



**ORAL HEALTH CARE AND ORAL HYGIENE PRODUCTS RELATED KNOWLEDGE
AND BEHAVIOUR AMONG LOCAL PHARMACISTS IN SRINAGAR- A
CROSS-SECTIONAL SURVEY**

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ABSTRACT

Background: Early screening of the diseases and referral by health professionals may benefit to improve the access to oral health measures and to reduce the associated morbidity and mortality. Majority of the population approach pharmacists for their health problems. Hence, Pharmacists should have adequate knowledge about oral health and also they should play an active role in oral health promotion, identification and referral. The aim of the present study was to assess knowledge, attitude and practice of local pharmacists regarding oral healthcare and oral hygiene products in Srinagar. **Material and Methods:** A survey was conducted among local pharmacists working within Srinagar city using a self-structured, pre-tested, closed-ended questionnaire. The study was conducted among 72 pharmacists of Srinagar city. The data was collected and analyzed. Comparison between variables by Chi square test and ANOVA test with the level of significance set at $P < 0.05$. **Results:** The response rate was 97.29%. Majority of the pharmacists stocked and dispensed oral health-related products. Toothbrush (34.72%) was the most common oral healthcare product stocked followed by toothpaste and dental floss. Pharmacists advised patients complaining of dental pain to consult a dentist in 45.83% of cases, prescribed medication in 30.55% of cases. **Conclusions:** Pharmacists working within Srinagar city had moderate knowledge, attitude and practice regarding oral health care and oral hygiene products. There is a need for training and comprehensive educational programs to promote good oral hygiene and impart education about correct oral hygiene practices among pharmacists. Oral health knowledge should be inculcated in the curriculum for all health care professionals including Pharmacists.

KEYWORDS: Oral health, oral hygiene products, pharmacists, toothache.

INTRODUCTION

Oral health is an essential component of general health. Poor oral health and untreated oral diseases can have a significant impact on quality of life. In developing countries like India, majority of the population resides in rural areas where limited manpower resources are available. For such a major part of the population, health care is mainly delivered through primary health centres where majority of health providers are medical practitioners. Early screening of the diseases and referral by health professionals may benefit to improve the access to oral health problems and reduce the associated morbidity and mortality.

Dental caries and periodontal diseases are increasing in developing countries where preventive programs have not been implemented properly.^[1] The need of the hour is for health care professionals to have adequate knowledge about oral health as they are the one to whom majority of

the population approach. Therefore, oral health care needs to be addressed by a multi-disciplinary approach and should be integrated into comprehensive health-promoting strategies and practices.^[2]

Undoubtedly, one of the methods for prevention is to improve the knowledge of the community regarding promotion of health behaviour and influence of self-effective methods on preventing diseases.^[3] With proper knowledge and oral health behaviour, health care professionals can play an important role in the oral health education of individuals and groups and can act as role models for patients, friends, families and the community at large. Before health professionals are trained as oral health educators, there is a need to determine the status of their oral health knowledge and behaviours.^[4]

Community pharmacist can play an important role in the oral health education of individuals and groups and can

act as role models for community at large with excellent opportunities to promote oral health.^[5] They can play an active role in oral disorder prevention, identification and referral. They can give advice for the patients besides dispensing of drugs and medications.^[6] Increasing their awareness about oral health in general can increase their knowledge and skills in oral health care. Having the ability to identify potential health risk factors associated with oral health status risk, health care providers can take an active role in health screening and early interventions including dental preventive services.^[7] Also pharmacist should be incorporated into oral health team to meet the need of population.^[8]

The aim of the present study was to assess knowledge, attitude and practice of local pharmacists regarding oral healthcare and oral hygiene products in Srinagar.

MATERIAL AND METHODS

A descriptive cross-sectional survey was conducted among 72 pharmacists working in local pharmacies dispensing drugs for patients in Srinagar city. The study was carried out during the period from March 2019 – June 2019. A self structured, pre-tested questionnaire was used for the survey. The questionnaire was divided into 13 questions; assessing the knowledge, attitude and practice of oral health care and oral hygiene related products among pharmacists.

Validity of the questionnaire was tested by back translational method (Questionnaire in English was translated into Urdu by an expert in literature which was again translated back to English). Pilot study was conducted among 10 randomly selected pharmacists to ensure comprehensibility, reliability and accuracy of the questionnaire. Cronbach's alpha test showed the reliability coefficient of 0.85, which was found to be satisfactory for conducting the study. These 10 questionnaires were not included in the final data.

The city of Srinagar was divided into north, south, east, and west zones. Simple random sampling was employed to select the study population. Out of the four zones, systematic sampling was employed by selecting the pharmacists in every 3rd pharmacy shop starting from the first shop. Thus, a total of 74 subjects who were fulfilling the inclusion criteria were selected which included natives belonging to that area/community since birth. Participants were requested to participate voluntarily.

Written informed consent was obtained from the subjects participating in the study after explaining the objectives. The subjects who were not willing to participate were excluded. Two incomplete questionnaires were excluded. Thus, responses from 72 pharmacists were included in the final study and were subjected to statistical analysis.

