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Attitude and practice of pharmacist towards oral healthcare and oral hygiene products: An exploratory study

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The aim of this study was to assess Knowledge, attitude and practice of pharmacists regarding oral healthcare and oral hygiene products in Qazvin, Iran. This is a cross-sectional descriptive and analytical study conducted in Qazvin, Iran. The study group was included of 147 pharmacists who recruited to participate in this study. A self-administered structured validated closed-ended questionnaire was developed for this purpose. Statistic alanalysis were done using SPSS version 22. Of the total study group, 100 pharmacists responded to the questionnaire and participated in the study.35% 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 less than 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 38% 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 55% of cases, dispensed painkiller in 2% of cases, and in 5% of cases dispensed an antibiotic. The community pharmacists in Qazvin 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.

Keywords: Community pharmacies, Oral health advice, Oral hygiene products, Pharmacists

INTRODUCTION

Oral health is a part of general health and so it affects the entire well-being of individuals [1]. It is the cumulative result of both the progressive and relatively diseases-free periods during a lifetime. Recently in public health aspect of medical sciences, the importance of general hygiene has been highlighted. One of the most important fundamentals of general health is oral hygiene. Personal knowledge combined with professional tooth brushing can reduce the progression of dental caries and periodontal disease [2, 3].

Dentists as well as other health professionals realize that oral health cannot be divorced from the general health of the hospitalized patient. Many oral conditions are intimately related to systemic diseases. Optimally, total health care requires the combined efforts of the medical and dental professions [4, 5].Pharmacy is one of active profession which is growing and changing every minute. Pharmacists have very long helped as the medication experts in health care team and due to their knowledge, accessibility are usually consulted by the public and other specialists to response health-related questions [6-8].

The role of the pharmacist in oral healthcare has increased 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 [7, 9].They can emphasize the nature of dental disease, its prevention, and importance of regular dental checkups and medications. 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 [10-11].

Based on the outcome of the several studies, also stressed the importance of training for the pharmacists to access information on available dental services [11-14].In Iran, its common practice for some people to visit pharmacists for assistances regarding ordinary medical and dental problems and counsels for oral health and dental products due to lack of time and difficulty in getting an appointment with the physician or dentist .Till date, there are no self-reported studies on knowledge, attitude, and behaviors of pharmacists on oral

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health care products in Iran. Therefore, the present study was undertaken to assess the level of information and attitude of pharmacists on oral health care products in Qazvin, Iran.

METHODOLOGY

Study design, settings and study subjects

This is a cross-sectional survey conducted among pharmacist in Qazvin, Iran. The study commenced in July-2012 and continued for two weeks. A list of all the registered private and community pharmacies in Qazvin region was obtained from the food and drug department of Qazvin University of Medical Sciences was prepared. The pharmacies' could be broadly divided into two types: those owned by individual pharmacist; those pharmacists that were attached to hospitals from the list. Out of one hundred forty seven, one hundred pharmacists (community hospital and private pharmacists) were included in the study with a response rate of 68%. Each pharmacist was asked to fill a validated structured questionnaire delivered by hand. The participated pharmacists (community &hospital and private pharmacists)were from independent and as well as from different hospitals (public and private hospitals).Two hospitals in Qazvin were covered, while the community pharmacies coverage represented about 2 % of the total number of pharmacies in Qazvin.

Questionnaire

We used a Priya S questionnaire that designed with an 18-item self-administered assessing [12].Content validity was assessed by distributing the questionnaire to 10 pharmacists recruited to complete the validation process. The initial draft of questionnaire was hand delivered to those pharmacists to help review the structured questionnaire and perform any alterations needed. The questionnaire comprised 18 closed-ended questions that had been earlier pre-tested on a group of pharmacists. One pharmacist from each selected pharmacy participated in this study. Each pharmacist took around 15 min to complete the questionnaire. The questionnaire was divided into four sections: section I dealt with details regarding the vicinity of the dentist to the pharmacy, their appointment details, and the frequency with which the pharmacist met the dentist. Section II focused on the range of dental products stocked in the pharmacy. Section III dealt with the advice given by the pharmacist to customers regarding oral hygiene products and oral health, while section IV dealt with the pharmacist's source of information regarding oral health and oral hygiene, the barriers faced by them, and also methods to improve their knowledge and attitudes regarding oral health. Data was collected by a single investigator, who personally met the pharmacists and explained to them the purpose of the study. The completed questionnaire was collected by the same investigator.

