

## Knowledge and Attitudes of Pharmacists Regarding Oral Healthcare and Oral Hygiene Products in Riyadh, Saudi Arabia

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### How to cite the article:

Bawazir OA. Knowledge and attitudes of pharmacists regarding oral healthcare and oral hygiene products in Riyadh, Saudi Arabia. J Int Oral Health 2014;6(6):10-3.

### Abstract:

**Background:** To assess the knowledge and attitudes of pharmacists regarding oral healthcare and oral hygiene products in Riyadh city, Saudi Arabia.

**Materials and Methods:** A cross-sectional survey among a sample of the community pharmacies in Riyadh city was done. The survey comprised of 23 closed-ended questions divided into five basic sections.

**Results:** A total of 141 pharmacists participated in this survey. About half of the respondents had not met the dentists practicing close to their pharmacies, nor were they aware of the opening times of the practice. Most of the pharmacists stocked oral health-related products, which comprised of 10-15% of their total stock. Toothpaste was the most common among the oral healthcare products stocked, followed by toothbrushes and mouth rinses. A total of 93% pharmacists expressed an interest in further developing their oral healthcare knowledge through course attendance or oral health programs. Toothache or mouth ulcers were the most common dental problem for which patients approached the pharmacists for advice. Pharmacists advised patients complaining of dental pain to consult a dentist in 43% of cases, dispensed painkiller in 44% of cases, and in 13% of cases dispensed an antibiotic.

**Conclusions:** The community pharmacists in Riyadh are under-used in the promotion of oral health. There is a need for training of pharmacists and providing them with access to information on available dental service and oral health products.

**Key Words:** Community pharmacies, oral health advice, oral hygiene products, pharmacists

### Introduction

Community pharmacists have long served as the medication experts of the health care team and, due to their knowledge and accessibility, are frequently consulted by the public and other professionals to answer health-related questions.<sup>1</sup> In today's information-driven society, pharmacists are constantly bombarded with new information on thousands

of prescription medications, nonprescription medications, and dietary supplements, and it is challenging to keep updated.

The role of the pharmacist in oral healthcare has gained importance in view of delivering primary dental care services from the professionals to the public. The pharmacists are in a unique position to disseminate information on oral health, since they are in the frontline of primary source of information to many patients in developing countries.<sup>2</sup> There are a variety of ways by which a community pharmacist can play an active role in oral disease prevention, identification, assessment, and referral. Even though they cannot take over the role of dental professional, they can endorse the advice given by them. Pharmacists can emphasize the nature of dental disease, its prevention, and importance of regular dental checkups and medications.<sup>3</sup> Chestnut *et al.*<sup>4</sup> in his study on dental care advice, products, and information provided by community pharmacists found that they could perform a better role in oral health care through support and education from the dental practitioners. Priya *et al.*<sup>5</sup> based on the outcome of the study, also stressed the importance of training for the pharmacists to access information on available dental services. Anderson<sup>6</sup> highlighted the need for pharmacists to be incorporated into a multi-disciplinary oral healthcare team.

The health care system of many countries relies heavily on the ability of an informed public to self-diagnose certain ailments and symptoms and to treat them successfully and inexpensively with the available nonprescription (over-the-counter) medications.<sup>7</sup> In Saudi Arabia, it is common practice for many people to resort to community pharmacists for advice regarding common medical and dental problems due to lack of time and difficulty in getting an appointment with the physician or dentist.<sup>8</sup>

Till date, there are no reported studies on knowledge, attitude, and behaviors of pharmacists on oral health care products in Saudi Arabia. Hence, the present study was undertaken to assess the level of information and attitude of community pharmacists on oral health care products among a group of pharmacists in the capital city, Riyadh, Saudi Arabia.

**Materials and Methods**

A list of all the registered private pharmacies in Riyadh region was obtained from the Health Directorate in January 2013. Of this, 141 pharmacies were randomly selected for the study by lottery method. The questionnaires were made based on a study by Maunder and Landes<sup>2</sup> and comprised of 23 close-ended questions divided into five basic sections. The first section dealt with the demographic details of the participating pharmacist including age, nationality, qualification, and year of graduation. The second section dealt with the relationship of the pharmacists to the practicing dentists in that area, regarding their timing and their visit to the pharmacy. The third section mainly enquired on the current range of oral health products available and the basis for any particular product recommendations from the dentists. The fourth section dealt with the interaction of the pharmacist to the customers, to the level of attitude and knowledge of the pharmacist on oral health and oral hygiene products and passing on the message to the patient. The fifth section focused on the dental patients attending the pharmacies; their number, common complaints, and advices sought out by them regarding dental problems.

Each pharmacy was visited by a single investigator explaining the participating pharmacist about the study. One pharmacist from each selected pharmacy participated in this study. The questionnaires were discussed and completed by the same investigator. The collected data were analyzed using the Statistical Package for Social Sciences (Version 15.0, SPSS Inc., Chicago, IL).

