



Habitual risk factors in gutka chewers

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Keywords

Areca nut, betel quid, caries, gutka, oral mucous fibrosis

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Received 27 February 2017;

Accepted 06 April 2017

doi: 10.15713/ins.idmjar.67

Abstract

Background: Gutka chewing habit is found to be addictive and contains damaging and destructive effects on oral health. What factors lead to its usage, habit development and which sex is more predisposed to its effects is being evaluated in this study.

Aim: The aim of the study is to assess the contributing factors and prevalence associated with gutka chewing habit in comparison to women and men and to determine the effect of this habit on the oral cavity.

Materials and Methods: Participants were divided into four categories of age 6-12 in children, 14-25 years and 25-45 adults. Two groups of men and women were also made for comparison. This cross-sectional study was conducted with the help of using self-administered questionnaire during January 2016 to March 2016. Where the questionnaire was comprised multiple questions through which socioeconomic condition and professional and mental stability, such as psychological stress was assessed.

Results: Overall prevalence of tobacco chewing was males 67% and females 32% among the youth with and Urdu-speaking group was mostly involved as compare to other ethnic groups. Gutka was being used most frequently 3-5 times per day by males and females. Reasons revealed from our study for chewing were most commonly influence of friends, for fun and depression. And changes in oral cavity were also observed in the form of development of stains, caries, plaque, and calculus.

Conclusion: According to the study age, socioeconomic condition, occupation, psychological stress, friends, and family influence were the contributing factors associated with gutka chewing habit. Moreover, habitual chewing affects the oral health by introducing caries, calculus, and stains.

Clinical Significance: Strengths and limitations depend on the cooperation level of the participants. The study has concluded that many contributing factors such as age, socioeconomic status, profession, and psychological stress play an important role in this habit in both women and men.

Introduction

Gutka is a form of smokeless tobacco commonly used in Indo-Pak subcontinent.^[1] Gutka chewing is the habit or addiction of many people related to underprivileged areas. Gutka is an herbal blend of many ingredients. Some factors are responsible for this habit in man or women of all ages. Men are more susceptible to this habit than women due to some reasons of their friends, professional activities and no restriction socially.^[2]

Gutka is a combination of betel quid with tobacco having flavorings catechu.^[3] Gutka is a new product introduced in

early 1990's by the tobacco industry in India. It is a preparation of crushed betel nuts, tobacco, catechu, paraffin, slaked lime with sweet aromatic flavors available in small sachet of 20-50 g shown in Figure 1. Gutka is placed in the mouth or chewed and it remains in contact with oral mucosa for variable periods of time depending on the intensity of the habit of the chewer.^[4] These products are commonly chewed for their psychoactive effects of good being.^[5] Betel quid is the combination of areca nut and betel nut with lime; areca nut is the fruit of the areca catechu palm tree.^[6] It is a very common psychoactive substance, especially

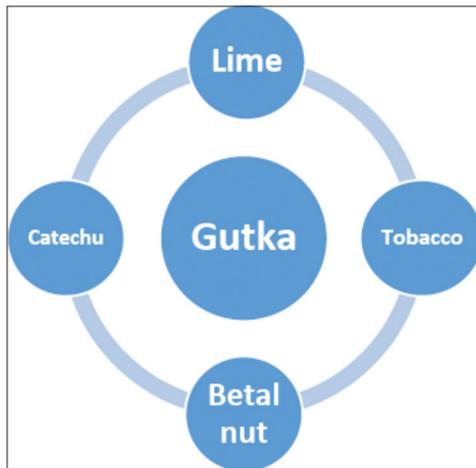


Figure 1: Gutka is the mixture of components

in the South Asian region. Areca nut is used in betel quid or as processed areca nut products. Areca nut is also recognized as a Class I carcinogen by International Agency for Research on Cancer.^[5]

Habit is the routine of behavior, nevertheless, addiction is a chronic disease of drug seeking, and is difficult to control. Gutka chewing is not just a habit, it leads to addiction due to its constituents, it has nicotine and areca nut which is psychotic substance that makes the person addicted, and quitting becomes very difficult. Withdrawal from smokeless tobacco causes symptoms such as intense cravings, increased appetite, irritability, and depressed mood.^[7]

