

ORIGINAL ARTICLE

General Population's Awareness of Commercially Available Dental Products

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ABSTRACT

Objective: The aim of this survey was to assess the knowledge of general population regarding commercially available dental products.

Study Design: Cross-sectional survey.

Place and Duration of Study: Three different undergraduate institutes of Islamabad from April to June 2014.

Materials and Methods: A self-administered questionnaire was distributed and filled by 70 participants of ages 15-30 years. The sample of students was selected from three undergraduate institutes of Islamabad.

Results: In Section A, about 20 (28.6 %) participants were using only toothpaste to maintain their oral hygiene. One (1.4%) participant was using only dental floss. About 48 (68.6%) people were using fluoridated toothpaste. About 44 (62.9%) participants were using medium bristle toothbrush. In Section B, 19 (27.1%) participants were using teeth whitening agents, out of which 17 (24.3%) participants were using toothpaste to whiten their teeth. Fifteen (21.43%) participants got their required results. Sixteen (22.87%) participants found no side effects after using it. In section C, 27 (38.57%) and 54 (77.114%) participants only went to dentist when they had the toothache and gingivitis respectively. Forty-five (64.29%) participants completed their antibiotic course. Twenty-one (30%) participants thought that it was alright to use medicated products without consulting doctor.

Conclusion: Most of the people are using fluoridated toothpaste and medium bristle toothbrush. Many people use over the counter teeth whitening agents. And many people use over the counter antibiotics for dental problems and they think it is alright if they do not complete antibiotic course.

Keys Words: *Dental Products, Self Medication, Oral Hygiene.*

Introduction

Although diseases of the oral health were considered to be different from the general health, efforts have been made to recognize oral health as an essential part of general health.¹

This change in the global view on health has been based on the premise that if the oral health is compromised all aspects of health are disturbed.² So it is very important to have correct knowledge about the dental products and dental aids and to use them in a correct way. Commercially available dental products include normal to medicated toothpaste, mouthwash, dental floss and tooth powder. It also includes the teeth whitening agents and drugs used for dental treatment. Over the counter products are those drugs which are sold without the prescription

of a health care professional.³ Prescription drugs are the drugs which are sold to a consumer having a valid prescription.⁴ In Pakistan, many dental products and drugs are available in medical stores and super markets. Medicated products are used by individuals, without consultation of a health professional.⁵ Chang and Trivedi have described the phenomenon seen in developing countries that every pharmacy sells drugs without proper prescription.⁶ Pilgrim et al. investigated there were 137 deaths in Victoria, Australia from 2001 to 2005 due to methadone, an opioid analgesic, toxicity which was taken as a pain killer.⁷ Although adolescents have been reported to the basic knowledge regarding dental health such as importance of tooth brushing they still fail to brush their teeth routinely.⁸ A few studies investigating the knowledge of the general population regarding oral health have been conducted in developing countries.^{9,10} An association relating oral health and socioeconomic status has been suggested in literature.¹¹ Moreover a study has been reported in Pakistan, according to which use of un-prescribed analgesics to very high despite the fact that many people are aware of the harmful effects of it.⁵ Hence

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Received: February 11, 2015; Accepted: November 15, 2015

the purpose of our study was to assess the knowledge of general population about the use of commercially available dental products.

The aim of the survey was to assess the existing knowledge of the general population regarding commercially available dental products. This survey was set out to identify areas where the knowledge of people is lacking so that health education campaigns may be planned in those areas.

Materials and Methods

A cross sectional survey was conducted in three institutes of Islamabad which included Islamic International Dental College, Comsats University and Nust IESC from April to June 2014. Male and female participants of age 15-30 years were included. There were 70 participants selected by convenient sampling from three institutes of Islamabad. A self administered questionnaire was filled by the participants. The quantitative data was analyzed using PASW statistics 17.0. Descriptive statistics were calculated for the questions responses.

The questionnaire was checked for face and content validity by distributing the questionnaire among three dental specialists. The specialists were requested to analyze the questionnaire for the content, wording and context of the questionnaire. Modifications were made in the questionnaire in light of the suggested changes by the dental specialists.

Results

Seventy people were included in the survey. All 70 participants completed the questionnaires and there was no loss to follow up. In the final results, data for all the 70 participants (18 males and 52 females) is included. Twenty-one (30%) out of 70 participants reported using only toothpaste to maintain their oral hygiene. Twenty-five (35.7%) participants were using both toothpaste and mouthwash. Seven (10%) participants used both toothpaste and miswak. Eight (11.4%) participants used both toothpaste and floss. Three (4.3%) participants used toothpaste, mouthwash and floss. Four(5.7%) participants used toothpaste, mouthwash, toothpowder and toothpaste. One (1.4%) participants used toothpowder, mouthwash and miswak. One person (1.4%) was using toothpaste and tooth powder to maintain his oral hygiene.

