

Exploring the Risk Factors and Practices of Self-medication for Oral Problems Among Dental Patients

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ABSTRACT

Objective: The present study aims to identify common types of medications used for self-treatment by individuals aged 18-35 years and to explore the influence of socio-demographic factor on self-medication practices among patients visiting Dow International Dental College, Karachi

Methodology: The study was conducted at the diagnostic Department of Dow International Dental College DIDC, DUHS. A closed-ended, self-administrated, structured questionnaire was given to study participants in diagnostic OPD. *Data Analysis:* This was done by using IBM-SPSS ver. 2.1. Mean and SD were calculated for variables whereas frequency and percentage were calculated by descriptive analysis.

Results: The participants in the study were between the age range of 25 – 34 years old. Females were in majority taking self-medication. Regarding the education level, the secondary education level comprised the largest group on self-medication (n=250). The majority of the participants lived nearest to the health Centre i.e. less than 1km away. The usage of oral analgesics was found in most i.e. 35.3% and these medications were purchased mostly from pharmacy shops by 122 participants (73.5%). The reason for taking self-medication was after triggering factors of pain i.e. 254 (75.6%) only for a few days.

Conclusion: This research concluded that the use of self-medication was found in most of the young adult population and dental pain is the most common reason for self-medication. Analgesics were the most frequent medication used as self-medication.

Keywords: Antibiotics, socioeconomic lifestyle, oral health problem, risk, self-medication

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INTRODUCTION

Taking Self-medication means the usage of medication on one's own without a doctor's prescription for managing self-recognized discomforts¹. It is an important component of self-care combined with other factors like socioeconomic lifestyle and environment. Some think this practice is cost and time-saving whereas drawbacks include misdiagnosis, drug resistance and wasting of resources². "In an emerging world, self-medication is prevalent." It is designated as using medications to cure self-medicated ailments and doing pharmacological intervention without seeking skilled advice³.

In South Asian countries, pharmacy stores are the people's priority and their contact point for healthcare delivery which is the reason drugs are more accessible to common people⁴. The most common self-medication

used in developing countries are painkillers and antibiotics, and these are also used in the field of Dentistry for oral problems⁵.

Self-medication (including antibiotics) is common in many countries due to a shortage of admittance to community well-being, being an inexpensive substitute for visiting a health care facility, the accessibility of various remedies over the counter (OTC), and inadequate medicine monitoring strategies⁶.

Oral mucosal discomfort might be associated with the misuse of systemic medications. Recently, more than 35 medications were shown to cause gingival inflammation.

Meanwhile, there are no stringent conventions governing self-medication, and misuse of antibiotics will be one of the chief contributing factors to developing antibacterial resistance⁷. Furthermore, this can also result in erroneous self-diagnosis, delays in pursuing appropriate medical attention, serious drug collaborations, drug dependency, drug exploitation, and unsuitable medication prescription and selection⁸. Pain is the most common symptom in the dental profession⁹. Dentists know that patients suffering from dental pain frequently self-medicate with analgesics to avoid dental treatment or consulting a dentist. Furthermore, antibiotics are frequently used in conjunction with analgesics. This results in issues such as side effects, drug interactions, expenditures, and the global emergency of drug-resistant pathogens¹⁰.

Certain health problems have been linked to training in self-medication globally. These include medicine abuse, and noncompliance through recommended concentration or dosage, which contributes to the emergence of antimicrobial-resistant strains, medication interactions, organ damage, and the use of expired medications¹¹. The present study aims to identify common types of medicines used for self-treatment by individuals aged 18-35 years, to explore the influence of sociodemographic factors on self-medication practices among patients visiting Dow International Dental College.

METHODOLOGY

IRB/ERC Approval:

The research was approved by the ethical review committee of The Dow University of Health Sciences Ref. No. IRB-2634/DUHS/Approval/ 2023).

This cross-sectional descriptive hospital-based research was conducted at the OPD of Dow International Dental College, DUHS. Data collection procedures were

performed according to the guidelines provided by Helsinki. The sample size for this study was determined to be 430, calculated using the OpenEpi software. Patients within the age range of 18-35 years, both males and females visiting dental OPD who are on self-medications were included.

The estimated population of approximately 5,000 individuals residing near Dow International College was used as the reference population. A confidence level of 95% and a margin of error of 5% were applied. Participants aged 18–35 years were selected through simple random sampling. The data was collected from July 2023 to November 2023. Informed verbal and written consent were obtained from all participants before they were given a survey questionnaire.

A closed-ended, self-administrated, structured questionnaire was given to study participants in diagnostic OPD. The questionnaire consisted of three sections: Section 1 asked about basic demographic and socioeconomic status, section 2 asked about oral hygiene status, and section 3 asked about self-medication prevalence. The questionnaire was pre-tested with experts in related fields to ensure its validity. For reliability, Cronbach's Alpha was used with a value of 0.7.

Collected data was evaluated using the software IBM-SPSS ver. 2.1. Mean and SD were calculated for variables whereas frequency and percentage were calculated by descriptive analysis.

RESULTS

The number of study participants included in this research was 430 with the age range between 18-35 years. Females were in the majority on taking self-medication i.e. 260 and males were 170. Concerning literacy levels, individuals with secondary education were found to engage in self-medication practices predominantly.(n=250) as shown in Table no: 1. When asked about the distance from the home to the primary health care center, the majority of the participants lived near the health Centre i.e. was less than 1km as shown in Table no: 2. Oral analgesics were the most frequently used as self-medication i.e. 35.3% and also that those medications were purchased from nearby pharmacy shops i.e. 22 (73.5%). The triggering factors of pain being the reason for the usage of self-medication i.e. 254 (75.6%) only for a few days, and the second most common reason for self-medication was having any kind of previous experience of treating the same type of illnesses i.e.101 (60.8%) as shown in Table no: 3.