The questionnaires were handed to the pharmacists in their pharmacies. At all times, one of the investigators was present with the respondent while the questionnaires

were being filled to ensure that the concerned respondent did not discuss the questions or the answers with any other person sitting in the pharmacy and also to make sure that the concerned respondent fully understood the questions as well as the probable answers completely. After distribution of questionnaire, 15 minutes were allotted for completing the questionnaire.

The data was compiled and transferred to Microsoft Excel and then the results were analyzed by using SPSS statistical software in terms of percentages. Associations between discrete variables were tested by Chi-square test and ANOVA. In all the cases, a $P < 0.05$ was considered significant. The study was completed within a period of 4 months.

RESULTS

The response rate was 97.29%. More than half of the pharmacists (55.55%) did not know about the importance of Oral health in maintaining general health. Less than half of the pharmacists (48.61%) were of the opinion that milk teeth are important for the child. More than half of the pharmacists (55.55%) considered it essential to go for regular dental visits and considered that Bottle feeding of the child after 1-year-old is bad for his/her teeth. 58.33% of respondents advised patients to go for frequent dental visits.

Majority of the pharmacists (80.55%) stocked and dispensed oral health-related products. Most of the pharmacists (62.55%) considered tooth ache/ pain as the most common type of dental problem they had come across. Pharmacists advised patients complaining of dental pain to consult a dentist in 45.83% of cases, prescribed medication in 30.55% of cases.

There is no significant difference between knowledge of pharmacist about techniques of tooth brushing as shown in Figure 1.

DISCUSSION

Healthcare workers need to work in collaboration with dentists to provide complete medical and dental care to the patient and society. In developing countries, there is a high prevalence of oral disease in the society. This can be due to scarcity of resources, neglect and illiteracy. The population at large in such nations consider dental treatment as their least priority. Due to this reason, we felt the need to assess the oral health related knowledge, attitude and practices of Pharmacists in Srinagar, India as they deal with numerous patients daily, much more than those dealt by the dentists. Community pharmacist's role should not be underestimated as they can play an important role in the oral health education with excellent opportunities to promote oral health^[5] by identification of oral related problems and referral. They can give advice for the patients beside dispensing of drugs and medications.^[6]

Overall, the response rate of the pharmacists who participated in this study was good and most of them had a positive outlook regarding their knowledge and attitude relating to oral health. The findings of the current study were similar to the findings of a study conducted at north of England^[9] and an Indian study.^[10]

More than half of the pharmacists (55.55%) did not know about the importance of Oral health in maintaining general health. The present study has confirmed the general opinion that oral hygiene has still remained as an ignored and unrealized major social problem. The findings were contradictory to a study where 87.60% of respondents said that there is a link between oral health and general health.^[11]

Tooth ache was the most common dental problem for which patients sought advice from the pharmacists. This is similar to the findings of the previous studies.^[9,10,12] Also the findings were similar to previous studies, Baseer *et al.*^[4] and Doshi *et al.*^[13], where the most common driving factor reported was toothache.

According to the present study, the most common counter drug prescribed for toothache from dentist were antibiotics (45.83%) followed by painkillers (33.33%). The findings were contradictory to a study conducted in Sudan where most counter drugs prescribed for toothache from dentist were pain killers which was 88.9%.^[14]

According to the current study, less than half of the pharmacist's, referred the patients to the nearby dentist. However the findings were dissimilar to the Indian study.^[10] Majority of participants believed that regular visit to the dentist was necessary. This was in accordance to previously reported studies done by Baseer *et al.*^[4] and Timmerman *et al.*^[15] This may be attributed to more favourable conditions like proximity of dental centre/ dental clinic adjacent to the Pharmacy.

However, it is interesting to note that 30.55% of the pharmacists prescribed medications and do not refer the patient to a dentist, which will provide short term pain

relief and this will affect the correct diagnosis of the disease. The findings were similar to a study conducted in Sudan. Visiting a dentist is still not considered a preventive dental behaviour.^[16]

A study conducted in North India revealed that around 75% of the patients visited the dentist only in problem and only 10% of the population visited the dentist on regular basis after every 6 months.^[17] These results are similar to the study done by Jain *et al.* where 54% of the subjects visited the dentists when they were in pain.^[18]

Tooth brushes followed by tooth pastes were the most common oral health care product stocked. It was also revealed that only 26.83% pharmacies stocked dental floss while as 8.33% stocked inter dental brushes. These findings were similar to previous studies.^[14] This can be attributed to less awareness of oral hygiene aids among pharmacists.

Preventive oral health education is in transitional stage in India. Population based oral health promotional programs are yet to be implemented and followed. Hence in this study attempts were made to describe the preventive oral knowledge, practice and behaviour of the studied population. Our study has shown very limited knowledge on prevention and preventive dental behaviour.