All the 70 participants were using toothbrush to

Table I: Frequency of use of teeth whitening products

	What do you use to whiten your teeth?			
	Teeth whitening agents		Teeth whitening strips	
	17		01	
Did you achieve your required results?	Yes	14	Yes	01
	No	03		
From where did you get to know about the products?	advertisement	12	Family & friend	01
	Dentist	04		
	Family & friend	01		
Did you find any side effect?	None	16	None	01
	Increase in sensitivity	01		

Total 18 people out of 70 used teeth whitening agents.

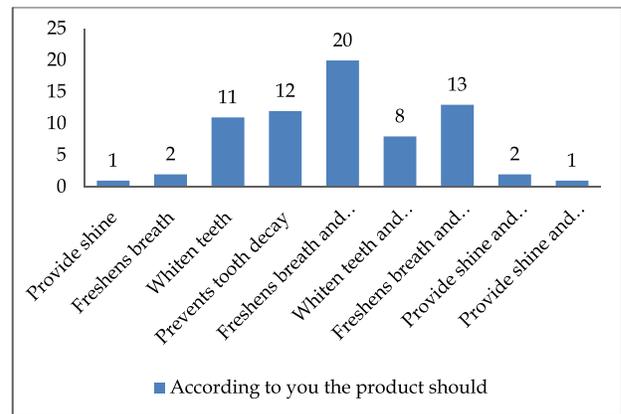


Fig 1: Frequency of Reasons for using Teeth Whitening Products

maintain their oral hygiene. Seventeen (24.3%) out of 70 participants were using toothbrush once a day. Fifty two (74.3%) out of 70 participants were using toothpaste twice a day and one (1.4%) participant was using it more than twice a day.

Thirty three (42.8%) out of 70 participants were using mouthwash along with toothbrush to maintain their oral hygiene. Sixteen (22.8%) out of 70 participants were using mouthwash once a day. Six (51.4%) participants were using mouthwash twice a day, two (2.9%) participants were using mouthwash thrice a day, five (7.1%) participants were using mouthwash weekly, two (2.9%) participants were using mouthwash monthly and two (2.9%) participants were using mouthwash sometimes along with toothpaste to maintain their oral hygiene. Two (2.9%) out of 70 participants were using tooth powder. Two (2.9%) participants used dental floss once a day. Three (4.3%) participants were using it

once a week. Four (5.7%) participants used it rarely. Forty five (64.3%) out of 70 participants were using medium bristle toothbrush to maintain their oral hygiene. Twenty three (32.8%) participants were using soft bristles and two (2.9%) participants were using hard bristle toothbrush to maintain their oral hygiene.

Fifty two (74.3%) out of 70 participants said that they chose the brand of toothpaste because it is more effective. Ten (14.3%) participants chose the brand because it is easily available, one participant (1.4%) chose the brand because it is cheaper, seven (10%) participants chose the brand because of other reasons.

Table II: Frequency of use of Over the Counter Drugs

		Frequency	Percent
What do you do when you have toothache?	Go to dentist	27	38.6
	Take homemade remedy	14	20.0
	Take analgesics	23	32.9
	Do nothing	06	08.6
	TOTAL	70	100
What do you do when you have gum infection?	Go to dentist	54	77.1
	Self medication	13	18.6
	Use home remedies	03	04.3
	TOTAL	70	100
Do you complete your antibiotic course?	Yes	45	64.3
	No	25	35.7
	TOTAL	70	100
Using medicated products without consulting doctor	Yes	21	30.0
	No	49	70.0
	TOTAL	70	100

Table III: Demographic detail

No of participants	Age group	Highest qualification	Total
Male = 18	15-30	Upto FSc	05
		Bachelors	10
		Upto Masters	03
Female = 52	15-30	Upto FSc	01
		Bachelors	49
		Upto Masters	02

Discussion

Generally participants are aware of importance of the basic dental products however some areas need work. All the participants are using toothpaste to maintain their oral hygiene. Fifty two out of 70 participants brush twice a day and 45 out of 70 participants are using a medium bristle toothbrush. Most participants are also using mouthwash once a day to maintain their oral health. This shows that most of the people have the basic knowledge regarding the use of tooth brush. As reported in research conducted in India that mostly adults have the knowledge about oral health like use of toothbrush but still they fail to maintain their oral hygiene because they underestimate their oral health risks.⁸ The percentages of dental floss and miswak users is very low which shows that people are not so aware of the use and importance of dental floss. As this study is done in few colleges of Islamabad where the literacy rate is high and socioeconomic status is high we can state that education and socioeconomic status are factors determining their use of fluoridated tooth pastes. Socioeconomic status is a determinant of overall health and it has a role in the practical implication of knowledge.¹²

Very few participants use the teeth whitening agents, among which most use the teeth whitening toothpaste. According to them, they achieve their desired results and most of them started using the product after watching an advertisement and without consulting dentist whereas the teeth whitening agents should be used for limited period of time and in the supervision of dental professionals.¹³ Also they don't know the side effects of using the teeth whitening agent. Most of the people are satisfied and they get their required results and have not found any side effects with the use of the teeth whitening agents.

