

Knowledge, Attitude and Practice of Areca Nut, Gutka and Tobacco Smoking amongst School Children in Karachi

Aisha Wali*, Dr. Talha M Siddiqui, Dr. Aneeqa Shahab and Dr. Anum Ejaz

Department of Operative Dentistry, Baqai Dental College, BMU Karachi, Pakistan

Research Article

Received: 26/05/2016

Accepted: 21/10/2016

Published: 28/10/2016

*For Correspondence

Dr Aisha Wali, BDS, MPH trainee, Senior lecturer, Department of Operative Dentistry, Baqai Dental College, BMU Karachi Pakistan, Tel: 03002248518

E-mail: aishawali@hotmail.com

Keywords: Areca nut, Awareness, Chewing habits, Cigarette smoking, Gutka, School children, Tobacco Smoking

ABSTRACT

Objective: The objective of the study was to determine the Knowledge, Attitude and Practice of areca nut, gutka and smoking amongst school children aged between 12 to 18 years.

Methods: The present cross sectional study was conducted in August 2014 – December 2014. The study was approved by the ethical committee of Baqai Medical University. A cluster sampling technique was used and a total of eight private schools located in urban areas of Karachi were selected. A total of 1000 school children aged between 12 to 18 years were selected and a list of the children participated from grade eight to ten were obtained from the respective school authorities. A self-administered questionnaire was designed comprised of 14 closed ended questions about Knowledge, Attitude and Practice towards consumption of areca nut, gutka and tobaccos smoking that were filled by the participants. Descriptive statistics were obtained and mean, standard deviation, frequency and percentages were calculated. Chi-square test was done to assess the association of gender with areca nut consumption. Data was analyzed by using SPSS version 20. P-value < 0.05.

Result: Sixty two (83.8%) were boys and twelve (16.2%) were girls who agreed in consumption of tobacco product. Four ninety seven (76.5%) boys and 156 (23.9%) girls were aware of the harmful effect of utilization of areca nut, gutka and nicotine smoking. Two hundred and thirty three (85.3%) boys and 40 (14.7%) girls tried to quit these habits.

Conclusion: The present study concluded that school going children lack Knowledge, Attitude and Practice regarding consumption of areca nut, gutka and tobacco smoking.

INTRODUCTION

Areca nut is chewed by approximately 600 million people worldwide^[1] and is the fourth most common psychoactive substance used globally^[2]. Areca nut chewing, by itself or in combination with scents, condiments or sweeteners is an accepted practice in parts of the Western Pacific and many South and South East Asian countries, including India and Pakistan^[3-5]. Shah et al.^[6] reported that 72.7% of the school children were daily habitual users of areca nut. Areca-nut is marketed in the form of the sweetened areca-nut (locally known as sweet supari) to target young children. Chewing of the areca-nut usually starts early in life leading to multiple health hazards in adulthood. Childhood and adolescence are the times when people try this form of sweetened areca nut and start using the products^[7]. Adolescence and young adulthood are the times when people are most susceptible, more vulnerable and more predisposed by marketing than adults and if their friends or their siblings chew, then they are even more eager to try themselves^[8]. School children often offer the packets to each other instead of candies but most of them do not know that these harmless looking sachets are actually very hazardous to their oral and general health^[7].

Gutka is a preparation of crushed tobacco, areca nut, lime, catechu and flavoring agent^[9]. The habit of consuming gutka starts as a teenager in higher secondary school and is believed to carry on to adulthood and then later in life confined to the elderly^[10]. In Pakistan, there is 8.5 to 10 times increased risk of oral cancer because of chewing tobacco, eating pan, gutka and betel nut^[11]. Kamal et al. reported that, in Karachi only, 21% men and 19.3% females are suffering from oral cavity cancer, 7% of

primary school children consumed gutka and 96% of women living on coastal areas of Karachi consumed gutka while they also breastfeed their children ^[12]. Media or electronic advertisements and too much marketing of gutka in small eye catching and low cost sachets have greatly enhanced the sales of these products ^[9].