Many factors can influence among which age, friends and family peer pressure,^[8] taste, lack of awareness of the drawbacks of this habit in low socioeconomic areas.^[9] Age determines the level of maturity to be influenced by others. Teenagers are more influenced to initiate this habit and then the habit can get converted into addiction as the time passes.^[10] The old age people get more frustrated; the chewing habit is the alternative run away passage from the stressful life. The occupation like pan shopkeeper, public dealing person, salesman faces many of habitual person on the daily basis, so can interact with this habit more easily than others. The literacy rate of Indo-Pak region is very low and mostly illiterate community is more in this habit due to lack of awareness of hazards of such kind of addictions, to their health.^[11]

Gutka chewing affects much more than expected,^[12] it can cause pre-cancerous conditions such as oral submucous fibrosis, caries, and stains are more abundantly present in the oral cavity of these habitual people.^[13] Oral submucous fibrosis is a chronic pre-malignant condition characterized by inflammation of oral mucosa, fibrosis of underlying tissue, lamina propria, and deeper connective tissues lead to the rigidity of mucosa. Symptoms are limited mouth opening.^[14] Carious lesion or tooth decay is the most common disease of the tooth due to bad oral hygiene. As gutka habitual community goes ignorant about their oral hygiene maintenance and continuous habit of chewing makes the mouth

unhygienic, also gutka contains flavoring material which mainly contains sugar that causes the accumulation of bacteria in the oral cavity which results in tooth decay.^[15] Stains on teeth are formed due to the nicotine presence in tobacco. Nicotine itself is a colorless substance but combines with oxygen which in turn becomes yellow in color. Nicotine yellow stain is extrinsic that can be removed by proper dental treatments. Due to ignorance of oral hygiene, the calcification of plaque occurs called calculus formation that cannot be removed by brushing, rather it needs proper dental treatment.^[16]

Materials and Methods

The participants were the patients from Baqai Dental Hospital, Karachi, Pakistan. Ethical clearance was gained by Baqai Medical University. The participants were asked the questions with the help of questionnaire asked by the practitioner. A total of 550 participants were contributed in which 350 were males and 200 were females. The participants were from low socioeconomic areas. The study was conducted at the Department of Periodontology and Oral Medicine, Baqai Dental College and Hospital, Karachi, in January 2016-March 2016.

Questionnaire

A questionnaire was filled by asking questions to the patients by trained dental house officers of Baqai Dental Hospital after mutual consent was accomplished. Data were being assessed with the help of using SPSS software version 20.

Inclusion criteria

Participants of all ages, including non-habitual to chewing any kinds of stuff and addicted chewing tobacco participants were included in this study.

Exclusion criteria

Participants to habitual of chewing other stuff than tobacco and suffered with any immune disorder were excluded from the study.

Results

According to the study age, socioeconomic conditions, occupation, psychological stress, and friend and family influences were the major contributing factors associated with gutka chewing habit. Gutka chewing habit affects oral health by introducing caries, calculus, and stains.

Hence, Table 1 indicates the participation of males (350) and females (200) ratio and the leading factors behind gutka consumption. Whereas, in Table 2 shows that, men seems to be more involved in this addiction than females due to some factors such as age, influences from family and friends, taste, fun, and occupation lie predominant factors in men's environment. Women are also habitual rather less than men, but the factors

Table 1: Factors behind gutka consumption

Demographics and contributing factors	Male n=350	Female n=200
Age (years)		
6-12	10	8
15-25	100	42
25-45	137	80
Friends influence	118	94
Family influence	39	19
For fun	65	7
Good taste	16	4
Depression	9	8
Treatment	0	1

associated with women were just family influence, depression, low socioeconomic status, and lack of awareness about the harmful effects of this habit. And in the same way Figure 2 explains in the form of bar chart various factors among males and females. The prevalence of tobacco chewing was (males 67% and females 32%) among the youth with and Urdu-speaking group was majorly involved 36% males and 25% females in the habit as compare to other ethnic groups such as punjabi and sindhi balochi. Gutka was being used most frequently 3-5 times per day by 21% males and 9% of females. Reasons revealed from our study for chewing were most commonly influence of friends, for fun and depression. And changes in oral cavity were also observed in the formation of stains, caries, plaque, and calculus. And stains were most commonly found almost up to 72% and 53% among males and females.

Statistical data analysis

The P value is <0.00001.

