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Trends of Self-Care Remedies among the Patients with Dental Pain: A Cross-Sectional Study

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ABSTRACT

Background: The recent trend of self-care remedies and self-medication for dental pain is influenced by various factors. The use of self-care medications and remedies among the public, without fearing the adverse effects has increased since the outbreak of the pandemic of Covid-19.
Objectives: Objectives was to evaluate the trends of self-care remedies among patients with dental pain, side effects, potentiating factors for self-medication, and awareness of patients towards it.
Materials and Methods: A cross section study was conducted in 2022 on patients with dental pain over six months. Pre-validated questionnaire using a convenience sampling technique was used for data collection. Data analysis was done using SPSS version 22 and results were presented in the form of percentage and frequency.
Results: A total of 340 participants were included with the mean age of 36.11±11.69. A slight predominance of females 56.8% as compared to males 43.2% was found. Self-medication was prevalent being more common in 3rd decade of life. Most of the participants (57.4%) used antibiotics and analgesics in combination for the relief of dental pain followed by cloves (41.8%). The main reasons for self-medication were temporary relief (81.2%), lack of time (31.5%) and costly dental procedures (24.7%). Pharmacists were the chief source of information for people who do self-medication.
Conclusion: Self-medication was prevalent in 3rd decade of life with a predilection for females. Lack of time, the high cost of treatment/dental procedures, and temporary relief were the main reasons for self-medication and pharmacists was the mainly knowledge sources.
Keywords: Dental pain, Home medications, Home Remedies, OTC drugs, Self-care, Self-medication.

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INTRODUCTION

Patients nowadays take an active role in using self-care remedies or medications (a universal phenomenon) to circumvent their dental issues to avoid dental visits and expenditures. This has become a very common practice around the globe.[1] Dental diseases are a major public health burden despite having dental workforces in the world. The poor people encounter dental pain frequently and are rarely concerned about their dental visits which suggests that rural areas are greatly affected by oral diseases.[1] Self-medication is related to those patients who tend to diagnose their illnesses and treat them to avoid doctor's visits considering it unnecessary.[2]

Self-care remedies for dental cures are in patient's reach or easily available in their kitchen counters like turmeric, green tea, capsaicin, vanilla extract, salt water rinses, hydrogen peroxide, clove oil, peppermint oil, garlic, guava leaves, and thyme, etc.[3] Herbal remedies for relief of discomfort should also be followed after a dentists recommendation as they can affect pregnant females, breastfeeding mothers, or people with other underlying disorders.[2] The students, the well-educated sector, and the youth are also exposed to this plague in great numbers via media and advertisements that promote self-medication as an emerging trend.[4]

William Osler once stated that “a desire to take medicine is perhaps a great feature which distinguishes man from animals”.[5] Self-medication is practiced all over the world now mostly affecting developing countries due to the high availability of drugs and painkillers.[6,7] Practices like Self-medication in certain countries are influenced by factors such as age, literacy, gender, family, society, income, nature of the profession, past experiences, and media.[8,9]

Dental pain and toothache are the most common orofacial complaints which can be a very distressing situation, people try alternative ways for pain relief.[10] Self-medication is practiced mainly by people who are self-conscious or health-conscious therefore online drug dealing has become increasingly common nowadays across the world where people including students who have better access to technology can order drugs with ease.[3,10]

The practices trending were of different frequency, up to 68% in European countries, 31% in the Indian subcontinent, and 59% in Nepal.[11] Self-care medication is also of high prevalence in Brazil as a cause of advertisements of drugs without displaying their adverse effects.[9]

In a study by Simon and colleagues, 30% of patients used self-medication consisting of 42.5% Analgesics,14.2% traditional medicines, and 10%

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antibiotics.[12] Another research reported that 69.9% were involved in self-medication practices.[6] A higher percentage of 73.8%, who practice self-medication were also reported with a predominance of females being 62%. The most commonly used drugs were NSAIDs 36.5% analgesics accounted for 33.2%, and antibiotics 17.6%.[8] According to a similar study 80% of patients picked self-medication out of which 30% claimed instant pain relief, 50.8% agreed on Analgesics to be the most effective drug group and 51.7% were unaware of the side effects of self-medication.[7]

Self-medication is also a growing problem among university students around the globe and according to a study it was 92.3% in Slovenia, 38.5% in Ethiopia, 94% in Hong Kong, and in Palestine it was considered to be 98%.[5] Another study reported self-medication using OTC drugs (64.7%) while only 8.85% of people received conventional dental treatment.[11]

The literature revealed reasons for self-medication including financial constraints, lengthy dental visits, unavailability of the dentist, anxiety about dental visits, ignorance, distrust in dentists and religious beliefs. Many also considered traditional medication as a better option.[3] The literacy rate had a direct relationship as the illiterate and uneducated subjects were more comfortable with self-medication practices.[8,10]

Public making use of self-care medications and remedies without fearing the risks has increased in numbers since the outbreak of the pandemic in recent years. It is necessary to know the remedies used by them to relieve dental pain. It is also paramount to aware patients regarding the risks of self-care remedies which include drug toxicities, drug dependence, overdose, liver failure, microbial resistance, nausea, diarrhea, etc.[5,12,13]

This study was planned to evaluate the trends of self-care remedies among patients with dental pain and to intensify the grasp and understanding regarding the self-care remedies, the medications used, risks and side effects, potentiating factors for self-medication, specially after covid 19 pandemic and awareness of patients towards it.