Tobacco use and especially cigarette smoking is a major public health problem among students not only in developed countries but also developing countries. The Global Youth Tobacco Survey reported that no difference was observed in cigarette smoking prevalence between boys and girls in 58% of the countries ^[13-15]. Several factors have been attributed to the use of tobacco products by students and these includes the perceptions that smoking enhanced one's image, relieved boredom and helped in reduction of tension ^[16]. Mohan et al. ^[15] reported use of tobacco by fathers and friends, adults, poor educational background and availability to pocket money as major contributors to tobacco use by students. In Pakistan, a survey of students' reported similar factors like smoking by peers, family members and spending free time outside home as contributing to cigarette smoking ^[17].

In this era of modern globalization, young people are adopting behavior patterns that may vary from country to country. Gutka and tobacco companies are advertising their products by mass media techniques and target the youth of the world ^[18].

Therefore the present study was conducted primarily to determine the Knowledge, Attitude and Practice of areca nut, gutka and smoking amongst school children aged between 12 to 18 years.

MATERIALS AND METHODS

The present cross sectional study was conducted in August 2014 – December 2014. The study was approved by the ethical committee of Baqai Medical University. A cluster sampling technique was used and a total of eight private schools located in urban areas of Karachi were selected. A total of 1000 school children aged between 12 to 18 years were selected and a list of the children participated from grade eight to ten were obtained from the respective school authorities and then children were randomly selected from each grade school children. The sample size was calculated by taking the prevalence rate and computed using the Epi Infoversion 6 statistical package at 95% confidence interval and $\alpha=5\%$.

Students of age range between 12 -18 years who consume areca nut, gutka and tobacco smoking were included in this study. Students aged above 18 and below 12 were excluded from study. A self-administered questionnaire was designed comprised of 14 closed ended questions about Knowledge, attitude and practice towards consumption of areca nut, gutka and tobacco smoking were filled by the participants. A written application for permission to start the survey attached with the questionnaire was submitted to the respective school principals. All the available students were requested to participate in the study and consent was taken from guardians/teachers of all the participants.

Descriptive statistics were obtained and mean, standard deviation, frequency and percentages were calculated. Chi-square test was done to assess the association of gender with areca nut consumption. Data was analyzed by using SPSS version 20 P-value<0.05.

RESULTS

A total of 772 out of 1000 students participated in the study out of which 590 (76.4%) were boys and 182 (23.5%) were girls. Mean and standard deviation regarding attitude and practice towards consumption of areca nut, gutka and tobacco smoking was (1.61 ± 0.516) as shown in (Table 1).

Sixty two (83.8%) boys and 12 (16.2%) of girls agreed in consumption of tobacco product. Four ninety seven (76.5%) boys and 156 (23.9%) girls were aware of the harmful effect of utilization of areca nut, gutka and nicotine smoking. Two hundred and thirty three (85.3%) boys and 40 (14.7%) girls tried to quit these habits (Table 2). One hundred and sixty seven (76.7%) boys and 51 (23.4%) of the girls reported to have a habit of chewing areca nut and gutka 1 to 5 times a day. Fifty five (90.2%) boys and 6 (9.8%) girls reported smoking 1 to 5 times a day (Table 3).

Table 1. Showed descriptive statistics of knowledge, attitude and practice of areca nut, gutka and smoking in children.

Variables	Mean ± SD	Min – Max	P- value
Do you /have you ever used tobacco products?	1.36 ± 0.409	0 – 3	0.001
How many do you/did you smoke?	0.18 ± 0.546	0 – 3	0.005
Do you or have you ever chewed tobacco pan, gutka and supari?	1.61 ± 0.516	0 – 3	0.237
How many do you/did you chew?	0.51 ± 0.763	0 – 4	0.549
At which age you started this habit?	1.02 ± 1.318	0 – 4	0.065
Why do you use these products?	0.90 ± 1.181	0 – 4	0.582
Have you ever tried to quit these habits?	0.72 ± 0.756	0 – 2	0.000
Do you know harmful effects of these products?	1.23 ± 0.590	0 – 3	0.866
Do your parents know about your habit?	1.72 ± 0.845	0 – 3	0.504
From where you get these products?	2.18 ± 0.871	0 – 4	0.001

How many times do you brush your teeth?	1.76 ± 0.703	0 – 4	0.002
What do you use to clean your teeth?	1.13 ± 0.398	0 – 3	0.837
Do you use dental floss?	1.63 ± 0.493	0 – 2	0.036

Table 2. Frequency of consumption of areca nut, gutka and tobacco smoking in children.

