Print ISSN: 2321-6379
Online ISSN: 2321-595X

Original Article

Assessment of Role Played by Pharmacists in Oral Health Care in Jammu – A Cross-Sectional Study

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Abstract

Introduction: Pharmacies are the frontline approach for delivering oral health care and the pharmacist should be able to discuss the appropriate dental products for a patient's oral health needs as well as know when referral to a dentist is needed.

Purpose: The purpose of the study was to determine the knowledge, attitude, and practice of pharmacist about oral health care and oral health products in Jammu.

Methodology: This cross-sectional study was carried out among pharmacists using self-administered, closed-ended questionnaire. Descriptive statistics were used for the data analysis. Statistical analysis was done using SPSS version 20.

Results: A total of 384 pharmacists were included in the study. Mean age was 43.2 ± 10.4 years. Among these, approximately 79% knew about a nearby dental clinic. Toothpaste was most common among the oral health-care product available in the pharmacies. Toothache was the most common pathology encountered by these pharmacists.

Conclusion: Community pharmacists play a major role in oral health care of the population. The present study revealed that majority of these pharmacists had no prior oral health training. Most of them were willing to give oral health care advice to the patients. Thus, proper and continuous oral health training of pharmacists can help to serve the oral health needs of the community.

Key words: Attitude, Knowledge, Oral health care, Pharmacist, Practice

INTRODUCTION

Oral health is important to general health and quality of life. Forty years ago, the American Dental Association stated, "The dentist and the pharmacist are partners in caring for oral health." In fact, the pharmacist sees more people with dental problems than the average dentist![1] Team working is now acknowledged as a key concept in the delivery of oral health care. The practice of community pharmacist has developed over years from traditional dispensing of medicine to more profound public and professional involvement in health care which is valuable to the community.[2] A survey of community pharmacists in Edinburgh, Scotland, in the fall of 2002, revealed that the pharmacist was asked at least one question every week about some oral health- related problem; nearly half of these questions were related to mouth ulcers or persistent soreness.[3]

India being a densely populated country with approximately 1.3 billion population, which is unevenly distributed in rural and urban areas. Jammu and Kashmir is geographically located in the Indian Himalayan Region (IHR), where Jammu district is located on the foothills of IHR. The hilly geography makes the accessibility to oral health care difficult. However, community pharmacies have been spread over the remotest areas of Jammu district. Pharmacies are the frontline approach for delivering oral health care and are easily accessible to the public. There are a variety of ways by which the pharmacist can take a frontline approach to oral disease prevention, identification, assessment, management, and referral.[3] These include

Access this article online

www.ijss-sn.com

Month of Submission : 09-2020
Month of Peer Review : 09-2020
Month of Acceptance : 10-2020
Month of Publishing : 11-2020

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promoting topical fluorides, especially fluoride toothpastes, encouraging effective oral hygiene practices, promoting healthy eating, encouraging use of dental services and preventive therapies, and giving parents and other family caregivers information, motivation, confidence, and the skills to prevent oral disease.[1] The pharmacist should be able to discuss the appropriate dental products for a patient's oral health needs and know when referral to a dentist is needed. He should be able to recognize the oral side effects of systemic medications, be familiar with the interactions between oral and general health, and counsel patients as needed.

While this is most often discussed in the context of members of the "dental team," this study provides a useful reminder of the potential contribution of healthcare professionals, beyond the confines of the surgery. Thus, this study was done to evaluate the role of pharmacist in dentistry.

The aim of the study was to evaluate the knowledge, attitude, and practice of pharmacist regarding oral health care and oral health products in Jammu district.

METHODOLOGY

A cross-sectional study was conducted on pharmacists in Jammu district, over a period of 2 months. A sample size of 384 was estimated. A pilot study was undertaken on 10% of the study participants to check the feasibility of pro forma and to improve the clarity and understanding of the questionnaire. They were not included in the study.

Informed consent was obtained from the pharmacists participating in the study before the start of the study. Stratified simple random sampling method was used to select the pharmacies. Jammu district is administratively divided into seven subdivisions, namely, Jammu South, Jammu North, R.S. Pura, Marh, Akhnoor, Chowki Choura, and Kour. A closed-ended pre-validated questionnaire[4] was distributed among pharmacists from all subdivision of Jammu. The questionnaire was divided into five sections: Section I: Comprised details regarding the vicinity of the dentist to the pharmacy, Section II: Comprised details regarding range of dental products stocked in the pharmacy, Section III: Comprised details regarding advice given by the pharmacist to customers regarding oral health, Section IV: Comprised details regarding pharmacist's source of information regarding oral health and oral hygiene, Section V: Focused on the dental patients attending the pharmacies; their number, common complaints, and advices sought out by them regarding dental problems.[4]

The collected data were thoroughly screened and entered into MS Excel spread sheets. Statistical Package for the Social Sciences (SPSS) version 20 was used to analysis the collected data.