MATERIALS AND METHODS

A cross section study was conducted in-March 2022 to August 2022 on patients presenting with dental pain at Islamabad Dental Hospital, Islamabad. The ethical approval was sought from the IRB of the said institution through reference no IMDC/DS/IRB/129 dated 9th Feb 2022. A sample size of 339 was calculated with the WHO sample size calculator using a 33.8% prevalence of herbal remedy (clove oil)[6] used for dental pain and considering the population of Barakahu which is 0.9 million.[14] Data was collected by a pre-validated questionnaire[8] using a convenience sampling technique. After consent from participants, researchers asked the questions and noted in the proforma. Participants who did not give consent were excluded from the study. Incomplete forms were also excluded.

Questionnaire consist of two parts demographic part and second part include information regarding self care remedies in seven questions. After data collection, the questionnaire responses were used to assess the trends and reasons for self-care remedies. Descriptive analysis using SPSS version 22 was done to calculate frequency and percentages for qualitative variables and means and standard deviation for quantitative variables. The results were presented in the form of tables and figures.

RESULTS

The study included a total of 340 participants. The mean age of the participants was 36.11±11.69 with the range from 8 to 70. Gender distribution showed a slight predominance of females 56.8% as compared to males 43.2%.

Occupation distribution showed that most of the participants were non-working housewives followed by individuals involved in jobs as shown in Figure 01.

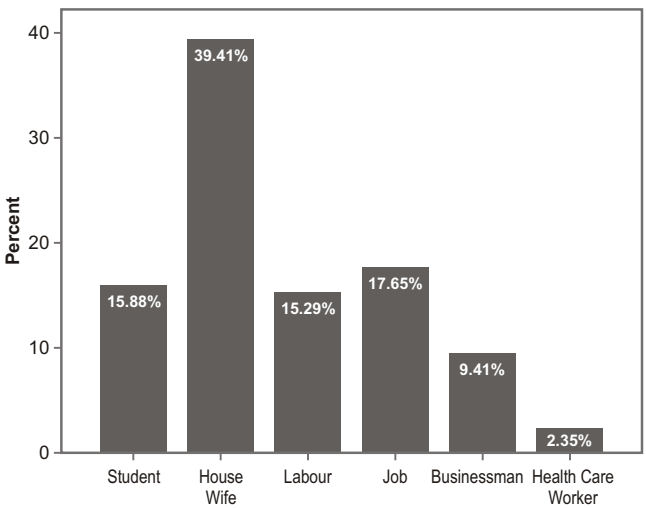


Figure 01. Occupation distribution

Education status showed that the participants who were Ill-literate were 29.12%, Primary 16.76%, Secondary 30.29%, University 13.53%, and Islamic education was 0.29%.

Different remedies were used by participants for the relief of dental pain. Most of the participants (57.4%) used antibiotics and analgesics in combination for the relief of dental pain followed by cloves (41.8%) as shown in Table 01.

Table 01. Type of self-remedies used for relief of dental pain.

Self-Remedy	Frequency	Percentages (%)
Analgesics	117	34.4
Antibiotic	12	3.5
Analgesic & Antibiotic	195	57.4
Cloves	142	41.8
Saltwater Gargles	37	10.9
Tobacco	4	1.2
Ice Pack	35	10.3
Homeopathic	2	0.6
Spiritual	61	17.9

Most of the participants (51.8%) used self-remedy only once a day. The rest of the participants used twice a day (23.5%), thrice a day (12.06%), once a week (4.12%), and once a month (8.52%).

Temporary relief (81.2%) and lack of time (31.5%) were the most common reasons to use self-remedies as shown in Table 02.

Table 02. Reasons for the use of self-remedies

Factor	Frequency	Percentages (%)
Lack of time	107	31.5
Temporary Relief	276	81.2
Personal Preference	20	5.9
Lack of Services	23	6.8
High Cost	84	24.7
Distant	29	8.5
Previous Experience of Same illness	20	5.9
Others	3	0.9

Most of the participants got the information from pharmacists (52.1%) regarding self-remedy followed by parents /relatives (35.3%) as shown in Table 03.