Table 1: Demographic information of study participants

Characteristics	Number (n)
<i>Gender</i>	<i>Gender</i>
Female	260
Male	170
<i>Age of Participants</i>	
18-24 years	110
25-34 years	320
<i>Marital Status</i>	
Unmarried	169
Married	261
<i>Education</i>	
Primary level	35
Secondary level	250
Bachelors	78
Masters	67

Table 2: Distance from home to Primary Health Care Centre

More than 1 km	184
Between 1-2 km	138
Greater than 2 km	108

DISCUSSION

In this study, a cross-sectional survey was done on the practice of self-medication patients coming in Dental OPD of Dow International Dental College, DUHS. Predominantly females were more on the usage of self medication¹² with the most common age range between 25-34 years old. That indicates that most of them were at their middle-aged. These findings were as same as the study conducted in India by Ghimire et al¹³. This might be possible that individuals within this age range have more workload with stressful and unhealthy lifestyles along with this also have more access to different pharmacies to get medicine.

When asked about the period for practicing self-medication, it was reported that most participants take them for a few days only and stop will the problem subsides, and the triggering factor for self-medication is the pain sensation. These results were similar to the previous research done by Komal Raj and et al⁷ in the South Asian population. This shows that medications can easily come from a variety of sources and these are affordable to people. The most used self-medication as seen in the present study population was oral analgesics. The reason for this practice is probably due higher occurrence of orofacial pain and also a greater fear of the dentist and expensive procedures. These measures were almost similar to the studies conducted

Table 3: Survey questions

Questions	Frequency n (%)
Types of Self-Medications	
Oral Analgesics	200 (35.3)
Anti-Inflammatory	70 (9.3)
Topical Analgesics	8 (1.3)
Oral Analgesics + Antibiotics	55 (20.0)
Antibiotics	25 (2.7)
Others	72 (31.3)
Duration of Self-Medication	
Few days	90 (59.0)
Weeks	15 (8.6)
Month	45 (26.7)
Triggering Factor	
Toothache	99 (60.8)
Swelling/ulcers	18 (10.8)
Bad breath	12 (7.2)
Gingival Bleeding	10 (6.0)
Others	20 (15.1)
Reason for Self-Medication	
Advice by friends	46 (27.7)
Lack of Resources	7 (4.2)
Previous experience	101 (60.8)
Social Media	4 (2.4)
Not Access Hospital	3 (2.2)
Others	5 (2.6)
Source to Obtain Medication	
Pharmacy	89 (52.9)
Clinic	42 (21.3)

among respondents in Bangalore¹⁴ and Karnataka, India¹⁵. However, the real underlying cause should be further explored in future research. In terms of the duration of self-medication practice, most of them used only for a few days, as this practice is found similar and observed in the people of Saudi Arabia¹⁶. Another question was asked in this study regarding the reason for self-medication. It was found that this was due to the advice received from close friends. Similar findings were also previously reported by the other researchers¹⁷.

The primary source for obtaining any kind of medication was the nearest Pharmacy shop among the participants of this current study. These results were in line with other study findings that show about for 66% of Saudi Arabian residents^{12,16,18}, 46% of Brazil residents¹⁹ and 86% of Indian study participants,²⁰ local pharmacies were preferred as their source to obtain medication. It was also reported that local pharmacy is one of the most reliable sources in this study.

Furthermore, the local pharmacist might play an important role play in addressing various issues related

to the purchasing of self-prescribed medications as these nearest pharmacy stores are the primary source for taking medication, and awareness campaigns for practicing proper medication may benefit in reducing drug abuse usage among the local population. In this study, the triggering factors for usage of self-medication were also asked which was found to be mainly toothache, followed by ulcers. Toothache was reported as a more frequent triggering effort for taking medication, and it was reported in most of the other studies including in countries like India⁴, Saudi Arabia²¹ and Malaysia¹¹. Most people prefer to self-medicate when encountering a mild toothache.

In terms of frequency of self-medication practice, most of them self-medicate only for a few days, or when necessary, similar results were observed in the Saudi population and also in other South Asian countries²². The major reason behind taking self-medication was because of a mildest to exceeding moderate perception of pain or discomfort from their dental problem that might indicate that people wanted to avoid the long waiting time for dental treatment. This present study proved that the younger population follows the practice of self-medication more.

This descriptive cross-sectional study on self-medication did not access detailed specific names of medicines, as the community that was targeted might not be able to remember specific names of medications. In addition, no information was given to the respondent regarding usage for self-medication. Furthermore, the data was collected only at Dow International College, limiting the generalizability of the findings to other geographical areas or diverse populations.

CONCLUSION

This study concluded that self-medication was prevalent among the majority of the young adult population, with dental pain being the most common reason. Analgesics for toothache emerged as the most frequently used medication for self-medication.

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Conflict of interest: Authors declare that there is no conflict of interest.

Authors' Contributions: JJ: Contributed to the study design and manuscript writing. MP: was responsible for data collection and manuscript writing, Conducted Statistical analysis. SZA: Conducted the statistical analysis and contributed to the final manuscript. FA: played a key role in the study design and its final approval. SAA: Contributed to the final manuscript, while Zoya Dayala assisted with data collection.

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