Discussion

Gutka is the smokeless tobacco that comprises many other ingredients which make it tasty. It is common in Indo-Pak region.^[17] Men are more habitual than women due to friends influence and occupation. Oral problems such as caries, calculus, and stains are found in patients due to this habit.^[18]

The contributing factors which are influenced to the general population having gutka chewing habit are age, friend and family influence, occupation and somehow the taste. Age is important as the teenage boys especially are more susceptible to the friends influence to start this habit than the elderly mature aged person. Occupation for men has also played an important role in adopting this habit. Some occupations, such as a shopkeeper, a salesman who are selling gutka, and pan are difficult to resist from these things by themselves. To enhance and make it acceptable in taste, the producer of gutka uses additional flavoring materials. The low cost of gutka affects the socioeconomic factor with low income. The people are unaware with the harmful effects of it due to illiteracy and unappropriated medical facilities.

Table 2: Demographics and frequency of habit adaptation and its consequences

Variables	Yes (%)	No (%)
Gender		
Male	67.7	32.2
Female	32.6	67.4
Occupation	Males (%)	Females (%)
High class	4.9	13.1
Middle class	44.8	50.5
Lower class	50.2	36.4
Ethnic group		
Urdu speaking	36.7	25.4
Sindhi	13.8	13.8
Punjabi	12.7	13.8
Pathan	16.6	22.5
Balochi	14.4	20.3
Memon	4.1	2.9
Bihari	1.4	0.7
Christian	0	0.7
Why did you start it?		
Friends influence	31.8	8
Family influence	10.8	13.8
For fun	18.0	5.1
Good taste	4.4	2.9
Depression	2.5	1.4
Pain relief	0	0.7
Since when		
1-3 years	13.0	7.2
3-5 years	10.5	5.8
5-7 years	8.3	0
>7 years	35.6	18.8
Frequency		
<3 times/day	20.7	15.9
3-5 times/day	21.5	9.4
5-10 times/day	12.4	5.8
>10 times/day	12.7	0.7
Awareness	Yes (%)	No (%)
Males	86.2	13.8
Females	73.9	26.1
Thought of quitting	59.7	40.3
Changes in oral cavity	79.2	20.8
Stains		
Males	72.4	27.6
Females	53.3	46.7

(Contd...)

Table 2: (Continued)

Variables	Yes (%)	No (%)
Calculus		
Males	64.9	35.1
Females	50	50
Caries		
Males	43.9	56.1
Females	42.8	57.2

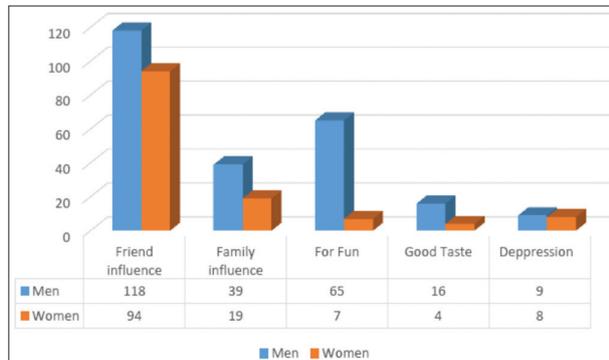


Figure 2: The comparative factors among gutka habituals

Men are become gutka habitual mainly due to friend influence and occupation, but women are due to family influence. Depression is another factor, due to the presence of psychotic substance in it, the habitual take it as sedative.^[18]

Gutka also cause oral problems such as caries, calculus, and stains. Caries are formed due to the flavoring material which contains sugar in the gutka, enhances bacterial accumulation in the plaque on tooth surface that causes tooth decay or caries. Smokeless tobacco also typically contains sand and grit, which can wear down teeth. Nicotine stains are present in gutka habitual person. Nicotine, which is present in tobacco, is a colorless substance that becomes yellow after combining with oxygen. Mostly the teeth become yellow due to nicotine. These stains are extrinsic, that can be treated with proper dental management. The gutka habitual person also bears calculus in his mouth; calculus is the calcification of plaque after prolong ignorance of oral hygiene that cannot be removed with the help of normal brushing but need proper dental treatment.

Conclusion

The study indicates the higher figures of the prevalence of tobacco chewing by Pakistani population. It was more prevalent in males due to age, friend influence, taste, fun and occupation, and women are due to family influence and depression, and the lower socioeconomic area people were most affected. Significant factors that contributed to the habit were basically friends who chewed tobacco themselves. It is important to take into account

these factors when developing any cessation and prevention programs.

Author Contributions

First three authors start this idea with the extraction of supporting papers from electronic databases and conducted the study. Other authors equally contribute with first authors in the compilation and designing the table and figures.

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How to cite this article: Rehan F, Sahar NU, Khan RS, Memon MS, Minhaj N, Shaharyar SH. Habitual risk factors in gutka chewers. *Int Dent Med J Adv Res* 2017;3:1-5.

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