Many participants take analgesics on their own or homemade remedies for toothache. They only visit dentist when the situation gets worse e.g. when suffer from gingivitis or periodontitis. Most people complete their antibiotic course.

Hussaini et al. conducted a study in Kuwait University Health Sciences Centre to assess dental health knowledge, attitudes and behaviour among students. Study was based on the concept that good

oral health practice consists of continuous implementation of two broadly defined sets of behaviour: self-care habits and utilization of dental services. The results showed that students considered mainly tooth brushing to be effective measure for good oral hygiene. Students were satisfied with their oral hygiene due to which they didn't feel the need for regular dental checkups and only visited dentists in real need.¹⁴

Zafar et al. have assessed the awareness of over the counter products. However, this study used a very limited, small sample.⁵

The current survey assessed the knowledge of general population regarding the commercially available dental products. It has three sections. Section A was regarding the knowledge and use of basic dental products such as toothpaste, mouthwash, tooth powder, dental floss and miswak Section B was regarding use of any kind of teeth whitening agents and Section C was regarding general practices related to analgesics (pain killers), home remedies and antibiotics. The section regarding diet for good oral health in Hussaini et al. study was eliminated in current survey.

A cross sectional study design was chosen because of limited time duration and financial resources. Due to limited time and resources random sampling couldnot' be done and sample size was small and we conducted the research in some colleges of Islamabad and the ratio of male and female participants could not be matched but all participants initially contacted completed the questionnaires and there was no loss to follow up.

This research should be done with multi-sectoral collaboration in Islamabad and other cities and sampling should be done by systematic randomization. Number of males and females in sample should be according to the population of the respective area so that attitude and knowledge difference in both genders can be evaluated. In future, another research can be done by first assessing the knowledge of the sample and then educating them and then assess their knowledge again so that impact of knowledge can be measured and this intervention can be done on larger scale.

Conclusion

Generally people in selected institutes of Islamabad have the knowledge about the use of the dental

products that are commercially available. But they visit the dentist only when once their symptoms aggravated. Self-medication still needs to be addressed and awareness about the harmful effects of whitening agents and self-medication should be spread among the general population.

Awareness should be developed regarding self-prescription of analgesics and regarding the importance of completing an antibiotic course. In short, a habit of asking a dentist first should be developed.

REFERENCES

1. Prasai Dixit L, Shakya A, Shrestha M, Shrestha A. Dental caries prevalence, oral health knowledge and practice among indigenous Chepang school children of Nepal. *BMC Oral Health*. 2013;13: 20.
2. Cunningham SJ, Hunt NP. Quality of life and its importance in orthodontics. *J Orthod*. 2001; 28:152-8.
3. Amoako EP, Richardson Campbell L, Kennedy Malone L. Self-medication with over-the-counter drugs among elderly adults. *Journal of gerontological nursing*. 2003; 29: 10-5.
4. Bihari M. *Prescription Drugs* 2008.
5. Zafar SN, Syed R, Waqar S, Zubairi AJ, Waqar T, Shaikh M, et al. Self-medication amongst University Students of Karachi: Prevalence, Knowledge and Attitudes. *Pak Med Association*. 2008; 58: 214-17.
6. Chang FR, Trivedi PK. Economics of self-medication: theory and evidence. *Health Econ*. 2003; 12: 721-39.
7. Pilgrim JL, McDonough M, Drummer OH. A review of methadone deaths between 2001 and 2005 in Victoria, Australia. *Forensic Sci Int*. 2013; 226: 216-22.
8. Suprabha BS, Rao A, Shenoy R, Khanal S. Utility of knowledge, attitude, and practice survey, and prevalence of dental caries among 11- to 13-year-old children in an urban community in India. *Glob Health Action*. 2013; 6: 227-50.
9. Mehta A, Kaur G. Oral health-related knowledge, attitude, and practices among 12-year-old schoolchildren studying in rural areas of Panchkula, India. *Indian J Dent Res*. 2012; 23: 1-5.
10. Diwan S, Saxena V, Bansal S, Kandpal S, Gupta N. Oral Health: Knowledge and Practices in Rural Community. *Indian Journal of Community Health*. 2013; 22: 29-31.
11. Tarique N, Ahmed M, ShailaTahir, Shahid U. Oral Health Knowledge and Practices among Children 10-14 Years Attending Cricket Summer Camp. 2012.
12. Plianbangchang S, Narain JP. Health situation in the South-East Asia Region: challenges for the next decade. *WHO South-East Asia Journal of Public*

- Health. 2012; 1:1-3.
13. Lucier RN, Etienne O, Ferreira S, Garlick JA, Kugel G, Egles C. Soft-Tissue Alterations Following Exposure to Tooth-Whitening Agents. *Journal of Periodontology*. 2013; 84: 513-9.
 14. Al-Hussaini R, Al-Kandari M, Hamadi T, Al-Mutawa A, Honkala S, Memon A. Dental health knowledge, attitudes and behaviour among students at the Kuwait University Health Sciences Centre. *Med Princ Pract*. 2003; 12: 260-5.
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