STATISTICAL ANALYSIS

Data were analyzed using statistical package for social science version 22 (SPSS, Inc., Chicago, IL, USA). The descriptive analysis was done using mean and SD for continuous variables and percentage for qualitative variables. Pearson Chi-Square was used to calculate p-values for categorical variables.

RESULTS

Among the 147 pharmacies approached, 100 pharmacists participated in the study and completed the questionnaire. Among them, 96 pharmacies were owned by persons, and the rest were attached to hospitals and else. The mean number of years of practice of the pharmacies was around 22.2 years. Fifty eight (58%) pharmacists who participated in the present study said that there were less than four dentists practicing within 5 km of their pharmacies and 14% felt that there were five to nine dentists practicing near (within a 5 km distance) their pharmacy. When asked whether they had met the dentists practicing close to their pharmacies, only 66 (66%) pharmacists gave a positive answer. Among them 62% had met the dentist less than six times in the past one year on a regular basis. 32 percent of the pharmacists said they did not meet the dentist at any fixed time interval. Nearly 54 pharmacists (54%) who participated in this study gave a negative answer when asked whether they had tried to interact with the dentist regarding oral health. Similarly, 84 (84%) of the participating pharmacists were not even aware of the appointment arrangements of the local dentist. Less than 15% of the total stock was related to oral health in 54% of the pharmacies. 27% of the pharmacist had oral health-related products in the range of 15-25% of the total stock. Toothpaste was the most common (68%) among the oral health care products stocked, followed by mouth rinses (10%). Toothbrushes contributed to around 20% of the total stock. Forty-five pharmacists (45%) said that around ten patients with dental problems visit their pharmacies every day. Among them, nearly 67%

ask the pharmacist for oral health-related advice. Toothache is the most common dental problem (81%) for which patients approach the pharmacist for advice; this is followed by gum problems like bleeding gums and/or bad breath and mouth ulcers. Patients seldom seek advice regarding toothbrushes, toothpastes, whitening of teeth, etc.

Though 22 (22%) of the participating pharmacists ask the patient to consult a nearby dentist after dispensing medications, 7 (7%) dispensed antibiotics and painkillers without any referral to a nearby physician or dentist.53 (53%) pharmacists said that they just ask the patient to consult a nearby dentist, without dispensing drugs.39 percent of the pharmacists feel that financial constraints are the reason for patients approaching a pharmacist (instead of a dentist) for oral health care advice. A few (24%) feel that patients approach them for advice because of the difficulty in getting appointments with the nearby doctor/dentist.

Twenty-three percent of the pharmacists give advice based on their comprehensive knowledge of the products available. An equal number give advice based on the suggestions/instructions from the local dentists/doctors. When asked whether fluoride in toothpaste is beneficial, nearly 14 (14%) pharmacists were unaware of the benefits. 86% were aware of the benefits, while 14% felt that there was no benefit in the presence of fluorides in toothpastes. ninety percent of the pharmacists were aware of the different types of toothbrushes present in the market.

The majority of the participating pharmacists, i.e., 85(85 %) in number, expressed interest in giving oral health care advice to patients. However, some of them (8%) feel that lack of proper knowledge is a barrier to providing oral health care advice. 33% feel that oral health care and details regarding oral hygiene products should be made a part of their curriculum. Information disseminated through leaflets/pamphlets/posters was the preferred choice of many pharmacists for improving their knowledge regarding oral health. However, 39% also feel that their knowledge could be improved by oral health care courses, meetings, and training programs.

Demographics

The demographic details of the pharmacists included. The mean age of pharmacist was approximately 22.2 years, and the average year of experience was 22.8years and their mean age was50 ± 9 years. In this study, 96% of pharmacists were community pharmacists while 4 % were hospital and else pharmacists. Females accounted for 31.6% of pharmacists.