The findings of this study on oral health knowledge, attitude and oral health behaviour will help plan preventive oral health care programmes regarding the oral health. This will help in prevention of the dental diseases. Hence, there is a need to educate and spread knowledge of proper dental care and prevention of dental diseases through the dentists, outreach programs and relevant public health awareness measures to make a healthy individual and a healthy society. Also, we suggest that knowledge regarding oral health care and its importance should be incorporated into the teaching curriculum of all medical and para-medical staff members. This will increase the awareness amongst them regarding oral health care and they could prove to be beneficial in community programs at large.

Table 2: Distribution of responses of Pharmacists according to knowledge and practices on oral health/

S.No	Knowledge of Oral Health	Options	N (72)	%	P value
1	Do you know about the importance of Oral health in maintaining general health?	Agree	27	37.55	P<0.01*
		Disagree	40	55.55	
		Unsure	5	6.94	
2	Milk teeth are important for the child	Agree	35	48.61	NS
		Disagree	30	41.66	
		Unsure	7	9.72	
3	Is it essential to go for regular dental visits?	Yes	40	55.55	NS
		No	32	44.44	
4	Medicated syrups may lead to dental decay.	Agree	24	33.33	P<0.01*
		Disagree	46	63.88	
		Unsure	2	2.77	
5	Bottle feeding of the child after 1-year-old is bad for his/her teeth	Agree	40	55.55	P<0.016*
		Disagree	25	34.72	

		Unsure	7	9.72	
6	Microorganism cause dental decay?	Yes	39	54.16	NS
		No	33	45.83	
7	If tooth decay is not treated in time?	Decay deepens with pain	19	26.38	NS
		Results in swelling	29	40.27	
		loss of tooth/ teeth	34	47.22	
8	Do you advise patients to go for frequent dental visits?	Yes	42	58.33	NS
		No	30	41.66	
9	Do you stock oral hygiene products in your pharmacy?	Yes	58	80.55	P≤0.001*
		No	14	19.44	
10	Most common type of dental problem you come across?	Tooth decay/ pain	45	62.55	NS
		Bleeding gums	22	30.55	
		Deposits	5	6.94	
11	If a patient approaches you with toothache, You suggest him/her to visit?	Doctor	27	37.5	NS
		Dentist	33	45.83	
		Hospital	12	16.66	
12	In case of dental emergency how would you manage a patient?	Prescribing medication	22	30.55	NS
		Referring the patient to a doctor	12	16.66	
		Referring the patient to a dentist	38	52.77	
13	Most common dental drug prescribed ?	Painkiller	24	33.33	NS
		Antibiotics	33	45.83	
		Mouthwash	12	16.66	
		Gum paint	3	4.16	
15	Most common oral health care product stocked?	Tooth paste	22	30.55	NS
		Tooth brush	25	34.72	
		Dental floss	19	26.38	
		Interdental brushes	6	8.33	
14	Best technique for toothbrushing?	Vertical	20	27.77	NS
		Horizontal	22	30.55	
		Roll technique	18	25.00	
		Bass method	12	16.66	

*ANOVA (p<0.05), NS: Non Significant

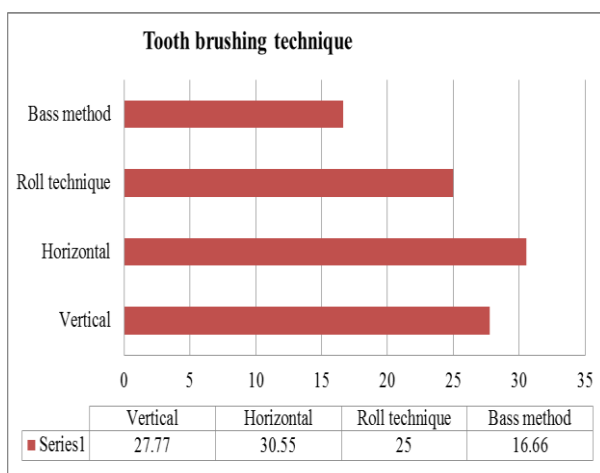


Figure 1: Knowledge of pharmacist about techniques of tooth brushing.

CONCLUSION

Pharmacists have the potential to impart oral health knowledge as patients regularly approach and ask for their advice on both general and oral health care issues, so the integration between dentists and pharmacists can

improve the oral health of our society. There is a definitive need for training of pharmacists and providing them with access to information on available dental services and products through courses and programs and Government should promote the pharmacists to take an integrated role as part of a primary oral healthcare team.

The study concluded that oral health knowledge, attitude and practice of Pharmacists were moderate. There is an immense need of educating and training Pharmacists regarding oral health awareness. A pharmacist could become an important link in bridging the gap between community and dental health care delivery systems and help in developing healthy oral habits and preventing caries. The findings of the study suggest that it is important to adopt the strategy of early intervention to minimize the burden of oral related diseases. This study was conducted on a very small population, the results of which cannot be extrapolated the general pharmacists. Further studies with larger sample size are warranted which will help us give a better picture regarding attitude of health care professionals towards oral health knowledge and its care. Studies involving a larger sample size are warranted in order to yield a much more

sensitive result. Oral health related training programme should be included in their curriculum and acquiring necessary skills, so that they can make decisions and play an efficient and significant role in oral health promotion and disease prevention.

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