongst patients attending dental teaching hospitals. The study was approved by ethical committee, Baqai Medical University. The study was conducted in the Out Patient Department of Oral Diagnosis of Baqai Dental College (BMU) and Dow International Dental College (OJHA campus, DUHS). Two stage cluster sampling technique was done and at first stage,

cluster sampling was used; one cluster was made of government institutes and one of private institutes recognized by PMDC. Out of these two clusters two institutes were chosen randomly. At second stage, patients from these institutes were conveniently sampled. The sample size was calculated by taking 50% prevalence rate and computed using Open EPI (version 3.01) at 95% confidence interval and  $\alpha=5\%$  and it was calculated to be 384.

A self-administered questionnaire was developed with closed ended questions. The questionnaire consisted of 23 items. The questionnaire was developed in English language therefore the Principal investigator asked the questions in Urdu language and marked the answers given by the participants. A questionnaire with 22 closed ended questions including demographic characteristics of the patients i.e., age, gender, marital status and education, Attitude and Practices of gutka chewing. Habitual eaters of gutka aged 18-45 years were included in the study. Those who refused to give informed consent were excluded from the study.

**Statistical Analysis**

Data was analyzed for Descriptive statistics (frequency and percentages) for each variable. Chi-square test was performed to analyze the association of gender with gutka chewing by using IBM SPSS version 22.

**RESULTS**

Table 1 showed the demographic profile of age, gender, marital status and educational status. Mean age and SD of the participants was 35.33 ±10.7. Three hundred and seventeen (82.6%) of males and 67(17.4%) of females participated in the study.

**Table 1** Demographic Profile

Variable	Frequency (%) / Mean ±SD
Age	35.33±10.7
Gender	
Male	317(82.6%)
Female	67(17.4%)
Marital status	
Married	302(78.6%)
Unmarried	80(20.8)
Divorced	2(0.5%)
widowed	0
Education	
Illiterate	163(42.4%)
Primary	85(22.1%)
Secondary	99(25.8%)
Graduate	36(9.4%)

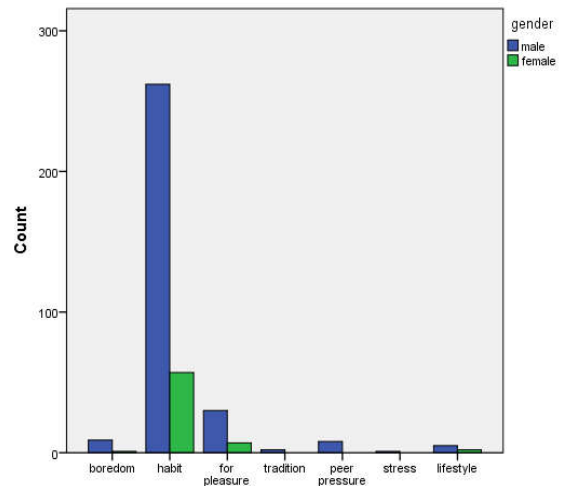
One hundred and forty seven (84.5%) of males and 27(15.5%) of female patients believed that oral cancer can be treated whereas 170(81%) of males and 40(19%) of female patients do not believe that oral cancer can be treated.

**Table 2** Attitude of Gutka chewing in relation to gender

Variables	Responses	Gender		Total	P-value
		Male	Female		
Do you believe that gutka is beneficial to the health of a person	Yes	31(81.6%)	7(18.4%)	38(100%)	0.888
	No	286(82.7%)	60(17.4%)	346(100%)	
Do you believe oral cancer can be treated	Yes	147(84.5%)	27(15.5%)	174(100%)	0.220
	No	170(81%)	40(19%)	210(100%)	
Do you believe oral cancer can be prevented	Yes	175(89.7%)	20(10.3%)	195(100%)	< 0.001
	No	142(75.1%)	47(24.9%)	189(100%)	
Do you think people who smoke tobacco have more friends	Yes	255(81.7%)	57(18.3%)	312 (100%)	0.243
	No	62(86.1%)	10(13.9%)	72(100%)	
Do you wish to consume gutka after watching related advertisements	Yes	98(89.1%)	12(10.9%)	110(100%)	0.021
	No	219(79.9%)	55(20.1%)	274(100%)	

One hundred and seventy five (89.7%) of males and 20(10.3%) of female patients believe that oral cancer can be prevented whereas 142(75.1%) of males and 47(24.9%) of females did not believe that oral cancer can be prevented. (Table 2)

Three hundred and eight (97.2%) of males chew gutka daily, 5(1.6%) weekly and 4(1.4%) occasionally whereas 64(95.5%) of females chew gutka daily and 3(4.5%) weekly. Fifty five (17.4%) of males chewed 1 packet each time, 224 (70.7%) chewed 2-5 packets each time and 38(12%) chewed more than 5 packets whereas 8(11.9%) of the females chewed 1 packet each time, 58(86.6%) chewed 2-5 packets each time and only 1 (1.5%) chewed more than 5 packets each time. (Table 3)



**Fig 1** Reasons to chew gutka

**DISCUSSION**

Gutka is considered to be an inexpensive product in Karachi and it is the most popular thing in all socioeconomic classes because of its low cost and ease of availability ( Mariam and Rehan, 2011) (Nayak *et al*, 2010 )conducted a study and reported that more males chewed gutka than females. (Ahmed *et al*, 2006) conducted a study in Patna, Bihar reported similar results. (Saddichha and Khess, 2010) conducted a study in Ranchi also reported that more males chewed gutka than females. This generally happens because males are under stress due to their jobs and domestic problems and therefore to relieve stress they chew gutka (Saddichha and Khess, 2010). (Goyal *et al*, 2016) conducted a study reported that boys chewed more gutka than girls. (Shah *et al*, 2008) conducted a cross sectional study in Government Schools of Mahmoodabaad and Chensar Goth , Karachi which reported that boys chewed more gutka than girls. (Rehan F *et al*, 2017)