DISCUSSION

Teamwork is now predictable as a key idea in the delivery of oral health care. Although this is most often discussed in the context of members of the 'dental team,' this role played by pharmacists and has expanded significantly in recent decades from distributor of medication to known member of the health care team. Rather than consult a dentist or physician, many individuals with oral problems seek help from their pharmacists [15]. Therefore, this investigation was done to find out their knowledge and attitudes regarding oral health and oral hygiene products. To the best of our knowledge, this cross-sectional survey is the first study to evaluate this issue in Qazvin.

The role of 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. In many studies have been reported that pharmacists has the second most used source for advice on general health matters and therefore, can and should also be used in an oral health capacity [16, 17].According to this current study, 90% of community pharmacies had more than one dental clinic nearby, 34.7% of pharmacists never met the dentists practicing close to their pharmacies. Similar observations were reported in other studies [18, 12]. 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 [18, 12].

Most of the pharmacists specified that the greatest common oral health complaints raised by the patients stayed mouth ulcers and toothache, and greatest of them were able to be managed by medications given by pharmacists. Only a small percentage of patients remained referred to the practitioners. This was similar with study by Maunder and Landes [18]. However, it is interesting to take note that 5% of the pharmacists distributed antibiotics for toothache without prescription from a dentist. At top of the list for dental problems of the patients were toothaches or painful teeth, which may seek advice from the pharmacist. This is similar to the findings of the study [18]. Most of the pharmacists referred the

patients to the nearby dentist after dispensing medications for short-term pain relief. However, it is interesting to note that nearly 7% of the pharmacists dispense antibiotics and analgesic and do not refer the patient to a dentist or physician. This is a matter of concern since short-term pain relief might mean that the patient will postpone consulting a dentist or physician and, thereby, an opportunity to diagnose a disease in its early stage may be lost.

Our study showed that most of the respondents felt that financial constraints were the main reason for patients approaching the pharmacist for advice. The results of the present investigation firstly demonstrated that the majority of pharmacists have inadequate knowledge and lack of awareness. This study explored the urgent need for educational programs to emphasize the role and responsibility of pharmacists in oral health. Most probably, all these perceptions, attitude and behaviors could be changed significantly by proper educational programs. Nevertheless, we are aware of some methodological weaknesses of our study; as the questionnaire relied on pharmacists' self-rated assessment of their own practice and attitudes, pharmacists might have felt stressed into completing the questionnaire or might have been unwilling to reveal their practice deficiencies. Also the research has been conducted over a short period of time, which might shed doubt on the objectivity of the responses and introducing some over estimation in both pharmacist's knowledge and attitudes.

CONCLUSION

Pharmacists already provide some amount of oral health advice and they are keen to expand their knowledge. Patients regularly ask for their advice on both general and oral health care issues. They are presently an underused resource, and it is only now that they are beginning to get the recognition they deserve. There is a definitive need for training of pharmacists and providing them with access to information on available dental services.

These results suggest that Iranian pharmacists have little knowledge about the concept and process of oral health. However the pharmacists had positive attitudes toward oral health, but educational programs are needed to increase pharmacists' role and their knowledge about it.

RECOMMENDATIONS

Pharmacists have long served as the medication experts of the health care team and, due to their knowledge and accessibility, are frequently approached by the general public and other professionals to answer health-related questions. In this context, the recommendations by Maunder and Landes (18) need to be considered for improving the oral healthcare provision by pharmacists; these recommendations are:

1. Setting up of regular multidisciplinary and primary care team meetings.
2. Funding for more opportunities for continuing professional development, such as oral health courses.
3. Funding for information leaflets, especially during national oral health campaigns.
4. A list of key contacts within the area of practice to be provided to pharmacists for advice regarding tobacco cessation, clarifications regarding oral health, etc.
5. Support for window displays, especially about targeting health issues, including oral health.

The above recommendations would enable the pharmacist to follow the correct procedures agreed upon at the local multidisciplinary meetings. They would however have to be validated to meet national standards.

Limitations of the study

This study is a self-reported questionnaire based study. Therefore, in the present study, the subjective self-reported information should be carefully evaluated.

Assessment of practice by direct observation could add insight and reflect adherence to national infection control guidelines

Conflict of interest: None.

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