**Results**

All the pharmacists participated in this study were non-Saudis, and their mean age was 32 ± 5 years. One hundred and twentysix (89.4%) of pharmacists were Egyptians graduated from Egypt. Only three (2.1%) pharmacists in this study had a higher degree than Bachelor of Pharmacy. Eleven pharmacists (9.5%) had no dental clinics near their pharmacies; while 99 pharmacists (85.3%) have 1-3 dental clinics near their pharmacies. More than half of pharmacists (53.9%) have met the dentist working in their vicinity, but only 23 (16.3%) were meeting regularly. Ninety two pharmacists (65.2%) did not know the work time of the dentists near their pharmacies. One hundred and sixteen (81.7%) pharmacists refer patients requiring dental care to the dental professionals.

One hundred and thirty four of pharmacists (95%) reported that oral healthcare products represent 10%-15% of total products of the pharmacy. The oral health products stocked in the pharmacies were assessed and found that toothpaste topped the list followed by tooth brushes and mouthwashes (Table 1). The recommendations given by the pharmacists regarding the oral health products were mainly based on their own personal experiences and response from other patients. Very few recommendations were given based on proper documented information since there is a lack of scientific

knowledge regarding oral health care and products among the pharmacists (Figure 1).

About 98% of the pharmacists were interested in giving oral healthcare advice. However, 112 (80%) pharmacists were keen on improving their knowledge regarding oral health during their academic study. One hundred and thirty two (93.6%) pharmacists also felt that their knowledge could be improved by regular meetings with the dental professionals and training programs. While 39.7% did express concern about the timing of courses and 10.7% mentioned 12 h duty time as a barrier to attend such courses (Table 2). One hundred and thirty five (97.1%) pharmacists believed that they play an important role in improvement of community oral health and 81% of the pharmacists were enthusiastic to participate in oral health promotional activities. Forty eight pharmacists (33.8%) reported 10 daily requests for oral health advice; however, 51 (35.5%) pharmacists reported less than that and 42 (30.7%) pharmacists reported more than 10 requests.

The oral health advice requests by the patients to the pharmacist are presented in Table 3. The most common complaints were toothache, mouth ulcers, and mouth malodor (Figure 2). Forty three percent of pharmacists advised patients complaining of dental pain to consult a dentist, dispensed painkiller in 44% of cases, and in 13% of cases dispensed an antibiotic (Figure 3).

**Table 1: Quantities of stocked oral healthcare products.**

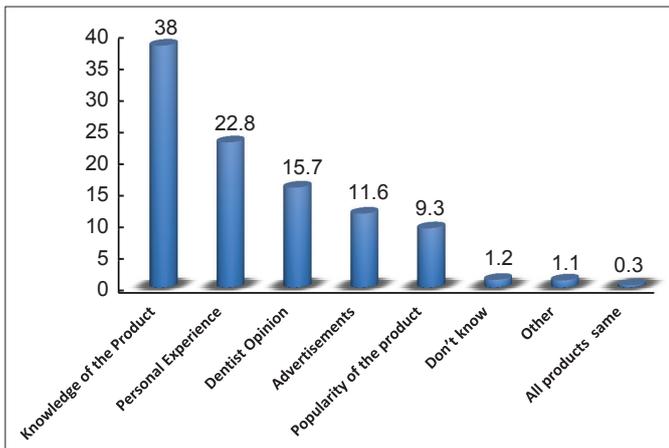
Product	Percentage	Percentage of pharmacists
Toothpastes	30-50	85
Toothbrushes	20-40	92.3
Mouthwashes	10-20	72.9
Dental floss	5-10	90.7
Denture care products	5-10	77.8
Tooth-whitening products	5-10	80.8
Others	0-5	92.8

**Table 2: Barriers preventing pharmacists from attending oral health care courses.**

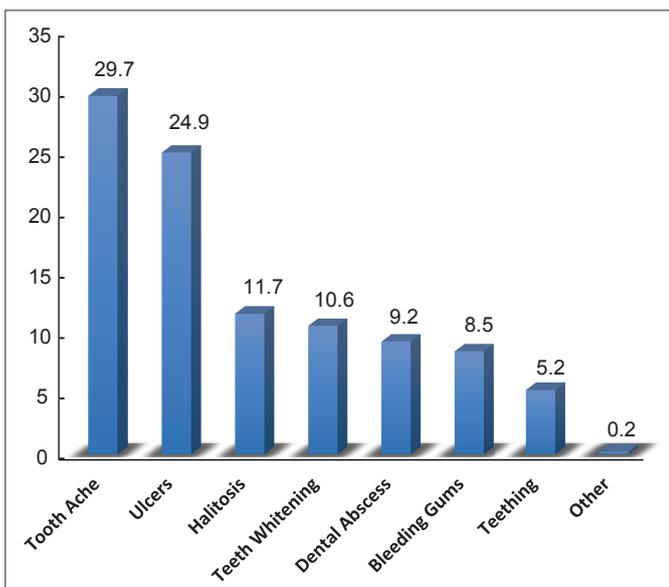
Barriers	Percentage
Timing	39.7
Announcement	27.9
Cost	12.1
Other barriers	10.7
Location	9.6