Variables	Boys	Girls	Total
Do you/have you ever used tobacco products?	62 (83.8%)	12 (16.2%)	74 (100%)
Do you or have you ever chewed tobacco pan, gutka and supari?	215 (76.5%)	66 (23.5%)	281 (100%)
Have you ever tried to quit these habits?	233 (85.3%)	40 (14.7%)	273 (100%)
Do you know harmful effects of these products?	497 (76.1%)	156 (23.9%)	653 (100%)
Do your parents know about your habit?	314 (76.4%)	97 (23.6%)	411 (100%)
Do you use dental floss?	196 (71.8%)	77 (28.2%)	273 (100%)

Table 3. Showed frequency of daily consumption of areca nut, gutka and tobacco smoking in children.

Variables	Boys				Girls			
	1 – 5 times	6 – 10 times	11 – 15 times	16 – 20 times	1 – 5 times	6 – 10 times	11 – 15 times	16 – 20 times
How many do you/ did you smoke?	55 (90.2%)	21 (87.5%)	11 (100%)	0 (0%)	6 (9.8%)	3 (12.5%)	0 (0%)	0 (0%)
How many do you/ did you chew?	16 (76.6%)	39 (69.6%)	11 (78.6%)	5 (100%)	51 (23.4%)	17 (30.4%)	3 (21.4%)	0 (0%)

DISCUSSION

Areca nut, gutka and smoking are widely prevalent and it deserves special attention because of its attractiveness and social acceptance^[19]. The present study was conducted to determine Knowledge, Attitude and Practice of areca nut, gutka and smoking amongst school children aged between 12 to 18 years. Although this habit is equally distributed among all population age groups, a generally higher proportion of school going children are observed of consuming areca nut on daily basis in one or the other form. Oakley et al.^[18] reported that 27% of school children habitually consume areca nut. Pobutsky et al.^[19] reported having the highest prevalence (63%) of consuming areca nut in high school children. The present study reported that a total of 74 students amongst which 62 (83.8%) were boys and 12 (16.2%) girls consumed tobacco products, gutka and areca nut. Another cross sectional study conducted in government school of Mahmoudabad and Chanesar Goth, Karachi which reported that 97.3% consumed tobacco products amongst which 167 (62%) was boys and 165 (44.6%) was girls^[6]. The sources of information about the areca nut/tobacco smoking were; observing in the community, prompting by friends and family influence^[20]. The present study reported that 193 (80.4%) boys and 47 (19.6%) girls buy these products from shops located nearby their homes and 118 (68.6%) boys and 54 (31.4%) girls from friends. Krishna D et al.^[17] reported that amongst 65.75% of the boys first came to know from their friends whereas 66.7% of the girls came to know from their family members.

Regarding the knowledge and awareness of harmful effects of chewing habits, Singh et al.^[21] showed that 2842 (99.2%) boys and 934 (99.5%) girls were aware that tobacco use is harmful and similar proportions disliked it. Gupta et al.^[22] reported that amongst 1365 (91.4%) students claimed to have knowledge about harmful effects of tobacco. The present study reported that 497 (76.1%) boys and 156 (23.9%) girls were aware of the health hazards of the consumption of areca nut, gutka and tobacco smoking. Two hundred and thirty three (85.3%) boys and 40 (14.7%) girls tried to get rid of this habit in this study following the acquisition of awareness regarding damaging effects. More than 80% among both boys and girls were using the substances with full knowledge of their family^[6]. Three hundred and fourteen (76.4%) boys and 97 (23.6%) girls responded in this study that their parents are aware of their habits.

The most common reason put forth by users was peer pressure, followed by advertisements, general stress, and academic pressure. The academic pressure was more amongst private school students whereas peer pressure was more amongst government school students^[23].

The present study reported that 103 (76.3%) boys and 32 (23.7%) girls consumed these products because of good taste and 90 (81.8%) boys and 21 (18.9%) girls just for fun. Qureshi et al.^[24] reported that 70.4% students consumed because of pleasant taste and 17.7% were influenced by advertisements.

CONCLUSION

The present study concluded that school going children lack knowledge, attitude and practice regarding consumption of

areca nut, gutka and tobacco smoking. It was also reported that most of the school children consumed just for fun and its good taste. Therefore efforts should be made to discourage younger generation not to begin these habits and to recognize their potential health hazards. The Government of Pakistan should impose a ban on all sorts of advertisements for marketing of these products and should keep a check on the local shops selling these products. Furthermore awareness programmes should be planned to educate school children, parents, teachers and general public to discourage such habits.

