

CONSUMPTION OF ARECA NUT WITH OR WITHOUT TOBACCO IN NON-TEACHING STAFF OF A PRIVATE MEDICAL UNIVERSITY IN KARACHI

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ABSTRACT

Areca nut is chewed in many different forms widely all over the world but its consumption is more prevalent in South Asian countries. The aim of the study was to determine the prevalence of consumption of areca nut with or without tobacco in non-teaching staff of a Private Medical University. A close-ended questionnaire consisting of questions regarding the practice of areca nut chewing was used. Convenience sampling technique was used to collect the data from 139 subjects. Descriptive statistics like mean, standard deviation, frequency and percentage were calculated for the study variables. Mean age of the respondents was 36.2 (SD ±10.6) and the age range was 18 and above. The frequency of using areca nut and products containing areca nut in our study was 50.4%. The habit of chewing areca nut was more prevalent among Sindhi people followed by Urdu speaking and Punjabis. The reason of chewing areca nut was investigated which revealed that most respondents chewed it because of its taste. Second most common reason reported was its craving, whereas some respondents chewed it due to boredom, others due to stress and some to postpone hunger. Despite having sound knowledge of the adverse effects of chewing areca nut and its products, the habit is still prevailing among the workers in this area. This ignorance could be hazardous for the oral and general health of the workers. There should be more focus on providing counseling services to the individuals who are addicted and habitual chewers of areca nut and maybe implementing a ban on eating areca nut and products in working places.

Keywords: *Areca nut, Knowledge, Practice, non-teaching faculty, oral cancer.*

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INTRODUCTION

Areca nut or betel nut is a seed of an oriental palm areca catechu which has a hardwood like consistency and it is the fourth most commonly consumed addictive substance worldwide after caffeine, nicotine, and alcohol.¹ Areca nut is usually consumed alone or in combination with tobacco, slaked lime, and catechu wrapped in a betel leaf i.e. betel quid or paan.² Gutka is a chewing product prepared from the small slices of areca nut, mixed with lime, catechu, tobacco and fragrances.³ One-tenth of the world population⁴ or almost 600 million people consume areca nut and it's common

in South Asians and Asia-Pacific regions due to its long history and social acceptance among the society.⁵

Areca nut chewers have a higher frequency of gum problems such as inflammation of soft tissues, halitosis, gingival recession, and periodontal pockets⁶ and also has a brawny association with oral leukoplakia and fibrosis of oral mucosa.⁷ Areca nut in conjunction with tobacco is widely known as oral carcinogen consumable product. When consumed without tobacco it causes oral cavity cancer however if consumed with tobacco, it causes upper aero digestive tract cancer.⁸ The international agency on research for cancer has classified the nitrosamine in Group 1 carcinogen to humans which is present abundantly in Areca nut.⁹

The social acceptance and higher consumption of Areca nut and tobacco has casted significant impact in increasing the number of cases of oral cancer in Pakistan.¹⁰ After evaluation and research it was commonly found that both adults and children coming up with such diseases were linked with the habit of consuming of either one or both harmful products. A study

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conducted on the school children in Karachi revealed that 79.6% students had areca nut eating habit¹¹ and in another study, prevalence of areca nut was 94% among school children.¹² Survey conducted in school children in Gadap town where the prevalence of areca nut chewing habit was 77.9% in students and 87% in their family members.¹³

There is a scarcity of data in contrast to the prevalence and consumption of areca nut among the non-teaching members of the Medical University and low waged staff members in most institutes and organizations. Therefore, the objective of this study was to assess the non-teaching staff of a medical university located in the sub-urban area of Karachi in terms of the prevalence of Areca nut consumption.

METHODOLOGY

The cross-sectional analysis was carried out from August 2017 to December 2017 in a Private Medical University of Karachi, Pakistan. Data were collected from the non-teaching faculty members of the Medical University, working in different departments and who belonged to different ethnic groups. The sample size of the research was contingent and was counted on the interest of the participants to take part in the research. Non-probability convenience sampling method was used for the selection of the study participants. Co-authors of the research, collected the data by visiting each departments in the University, and consent was taken prior to the research with purpose of the research being explained to the participants. The questionnaire was filled by the study participants, and any query related to the questionnaire was solved by the investigator at the same time and questionnaires were collected on the same day. The inclusion criterion incorporated of subjects who willingly participated whereas the exclusion criteria of the study included subjects who refused to answer the questionnaire.

