

Original Research Article

Prevalence of self-medication among adult patients suffering from dental pain

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Abstract

Introduction: Self-medication is commonly practiced all over the world. Several risks like misdiagnosis, drug resistance or increased pathogen resistance, use of drugs in excessive amounts, use of expired drugs, long time use, drug interactions and poly-pharmacy occur in self-medicating people. **Aim:** to determine the prevalence of self-medication and to determine factors associated with these practices in adult patients suffering from dental pain. **Methods:** It was an observational cross sectional survey. After meeting the inclusion and exclusion criteria's, a total of 200 participants were included in the present study. A self-administered closed-ended questionnaire was developed by reviewing different studies and necessary changes in the questionnaire were made accordingly after performing a pilot study. As the participant filled the questionnaire he/she was counselled regarding self-medication and the completed questionnaire, was collected. After collection of data it was checked for omissions and mistakes and the results were tabulated and analysed. **Results:** 178 (89%) were self-medicated. 84(47.2%) were males and 94(52.8%) were females. The age of the patients varied between 18-60 years and majority belonged to the age group of 25-35years. 86 (48.3%) of the respondents had attained higher level of education. 96 (51.3%) of the patients self-medicated because of pain which was in some cases unbearable. Most common source of self-medication in our study sample was family/friend advice (42.6%), followed by pharmacist (21.3%). Maximum of 97(54.4%) self-medicated with non-steroidal anti-inflammatory drugs/ painkillers. 129(72.4%) of the participants were not aware of the harmful effects of self-medication. **Conclusion:** We observed high prevalence of self-medication in our study. The people should be educated about the dangers of indiscriminate use of drugs. Drug control policy needs to be intensified in the community as well regarding prescription and availability of drugs.

Keywords: Dental Pain, Drug Control Policy, Drug Resistance, Self-Medication.

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Introduction

Self-medication is defined as the use of medication by a patient on his own initiative or on the advice of a pharmacist or a lay person instead of consulting a medical practitioner. This includes acquiring medicines without a prescription, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle or using leftover medicines stored at home. The sources of self-medication include suggestions from advertisement in newspapers, popular magazines, television, and radio or through social media. Advices from families, friends, neighbours, pharmacists or from previously prescribed medications.[1,2] Self-medication is commonly practiced all over the world. The prevalence of self-medication varies from place to place depending on the study population and the age group under consideration. Numerous studies have reported that self-medication is a common behavior in both developed and developing countries. It has become widely accepted that self-medication has an important place in the health care system. Improvements in people's general knowledge, level of education and socioeconomic status in many countries form a reasonable basis for successful self-medication.[3]

European countries have reported the frequency of self-medication for general health issues to be 68% - 78%. Asian countries, such as Saudi Arabia, Kuwait, Pakistan, and Bahrain have reported frequency of 80% - 94.5%.[4] Furthermore, the prevalence of self-medication in African countries such as Cameroon, Nigeria, and Egypt has been reported to be as high as 80% - 100%[2,5] and in Palestine is 98%. Headache, cough, fever, and pain were the most common issues for practicing self-medication. Self-medicating for oral health problems, in Indian and Nigerian populations has been reported as 100% and 80.6%, respectively.[6]

The medications that are usually used for self-medication are termed as "non-prescription" or "over the counter" (OTC) drugs. These drugs must be administered on the basis of authentic medical information. WHO has encouraged the responsible practice of self-medication in rural and remote areas for effective and quick relief of some common diseases where health care personnel or services are understaffed, deficient or inaccessible.[7]

Benefits of Shifting toward self-diagnosis and medication instead of seeking proper professional healthcare advice include lack of time, money, or accessibility of healthcare services. A responsible self-medication practice may even help to reduce the cost of treatment, travelling time as well as doctor's consultation time.[8] However Several studies on the subject show that there are risks like misdiagnosis, drug resistance or increased pathogen resistance, use of drugs in excessive amounts, use of expired drugs, long time use, drug interactions and poly-pharmacy in self-medicating people.[9,10]