RESULTS

The mean age of pharmacist was 43.2 years ± 10.41. Among 384 pharmacists, 311 (80.9%) were male [Figure 1]. Most of the pharmacists were diploma holders. About 3.6% of the pharmacist had master's degree [Figure 2]. About 357 (92.9%) pharmacies were owned by individuals, 22 (5.7%) belonged to a chain of pharmacies, and the rest were attached to hospitals [Figure 3].

Table 1 gives the details about the knowledge and attitude of pharmacists regarding oral health care and oral hygiene products. About 79.1% of the pharmacists who participated in the present study knew that there were dental clinics in their vicinity and among them only 60.5% knew their working timings. Most of the pharmacist (63.8%) recommended oral hygiene products based on their personal experience.

While assessing the attitude toward oral health care, 79.1% were interested of the participating pharmacists were interested in giving oral health care advice to patients [Figure 4]. When asked whether fluoride in toothpaste is

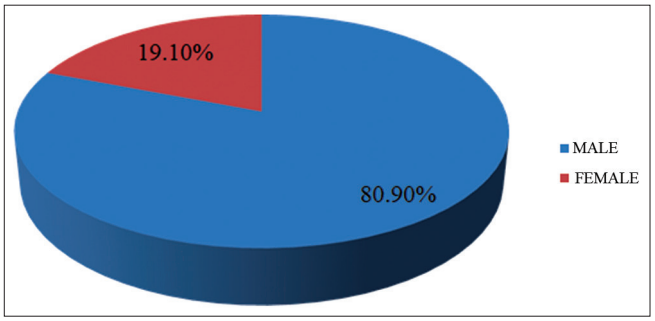

Figure 1: Distribution of study subject according to gender

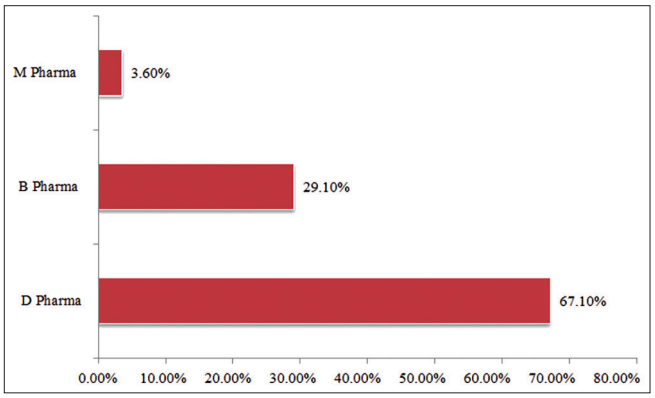

Figure 2: Distribution of pharmacist based on qualification

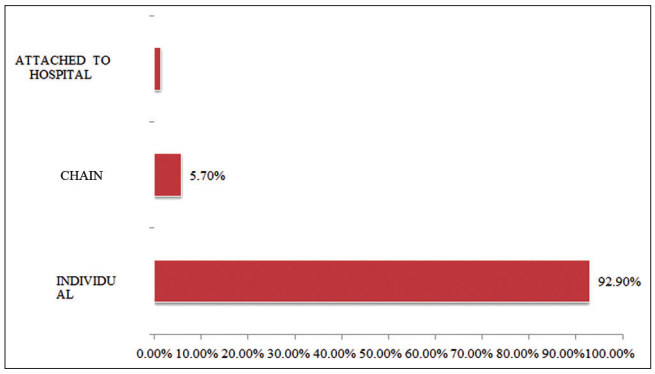

Figure 3: Distribution of type of pharmacy

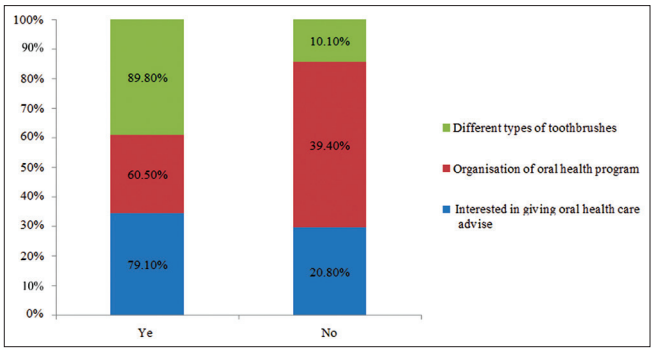

Figure 4: Distribution of study subjects according to knowledge and attitude

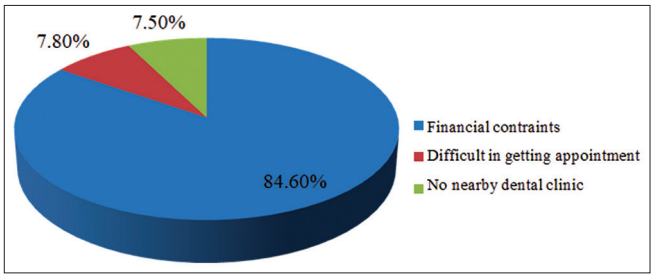

Figure 5: Distribution of study subjects according to knowledge and attitude

beneficial, nearly 89.8% of pharmacists were unaware of the benefits of fluoride in toothpaste [Table 1]. Most of the pharmacists (84.6%) feel that financial constraint is the reason for patient approaching the pharmacist instead of a dentist [Figure 5].

Most common oral health problem experienced by the participating pharmacist was toothache (83.1%) followed by bleeding gums and ulcers. Most of the pharmacies (75.3%) said that they experience <10 patients per day complaining about oral problems. Toothpaste is the most common dental product followed by toothbrush available in the pharmacies. About 70.3% of the participating pharmacists ask the patient to consult a nearby dentist after dispensing medications, 10.4% dispensed antibiotics and painkillers without any referral to a nearby physician or dentist. About 19.2% of pharmacists said that they just ask the patient to consult a nearby dentist, without dispensing medication [Table 2].

Table 1: Distribution of study subjects according to knowledge and attitude

Question	Options	Frequency (%)
Nearby dental clinic	a. Yes	304 (79.1)
	b. No	80 (20.8)
Working time of the dentist near your pharmacy	a. Yes	184 (60.5)
	b. No	120 (39.4)
Basis of recommendation of the oral hygiene products	a. Knowledge of product	46 (1.2)