A self-structured questionnaire was designed which was comprised of multiple questions pertinent to the utilization of areca nut i.e. in which state it is consumed, frequency of consumption, its usage in office hours, duration of keeping it in mouth, factors influencing the choice of its consumption and addiction, knowledge of its harmful effects on general and oral health.

The ethical approval of the protocol of the study was endorsed by the Ethical Committee of the University. Descriptive analysis was performed by using SPSS version 20. Descriptive statistics including mean, frequency, and percentages were reported.

RESULTS

A total of 139 individuals were surveyed, out of which 112 (80.6%) were male and 27 (19.4%) were female. Mean age of the respondents was 36.2 (standard deviation ± 10.6) years with a range of 18 and above. The prevalence of the consumption of Areca nut among the samples was 70 (50.4%). There were 58 (83%) male and 12 (17%) female users of areca nut. The habit was more prevalent among people with Sindhi ethnic background followed by Urdu speaking and Punjabis. 118 (84.9%) of the study participants had the knowledge

TABLE 1: KNOWLEDGE REGARDING EFFECTS OF ARECA NUT ON ORAL HEALTH

Questions	Frequency N=139	Percentage %
Areca nut can cause mouth cancer?		
Yes	118	84.9
No	9	6.5
Don't know	12	8.6
Areca nut can cause throat cancer?		
Yes	122	87.8
No	12	8.6
Don't know	5	3.6
Areca nut has effects on kidney Or Systemic health?		
Yes	109	78.5
No	18	12.9
Don't know	12	8.6
Do you know any advantage of areca nut?		
Yes	19	13.6
No	120	86.4

that areca nut has association with oral cancer (table 1).

DISCUSSION

The cross-sectional survey evaluated the prevalence, knowledge, and practice of areca nut among the non-teaching faculty in private medical teaching university. The prevalence of chewing of areca nut was 50.4% in the study. A similar study was conducted in a private medical and dental college in an urban area where the outcome was almost similar to ours and it revealed that 40% of the nonteaching staff of the university chewed areca nut.¹⁴ In this research majority of the study participants were from the low socio-economic group and had minimal education. Previously, the socioeconomic factors were identified as the most crucial risk factors for its consumption.¹⁵ Considering the fact that the usage of Areca nut is widespread in the South Asian region mainly because of its social acceptance which is built on the basis of its harmless effects like its usage for medicinal purposes in some parts of Asia.¹⁶ However it effects adversely on the systemic health as it has a tendency to damage the key functioning organs¹⁷. More than 85% of the study participants were well acquainted of the fact that its consumption leads to the oral and throat cancers and most of them were also aware that prolong usage can have bad consequences on the kidney. 40% of the study participants were consuming areca nut during job hours and nearly all of them were using because of its sweet taste, craving, boredom and for stress. A previous research conducted among the adult population in India where it was found that 21% of the participants had a craving for it and if it's not chewed for straight two hours.¹⁸ Arecoline, which is the most dominant psychoactive constituent present in the

areca nut, acts on the same receptor in brain where nicotine acts. Its cessation can lead to craving, lack of concentration, anxiety, and fatigue.¹⁹ Therefore, it's consumed to lower the fatigue as it makes the person more attentive during the working hours.²⁰ Persistent utilization causes dependency of Areca nut.²¹ It was observed that 57.1% of the respondents in our research were addicted as it gives them relief.

In this research convenient sampling method was used although the sample size was not sufficient as it was gathered from the non-teaching staff of only one university. For more desirable result estimation of the general population, a huge sample size is need to be obtained from all over the Karachi. In Pakistan, certain measurements should be taken to control its selling and buying or overall usage with the help of law enforcing agencies. Strict measures need to be taken to bring awareness of the consequences of consuming areca nut and its products with the implementation of dental public health education program which will eventually reduce the burden and epidemic of head and neck malignancies. Extensive measure for the restrain should be taken at macro level, Government officials, health workers, media, and community work as a whole and even at individual level, one must counsel and discourage its usage. There should be more focus on providing counseling services to the individuals who are addicted and habitual chewers and implementing a ban on eating areca nut and products on working places.

CONCLUSION

The finding of our study indicates that Areca nut consumption is common in adults. The respondents in our research belonged to low-socio economic status but had sufficient knowledge about its harmful outcomes. Most of the respondents had the knowledge that areca nut is associated with oral cancer and had harmful impact on oral and general health. They were aware that consuming it had no advantages on their health and that it's a bad habit. Most of them were interested in quitting the habit but were unable due to its strong addiction. Professional counseling services to the individuals addicted to Areca nut consumption can play an important role in helping them to reduce its utilization gradually.

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