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In dental practice, dental conditions such as toothache, gingival bleeding, discomfort, and halitosis are among the other reasons for self-medication. Toothache is very agonizing experience and those who experience pulpalgia seek relief through medical counselling, complementary therapies, self medication or application of clove oil, tobacco and tablets Aspirin. Furthermore, recent studies have also shown that as much as 70% of all patients with dental pain still complain after self-medicating with analgesics.[11,12]

The objective of this study was to determine the prevalence of self medication and to determine factors associated with these practices in adult patients suffering from dental pain.

Material and Methods

This was an observational cross sectional survey in which, the study population consisted of the dental patients coming to the OPD of the Institute. Ethical approval was obtained from before the commencement of the study from the concerned ethical committee of the institute. The definition of self-medication was explained to the participants as well as the objectives of the current study. They were assured of the confidentiality of their personal information and after which an informed consent was taken from all participants.

All the patients who were willing to participate and above 18 years of age, non diseased were included in the study. Those persons who were below 18 years of age and not willing to participate in the study were excluded from this study. The survey was conducted using the non-probability convenient sampling technique. After meeting the inclusion and exclusion criteria's, a total of 200 participants were included in the present study.

A self-administered closed-ended questionnaire was developed by reviewing different studies and necessary changes in the questionnaire were made accordingly after performing a pilot study. The questionnaire was written in local language. The questionnaire

consisted of 18 questions under following sections: (1) the first section compiled all the Demographic information regarding age, gender, marital status, religion. (2) Second section focused on specific questions regarding self care medications practices by individuals for managing tooth pain. These questionnaire helped us to collect information on presenting complain, duration of self-medication, reasons for resorting to self-medication, drug(s) used for self-medication, source of the drug(s), type of self-medication and dose taken, knowledge about the side effects of drug(s) used, awareness of the consequences of self-medication.

As the participant filled the questionnaire he/she was counselled regarding self-medication and the completed questionnaire, was collected. After collection of data it was checked for omissions and mistakes and the results were tabulated and analysed.

Statistical Analysis:

Data was collected in Microsoft excel and were analyzed with the SPSS version 21. Data were presented as frequencies, percentages, mean, and standard deviations. Comparative statistics was done using Fisher's exact test, and $P < 0.05$ was considered as significant. . Bar and pie charts were also used to give the graphical presentation of the results.

Results

The results showed that among 200 participants who presented with dental pain 178 (89%) were self medicated. 84(47.2%) were males and 94(52.8%) were females. The age of the patients varied between 18-60 years and majority belonged to the age group of 25-35years (figure 1). 86 (48.3%) of the respondents had attained higher level of education, 59(33.1%) attained secondary level of education, 28 (15.7%) attained primary education and 5(2.8%) were uneducated.

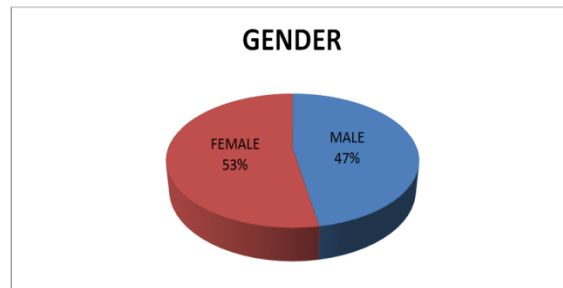


Fig. 1: Gender distribution

When asked about reasons of self-medication, 96 (51.3%) of the patients self-medicated because of pain which was in some cases unbearable, 58(32.5%) because of lack of time to consult a dentist, 24(11.2%) because of financial difficulties, 11 (6.1%) due to fear of going to dentist, 9(5.1%) did not mention any specific reason. (Figure 2)