	b. Personal experience	245 (63.8)
	c. Dentist opinion	89 (23.1)
	d. Advertisement	0 (0.0)
	e. Popularity of product	1 (0.2)
	f. Others	0 (0.0)
	g. All products are same	3 (0.7)
Do you think fluoride in toothpaste is beneficial?	a. Yes	34 (8.8)
	b. No	5 (1.3)
	c. Do not know	345 (89.8)

DISCUSSION

Pharmacists and pharmacy have a substantial role in the primary health-care system and hold a great potential to expand their role in oral health promotion.[5] Pharmacist being the frontline of health-care system, customers/patients frequently visit them to seek oral health advice. Excellent communication between a pharmacist and dentist is the best way to provide oral health care. Thus, this cross-sectional study was conducted to explore the knowledge, attitude, and practice of pharmacists on oral health care and oral hygiene products in Jammu district.

In the present study, more number of males (80.9%) was seen working as pharmacist in Jammu district. Similar results were seen in a study done by Gupta *et al.*[4]

In India, community pharmacies are either owned by a single person or attached to government and private hospitals. In addition, there are a chain of pharmacies running all over the country. In the present study, approximately 93% of the pharmacies were owned by individual pharmacists. Similar observations were seen in Gupta *et al.*[4] and Priya *et al.*[3]

Pharmacist being the first line access of the health-care system should know about the nearby dentist so that he/she can refer patient when needed. While assessing knowledge of the pharmacist, it was seen that about 79% of the pharmacist knew that there was a nearby dental clinic. Among them, only about 60% knew the working timings of the dentist. Similar observations were seen in study done by Priya *et al.*,[3] Gupta *et al.*,[4] Bawazir,[6] Hamissi and Hamissi,[7] and Maunder and Landes.[8]

Table 2: Distribution of study subjects according to practice

Question	Options	Frequency (%)
Health problems experienced	a. Toothache	319 (83.1)
	b. Gum problem (bleeding gums)	33 (8.5)
	c. Mouth malodor	9 (2.3)
	d. Ulcers	19 (4.9)
	e. Dental abscess	4 (1.0)
	f. Teething	0 (0.0)
Patients visiting pharmacy complaining about oral health problem	a. <10	289 (75.3)
	b. >10	95 (24.7)
Oral health products available in the pharmacy	a. ≤10%	84 (21.8)
	b. 10–20%	146 (38.02)
	c. >20%	154(40.1)
Different oral health-care products available in the pharmacy: (can tick more than one)	a. Tooth paste	381 (99.2)
	b. Toothbrush	350 (91.1)
	c. Mouthwash	230 (59.8.9)
	d. Dental floss	190 (49.4)
	e. Denture care products	120 (31.2.8)
	f. Others	47 (12.2)
Advice given to the patients	a. Ask to consult a nearby dentist, after dispensing medications	270 (70.3)
	b. Dispense medication (pain killer and antibiotic)	40 (10.4)
	c. Ask to consult a dentist without medication	74 (19.2)