**Table 3: Percentage of advice requests on oral health reported by pharmacists.**

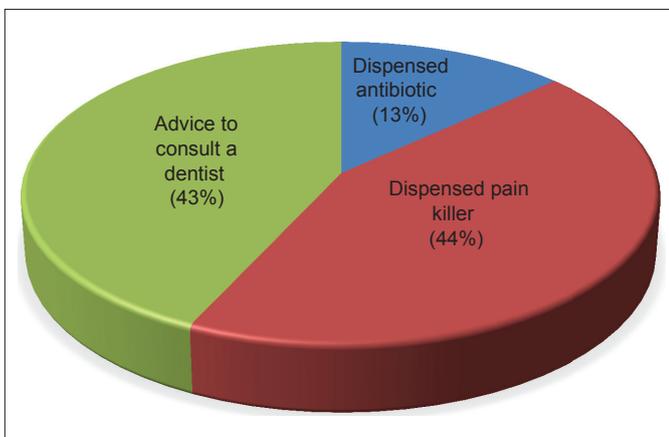
Enquiry	Percentage
Toothache	29.7
Ulcers	24.9
Mouth malodor	11.7
Tooth whitening	10.6
Dental abscess	9.2
Bleeding gums	8.5
Teething	5.2
Other	0.2



**Figure 1:** Factors affecting recommendations for oral health products.



**Figure 2:** Percentage of advice requests on oral health reported by pharmacists.



**Figure 3:** Recommendations given for dental pain.

**Discussion**

Pharmacy is a dynamic profession and pharmacists have long served as medication experts due to their knowledge and

accessibility, and are frequently approached by consumers with health-related questions.<sup>9</sup> The role played by the pharmacist in the delivery of oral health care has not been taken into consideration for many years. From a mere dispenser of medications prescribed by the doctors, their role has expanded to providing basic oral health care advices to the patients. Studies have reported that pharmacists are the second most used source for advice on general health matters and, therefore, can and should also be used in an oral health capacity.<sup>10,11</sup>

In Saudi Arabia, the community pharmacies are either owned by individual, part of a chain of pharmacies spread all over the city, the region or the country or pharmacies that are attached to medical hospitals/clinics. Here, the role of the community pharmacist is limited to dispensing of medications prescribed by the medical/dental professionals without much interaction with the patients.<sup>12,13</sup> The study revealed that pharmacists in-charge of a community pharmacies are non-Saudis.<sup>12</sup> This could be attributed to the fact that most of the Saudi pharmacists prefer to work in the governmental sectors. Usually limited to a single pharmacist in most of the pharmacies, their extended working hours prevent their professional progress due to lack of time and limited interaction with their colleagues and dental professionals.

In the present study, even though 90% of community pharmacies had more the one dental clinic nearby, 50% of pharmacists never met the dentists practicing close to their pharmacies. Similar observations were reported in other studies.<sup>2,5</sup> Assessment of the stocks of oral healthcare products in pharmacies revealed that toothpastes were the most common product stocked which was similar to previous studies. The recommendations of oral health products also depended mainly on the limited knowledge of the pharmacist about the product and their personal experience.<sup>2,5</sup>

In this study, 98% of pharmacists were confident in giving oral healthcare advice which was higher in comparison to other studies, whereas, 93% of them expressed an interest in widening their oral healthcare knowledge by courses or oral health programs given by dental professionals. This finding was consistent with other studies.<sup>2,5</sup> Similar to the long working hours reported in this study, Al-Hassan<sup>12</sup> found most of the pharmacists work about 64 h/week with an average of 9.14 h/day. Most of these issues can be solved by close collaboration of health team members and meetings that can improve team spirit which will be reflected on the delivery of oral health care.<sup>14</sup>

Nearly 65% of the pharmacists in this study provided 10 or more advices per day which was in contrast with the study by Maunder and Landes<sup>2</sup> which showed that the number of people seeking oral health advice from pharmacist were only 11/week. Priya et al.<sup>5</sup> reported that 84% of pharmacists provided advices to <10 patients/day in India. This difference could

be attributed to the information level of the public and the utilization of community pharmacies in developed countries.

Majority of the pharmacists stated that the most common oral health complaints raised by the patients were mouth ulcers and toothache, and most of them were able to be managed by medications given by pharmacists. Only a small percentage of patients were referred to the practitioners. This was similar to the study by Maunder and Landes.<sup>2</sup> However, it is interesting to note that 13% of the pharmacists dispensed antibiotics for toothache without prescription from a dentist.

### Conclusion

The data in the present study showed the important role and contribution of the pharmacist in improving oral health. The pharmacists were willing to improve their knowledge through training programs and promotional materials. The pharmacists trained in oral health can advise the public on the most appropriate choices of dental products and the use of fluoride supplements. Government should take initiatives to help the pharmacists to take a more active and integrated role as part of a primary oral healthcare team.

### Acknowledgment

The authors wish to thank Mr. Nasser Al Maflehi for his valuable help in the statistical analysis and Dr. Ahmed Al-Dafiri for the assistance in data collection. The research was registered with College of Dentistry Research Center (CDRC), King Saud University, Saudi Arabia.

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