Table 03. Source of information on self-remedies for dental pain

Source of Information	Frequency	Percentages (%)
Personal Knowledge	47	13.8
Pharmacist	177	52.1
School / College	17	5.0
Dentists	39	11.5
Parents / Grand Parents / Relatives	120	35.3
Friends	46	13.5
Mass Media / Internet	9	2.6
Others	2	0.6

Most of the participants (70.9%) reported that self-medication is not hazardous. Many participants (42.4%) encountered adverse reactions after using self-remedy among which stomach issues (83.7%) were the most common. Other included were Bad Taste (10.9%), pain (1.4%), and teeth discoloration (0.7%).

DISCUSSION

The present study assessed the prevalence and drawbacks of self-medication practiced among dental patients. Dental pain is a discomforting and emotionally distressing situation for which people may not always seek relief by visiting the dentist and practicing self-

medication. Usage of over-the-counter drugs remains common in developing countries because of unavailability of resources, lack of time, and dental procedures are time-consuming with multiple appointments.[2]

The mean age of participants was between the second and fifth decade as shown in the previous study.[3,15] This can be due to snacking and a cariogenic diet.

Self-medication has become a very common practice among the public and according to the present study, it had a male predilection as reported by others.[16] However, this result is not consistent with many studies.[5,6,8]

Self-medication was also found as a common practice among participants who were educated till the secondary level (30.29%) which was followed by uneducated respondents (29.12%.) These findings are opposite to the study by Joan & Mercy[11] and observed mostly in uneducated individuals.

Self-medication was observed in all the fields regardless of the profession. Some of those fields included: business, the education sector, and labor work which is like a previous study.[1-4] Most commonly used drugs belong to the antibiotics/analgesics group (54%) followed by analgesics alone (34%). This is in confirmation to many studies such as Zareef et al,[6] Mbanya et al,[8] and Karthik et al.[7] However this result does not support research conducted by Halawan et al,[17] indicating more use of antacids and antipyretics. Our results were like a previous study conducted in Karachi, Pakistan.[6] The frequent use of self-medication was common as they were unaware of the side effects and the ease of availability of the drugs without prescription.

Lack of time, temporary relief, and high cost account for the most common factors to begin self-treatment, which is in association with a study.[6] A study reported previous experience of treating similar illnesses as most common factor.[18] Economic reasons, need for emergency relief, ease, convenience, and financial difficulties were also a part of other studies.[2-4]

Participants got to learn about self-medication from a variety of sources among which pharmacists 52.1% followed by parents/relatives/grandparents 35.3% hold the major portion of the sources of information while others such as personal knowledge, school/colleges, friends, and mass media have a lower count. This is not in accordance with a study by Aslam and colleagues.[19] In subjects of Yaounde Central Hospital majority depended on personal knowledge or the influence of siblings and friends.[8] This difference could be due to behaviour difference due tosocioeconomics.

The majority (70.9%) of our subjects believe that self-medication is not hazardous, while 42.4% faced adverse reactions of self-prescribed medicines among which stomach issues 83.7% stand out the most. This is less as compared to a study that mentions 51.4% of its subjects being adversely affected.[12] Lack of information can also cause multiple adverse reactions.[2,20] In a study less than a third of the participants were ignorant of the adverse effects, which is opposite to our study.[2]

The few limitations of present study were that the questionnaire was a self reported which could result in over reporting of the self medication practices. This was also an institutional study so people with dental problems were included in it which might have led to higher percentage of self medication prevalence. A more comprehensive study with larger general population needs to be carried out. We recommend that comprehensive approach including education and awareness about hazards of self-medication, strict norms for pharmacy shops and strict implementation of these norms to reduce prevalence of self medication.

CONCLUSION

This study showed that self-medication is prevalent among the participants. It was more common in 3rd decade of life with a predilection for males. The main reasons for self-medication were lack of time, the high cost of treatment/dental procedures, and temporary relief. A combination of analgesics/antibiotics was mostly used. People's self-medication knowledge sources were mainly pharmacists. The majority of people think that self-medication is not hazardous for their health. Proper counseling and public health education along with strict regulation of availability of OTC drugs should be monitored to resolve this plague of self-treatment.

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Ethical consideration

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Conflict of Interest

Authors declared no conflict of interest.

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DATA SHARING STATEMENT: The data that support the findings of this study are available on request from the corresponding author. The data is not publicly available due to privacy or ethical restrictions.

AUTHORS' CONTRIBUTION

The following authors fullfill authorship criteria as per ICMJE guidelines;

Jamal M, Baig MZ:	Substantial contribution to conception and design, drafting the manuscript, final approval, agreed to be accountable for all the work.
Shahid AM:	Substantial contribution to conception and design, data acquisition, drafting the manuscript, final approval, agreed to be accountable for all the work.
Basit S:	Analysis and interpretation of data, drafting the manuscript, final approval, agreed to be accountable for all the work.
Siddiqi KM:	Analysis and interpretation of data, critical revision,final approval, agreed to be accountable for all the work.

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