REFERENCES

1. Pankaj C. Areca nut or betel nut control is mandatory if India wants to reduce the burden of cancer especially cancer of oral cavity. *Int J Head Neck Surg.* 2010;1:17-20.
2. Gupta PC and Ray CS. Epidemiology of betel quid usage. *Ann Acad Med Singapore* 33 (4 Suppl). 2004;S31-36.
3. Shah SM, et al. Addicted school children: prevalence and characteristics of areca nut chewers among primary school children in Karachi, Pakistan. *J Pediat Child Health.* 2002;38:507-510.
4. Winstock AR, et al. A dependency syndrome related to areca nut use: some medical and psychological aspects among areca nut users in the UK. *Addiction Biol S.* 2000;173-179.
5. Farrand P, et al. Prevalence, age of onset and demographic relationships of different areca nut habits amongst children in tower hamlets, London. *Br Dent J.* 2001;190:150-154.
6. Shah S, et al. Practices and knowledge of school children regarding chaaliya/pan masala in Mahmoudabad and Chanesar Goth, Karachi. *Journal of Pakistan Medical Association.* 2008;58:678-683.
7. Lingappa A, et al. Areca-nut: to chew or not to chew? *e-Journal Dent.* 2011;1:46-50.
8. Burton-Bradley BG. Papua and new guinea transcultural psychiatry: Some implications of betel chewing. *Med J Aust* 1966;2:744-746.
9. Betel quid and arecanut chewing.
10. Tibdewal H and Patel B. Factors related to betel chewing among higher secondary school students in India- A cross-sectional study. *Journal of Oral Health Research.* 2010;1:26-31.
11. Baig S, et al. Human papilloma virus and oral lesions in gutka eating subjects in karachi. *JCPSP* 2012;22:135-138.
12. Kamal R. Gutka: Taste for the toxic. *The Express Tribune*, March 21st, 2012.
13. Global Youth Tobacco Survey (GYTS) Pakistan Fact Sheet Centers for Disease Control. 2006.
14. Nichter M, et al. Popular perceptions of tobacco products and patterns of use among male college students in India. *Soc Sci Med.* 2004;59:415-431.
15. Mohan S, et al. Access to pocket money and low educational performance predict tobacco use among adolescent boys in Kerala, India. *Prev Med.* 2005;41:685-692.
16. Rozi S, et al. Prevalence and factors associated with current smoking among high school adolescents in Karachi, Pakistan. *Southeast Asian J Trop Med Public Health.* 2005;36:498-504.
17. Krishna D, et al. Prevalence and characteristics of chewing habits of areca nut, gutka and tobacco among school children of rural areas in and around Ghandinagar district, Gujarat. *Journal of Advanced Oral Research.* 2014;5:20-26.
18. Oakley E, et al. Areca (betel) nut chewing habit among high-school children in the commonwealth of the Northern Mariana Islands (Micronesia). *Bulletin of the World Oral Health Organization.* 2005;83:656-660.
19. Pobutsky AM and Neri EI. Betelnut chewing in Hawai'i: Is it becoming a public health problem? Historical and socio-cultural considerations. *Hawai'i J Med and Public Health.* 2012;71:23-26.
20. Khuwaja AK, Kadir MM. Smoking among adult males in an urban community of Karachi, Pakistan. *Southeast Asian J Trop Med Public Health.* 2004;35:999-1004.
21. Singh V and Gupta R. Prevalence of tobacco use and awareness of risks among school children in Jaipur. *J Assoc Physicians India.* 2006;54:609-612.
22. Gupta D, et al. Tobacco abuse amongst the school going students of 15 to 18 years of Almora District, Uttarakhand. A cross sectional study. *OHDM.* 2014;13:680-686.
23. Kotwal A, et al. Correlates of tobacco use pattern amongst adolescents in two school of New Delhi, India. *Indian journal of Medical Sciences.* 2005;59:243-252.
24. Qureshi A, et al. Areca nut consumption patterns among primary school children of Karachi. *Journal of Dow University of Health Sciences Karachi.* 2013;7:25-29.