**Table 3** Practices of Gutka chewing in relation to gender

Variables	Gender		Total	p-value
	Male	Female		
Do you chew Gutka?	317(82.6%)	67(17.4%)	384(100%)	< 0.001
How frequently do you chew gutka				
daily	308(97.2%)	64(95.5%)	372 (96.9%)	0.213
weekly	5(1.6%)	3(4.5%)	8(2.1%)	
occasionally	4(1.4%)	0 (0%)	4(1%)	
What amount of gutka do you consume each time				
1 packet	55(17.4%)	8(11.9%)	63(16.4%)	0.012
2-5 packets	224(70.7%)	58(86.6%)	282(73.4%)	
more than 5 packets	38(12%)	1(1.5%)	39(10.2%)	
Does anyone in your house chew gutka				
Yes	222(77.6%)	64(22.4%)	286(100%)	< 0.001
No	95(96.9%)	3(3.1%)	98(100%)	
Have you ever chew gutka in a forbidden area				
Yes				< 0.001
No	156(92.9%)	12(7.1%)	168(100%)	
Have you tried to quit gutka chewing				
Yes	161(74.5%)	55(25.5%)	216(100%)	< 0.001
No	155(90.1%)	17(9.9%)	172(100%)	
Do you need someone to help quitting this habit				
Yes	162(76.4%)	50(23.6%)	212(100%)	0.674
No	98(85.2%)	17(14.8%)	115(100%)	
At what time of day do you usually consume gutka				
Before meal	10(3.2%)	0(0%)	10(2.6%)	0.002
After meal	291(91.8%)	64(95.5%)	355(92.4%)	
Before sleeping	1(0.3%)	3(4.5%)	4(1%)	
After waking up	15(4.7%)	0(0%)	15(3.9%)	
From where you get these products				
Nearby shops	294(92.7%)	58(86.6%)	352(91.7%)	0.039
Friends	23(7.3%)	8(11.9%)	31(8.1%)	
Family	0(0%)	1(1.5%)	1(0.3%)	
What do you use to clean your teeth?				
Tooth paste	255(80.4%)	59(88.1%)	314(81.8%)	0.154
Miswak	48(15.1%)	8(11.9%)	56(14.6%)	
others	14(4.4%)	0(0%)	14(3.6%)	

also reported that male respondents seemed to be more involved in gutka chewing than females. Females are also habitual rather less than males but the factors associated with women were just family influence, depression, low socioeconomic status, lack of awareness about the harmful effects of gutka chewing (Rehan F *et al*, 2017).

The present study reported that 272 (77.6%) of the males said yes about anyone else in the house chew gutka followed by 64(22.4%) of females whereas 95(96.9%) of males said no about anyone else in the house chew gutka followed by 3(3.1%) of females. One hundred and fifty five (90.1%) of the males said yes when asked about tried to quit gutka followed by 17(9.9%) of the females whereas 162(76.4%) of the males and 50(23.6%) of the females said no when asked about tried to quit gutka. (Joshi *et al*, 2010) reported that 28.4% of the current-consumers showed willingness to quit their habit. (Anantha *et al*, 1995) in a study found the quitting rate to be 30.2% amongst male tobacco chewers. (Nangraj G *et al*, 2016) reported that 60.3 % of women chewed gutka by the influence of their family members while 30 percent respondents informed that as they work in factories therefore food is not available in required amount therefore they use gutka to control hunger, while only 9.2 percent respondents told that they chewed gutka for various reasons such as to spend time or to give company to friends. (Mutti *et al*,2016) reported that 350(69.7%) of Indian adults, 284(50.1%) of Bangladeshi adults planned to quit gutka chewing whereas 142(81.6%) of Indian youth, 66(49.6%) of Bangladeshi youth planned to quit gutka chewing.

The present study reported that habitual gutka chewing was the most common reason found amongst 262(82.6%) of the males followed by 30(9.5%) of males chew gutka for pleasure, 9(2.8%) boredom, 8(2.5%) peer pressure, 5(1.6%) lifestyle, 2(0.6%) tradition, 1(0.3%) stress whereas 57(85.1%) of females were habitual gutka chewers, 7(10.4%) for pleasure, 2(3%) lifestyle and 1(1.5%) boredom. (Banerjee *et al*, 2014) reported that gutka was used to relieve boredom, reduce stress, and to increase alertness. These perceived benefits were more pronounced for participants who started using gutka in their adulthood, post-immigration. Other perceived benefits like pleasant sensations of fragrant smell and taste encouraged use for some participants (Oakley *et al*, 2005). (Dere K *et al*, 2014) reported that 46.1% of boys and 23% of girls chewed gutka because of craving, 8.6% of boys and 0.4% of girls chewed gutka for taste, 1.7% of boys and 1.1% of girls. The present study reported that 291 (91.8%) of the males responded that they usually chew gutka after meal, 15(4.7%) after waking up 10 (3.25%) before meal and 1(0.3%) before sleeping whereas 64(95.5%) of the females chewed gutka after meal and 3(4.5%) before sleeping.(Banerjee *et al*, 2014) reported that some of the participants chewed gutka as a digestive aid and was therefore used after meals.

## CONCLUSION

Nowadays it is an alarming issue that gutka chewing is getting very popular amongst teenagers and adults. There is a need to provide health education regarding hazards of gutka chewing and awareness programs should be arranged in educational institutions. Now it is high time to take strict serious actions

against the gutka manufacturers, shopkeepers and pan selling cabins.

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