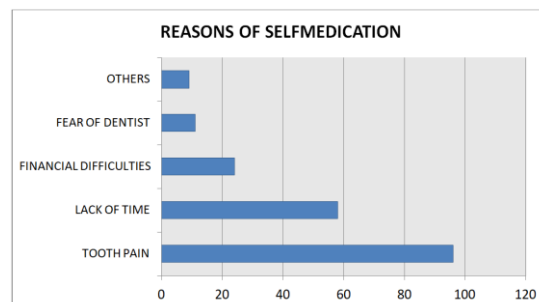


Fig. 2: Reasons of selfmedication in the present study

Most common source of self-medication in our study sample was family/friend advice (42.6%), followed by pharmacist (21.3%), old prescription (16.2%) and self knowledge (6.7%). (Figure 3)

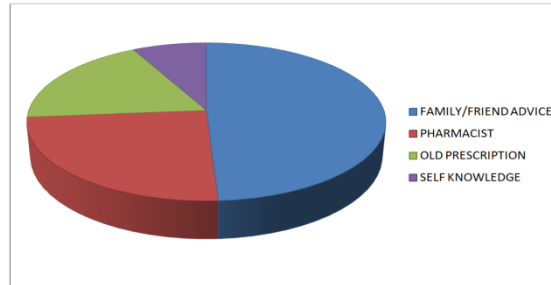


Fig. 3: source of selfmedication

Next in the study when inquired about the type of drug used for self-medication, maximum i.e. 97(54.4%) self-medicated with non-steroidal anti-inflammatory drugs/ painkillers, 61 (34.2%) used antibiotics, 8(4.4 %) used homeopathic medicine while 12 (6.7%) used home medications/ remedies like herbs followed by herbs and usage of salt in hot water. (Figure 4)

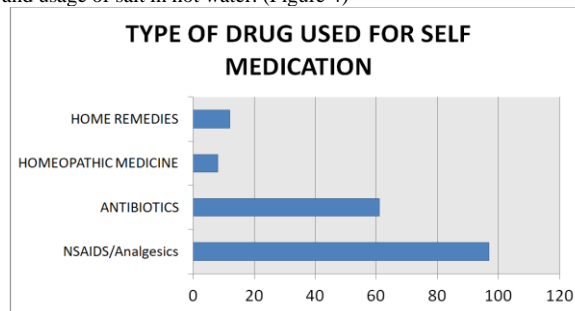


Figure 4: Type of drug used for self medication

Most common self-administered drug as reported by the participants was paracetamol in 72 (40.8%) followed by 42 (23.5%) amoxicillin and ibuprofen in 15 (8.4%) cases. We observed that 129(72.4%) of the participants were not aware of the harmful effects of self-medication, while 49 (27.6%) were aware of the adverse effects of self-medication like allergies, gastric upset and antibiotic resistance.

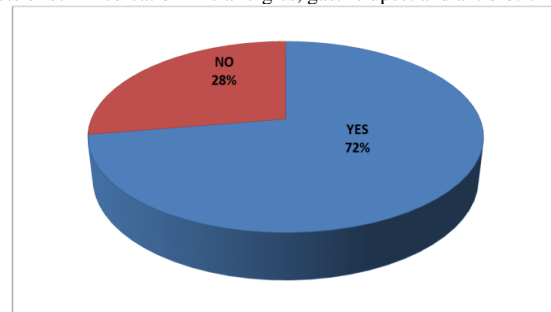


Fig. 5: Awareness about harmful effects of self-medication

Further, when asked about their opinion on visiting a dentist rather than self-medication, majority i.e. 142 (79.7%) were of the opinion that they should visit a dentist, 32 (17.9%) reported that they should only visit dentist when the problem is severe and lastly 4 (5.1%) said that there was no need to visit a dentist.