Most of the pharmacists (63.8%) recommended the oral health products based on their personal experiences. Only 89 pharmacists out of 384 recommended the oral health-care products based on the dentist opinion. However, when asked about the benefits of fluoride in toothpaste, approximately 90% of the pharmacist did not know anything about fluoride. This observation shows that there is an immediate need of imparting oral health knowledge to the pharmacist. Regular meetings and seminars imparting oral health information should be conducted for the pharmacists. Interdisciplinary approach is the key to attain oral health care in the district. Further, this lack of knowledge can also be related to less number of pharmacists with master's degree. Approximately 67% of the pharmacists were diploma holders. Similar observations were seen in a study done by Gupta *et al.*[4] and Bawazir.[6]

Knowledge along with positive attitude toward imparting oral health care is very important. Hence, while assessing the attitude of the pharmacist, a total of 61% of the pharmacist expressed their interest in attending more courses or programs. This illustrates that pharmacists are an underused but are potential oral health-care resource. If the investment is put into their training, then they can reasonably be expected to undertake more responsibilities as oral health-care providers. Similar results were seen in studies done by Priya *et al.*,[3] Gupta *et al.*,[4] and Bawazir.[6] Most of the respondents (84.6%) said that financial constraints are the barrier to the patients visiting dental clinics. This is in accordance with other studies done by Gupta *et al.*[4]

Many people visit pharmacies looking for pain relief and medications to rid themselves of toothache, ulcers, and oral health problems.

The most common oral health complaint experienced by pharmacists in the present study was toothache (83.1%) followed by ulcers (4.9%). About 70.3% of the pharmacist recommended these patients to visit a dentist and they were supplied with medications for short-term pain relief. Similar results were seen in studies done by Priya *et al.*,[3] Gupta *et al.*,[4] Bawazir,[6] Maunder and Landes,[8] and Hamissi and Hamissi.[7] It is significant to note that although the most common recommendation of the pharmacist is "to see a dentist," few pharmacists had ever met the dentist nearby, did not know the working times of the dentist. Approximately 10% of the pharmacist dispensed the medications without recommending to the dentist. This might provide a temporary pain relief, but there can be misuse of the medication by the patient. Furthermore, short-term pain relief might mean that the patient will postpone consulting a dentist and, thus an opportunity to diagnose a disease in its early stage may be lost.

While assessing the practice, approximately 75% of the pharmacist said that <10 patients a day visit pharmacy complaining about oral health problem. Similar results were observed in studies done by Gupta *et al.*[4] and Bawazir.[6]

Most of the pharmacies stock a wide range of dental products such as toothpaste and toothbrush.

Assessment of the stocks revealed, nearly 40.1% of the pharmacies had >20% of the oral health products. Toothpaste and toothbrush were available in approximately 99% and 91% of the pharmacies. Similar results were seen in a study done by Gupta *et al.*[4] It is important to

conduct oral health education programs and courses for the pharmacist, so that the pharmacist can discuss the appropriate dental products for a patient's oral health needs and know when referral to a dentist is needed.

This study included a large sample size from different subdivisions of Jammu district. This provided a representative sample that can be generalized. The response rate was satisfactory. The results of the present study rely on self-reported data, thus the information may have been biased through over and underreporting due to social desirability.

Overall knowledge, attitude, and practice among the pharmacists in Jammu district were low. Increasing oral health diseases, along with unevenly distributed dentist in rural and urban areas requires interdisciplinary approach. Pharmacists have long served as the medication expert of the health-care team and, due to their knowledge and accessibility, are frequently approached by the public to answer health-related questions. However, pharmacists are an underutilized resource, and there is a definitive need to improve their training and access to information on available dental services.

The pharmacists exhibited negative attitude and inadequate self-care practices toward oral health. It can be speculated that the average oral health knowledge among pharmacists could be the main reason for such a finding.

Recommendations

1. There is a need for revisiting the pharmacy curricula for undergraduates and more collaboration with dental institutions
2. Tailored oral health programs and education courses should be conducted according to the needs of already established pharmacists
3. Stronger collaborations and interactions among pharmacists and dentists should be established including referral protocols.

CONCLUSION

Our findings suggest that overall knowledge, attitude, and practice of oral health care and oral hygiene products is low among pharmacist in Jammu district. Community pharmacists play a major role in referring and oral health promotions. Thus, collaborations between pharmacist and dentist and better oral health education and training programs may enhance their roles in oral health. This may help reduce the disparities in oral health among the residents of Jammu district.

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How to cite this article: Gupta A, Vaid P, Sharma D, Singh J, Manhas KJ, Jha P, Joshi A. Assessment of Role Played by Pharmacists in Oral Health Care in Jammu – A Cross-Sectional Study. Int J Sci Stud 2020;8(8):88-92.

Source of Support: Nil, **Conflicts of Interest:** None declared.