Discussion

Although it is true that self medication can help treat minor ailments that do not require medical consultation, but the practice of self medication often has many adverse effects and can lead to many problems, including Multi-Drug Resistance, dependence and addiction. This finding supports the global reported prevalence in the literature, 100% in another study from India[2], 80.6% in Nigeria[5], 80% in Saudi Arabia[13] and 21.7% in Brazil.[12]

In the present study, females were found to be significantly more self-medicating than males.in similarity Arwa Aldeeri et al[14] and Anmol Zahoor et al[15] also reported similar findings. However, in another study among Saudi patients, self-medication using antibiotics

only were significantly higher in males than females, 63.8% and 16.5%, respectively.[12]

The results of the present study showed that 178 (89%) participants self medicated themselves during dental pain which is quiet high. The worldwide self-medication is increasing day by day which is increasing the complexities in the medical treatments. As for the triggers for practicing self-medication toothache was the main trigger in the present study.

The types of drugs used varied depending on the respondents' perception of efficacy of a drug for their medical condition. It is understandable that a significant proportion of the respondents used analgesics either alone or in combination with other drugs without prescription as common analgesics can be bought without prescription in the community.

Family/friends were the main consultants for taking self- medications, followed by relatives and friends in our present study. Pharmacist play a key role in giving advice to consumers on the proper and safe use of medicinal products intended for self

medication. Many reasons were claimed by the participants for practicing this behaviour among which of pain which was in some cases unbearable was the most common reason followed by lack of time to consult a dentist; financial difficulties and fear of going to dentist were common.

In a similar study by Arwa Aldeeri et al prevalence of self-medication was found to be 63.25%, with a higher prevalence among females than males. Salt in hot water locally and acetaminophen were, systemically, the most frequently used. Pharmacy shops were the main source of these medicaments. Similarly, the advice for using them was mainly given by pharmacists. Lack of time was claimed to be the main reason for practicing self-medication (54.55%) with abscess, toothache, and gingival bleeding being the main predictors.[14]

Similarly, Komalraj M.R et al reported the prevalence of self-medication was 100% among dental patients. Among reasons of self-medication, minor illness (36.6%) was the most common, with Toothache (52.6%) as the main triggering factor for self-medication. Analgesics (48%), Native herb (29.7%) were often used for treating their oral health problems. Majority of the subjects consulted pharmacist (40.6%) for basic treatment and they only approach dentist (84.6%) if the problem persisted. Majority of self-medication users for oral health problems had knowledge of checking expiry date of medications while self-medicating.[2]

In yet another recent study by AlQahtani et al, 70.7% respondents indicated that they practice self-medication. Among those who practiced self-medication for oral health problems, the mean age was 26 ± 9.4 years (52% men and 48% women), and the majority (46%) had obtained higher education, although their profession was not related to the medical field (69.97%). The most common factor that triggered self-medication practices was toothache (56.5%), while the main reasons for self-medication were both lack of time to visit a dental clinic (37.6%) and the perception that dental ailments were not serious health issues (36.8%). Analgesics were the main medicines used for self-medication.[16]

Similarly, Mbanya NE et al also reported that 73.8% of the respondents admitted to had self-medicated, with a female predominance (62%). The most frequently used drugs were non-steroidal anti-inflammatory drugs (36.5%) and analgesics (33.2%). Reasons for self-medication were unbearable pain 108(38.5%), financial difficulties 80 (28.4%), lack of time to consult a dentist and long waiting hours at the dental office 53 (18.8%). 71.2% of the respondents practised irresponsible self-medication and 28.9% practised responsible self-medication. The sources of medications included pharmacy 45.2% and non-pharmaceutical establishments such as previously prescribed medications at home 38.5%. 26% were aware of complications of self medications such as gastric ulcers, drug resistance, allergies and overdose.[17]

Conclusion

Therefore in conclusion we can say that our study shows high prevalence of self-medication. As the worldwide self-medication is increasing day by day, it is increasing the complexities in the dental treatments. The people should be educated about the dangers of indiscriminate use of drugs. Drug control policy needs to be intensified in the community as well regarding prescription and availability of drugs.

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