

Is Self-Medication And Drug-Abuse Still A Looming Threat In India? A Study And Review Of Literature

Shivani Pandey¹, Navika Gupta², Tara Srinivasan³, Neha Mahla⁴, Janvi Mody⁵,
Harshal Modh⁶, Gabriela Fernandes^{2,7,8}

¹ Private dental practice, Dover, Delaware, USA

² Private dental practice, Mumbai, India

³ M.S Ramaiah Medical College, Bengaluru, Karnataka, India

⁴ Private dental practice, Vancouver, British Columbia, Canada

⁵ Department of Periodontology, Boston University Henry Goldman School of Dental Medicine, USA

⁶ Department of Comprehensive Dentistry, NYU College of Dentistry, New York University, New York, USA

⁷ Department of Periodontics and Endodontics, University at Buffalo, SUNY Buffalo, New York, USA

⁸ Department of Oral Biology, School of dental medicine, SUNY Buffalo, Buffalo, New York, USA

Abstract: -

Self-medication with over-the-counter (OTC) drugs is a common practice in India, including in the field of dentistry. However, the indiscriminate use of OTC drugs can lead to various adverse effects and complications. This literature review highlights the prevalence and patterns of self-medication with OTC drugs in dentistry in India. Studies indicate that self-medication with OTC drugs is common among dental patients, particularly for pain relief. The most commonly used OTC drugs are painkillers, antibiotics, and antiseptics. Factors that contribute to self-medication in dentistry include accessibility, affordability, lack of awareness about the risks of self-medication, and the belief that the condition is not serious enough to require a dentist's attention. However, self-medication can lead to serious complications, including drug resistance and delayed diagnosis of underlying conditions. Therefore, there is a need for interventions to increase awareness about the risks associated with self-medication and to promote responsible use of OTC drugs in dentistry in India. Dentists can play a critical role in this regard by providing patients with proper guidance and education on the appropriate use of OTC drugs. Moreover, the aim of this study is to comprehend the psychology of a subpopulation in India with respect to self-medication and over the counter drugs in dentistry. Thus, helping dentists to understand the reason behind drug resistance. A survey was conducted amongst 317 individuals to collect information regarding the number of people involved in self-medication practice of ANTIBIOTICS and NSAIDS and buying medicines without a prescription from the attending dentist. The results revealed that a considerable percentage of people were involved in self-medicating themselves with ANTIBIOTICS and NSAIDS. Also, a significant percentage of people were involved in sharing medicines with individuals of similar symptoms and self-medicating themselves for a long period of time without any medical consultation. Results also showed that individuals self-medicating themselves had no knowledge regarding dosage of the medicine. Upon understanding the psychology of individuals, timely counselling can be achieved regarding drug resistance and overuse of NSAIDS causing peptic ulcers and drug side effects.

Key Words: Antibiotics, pain-killers, self-medication, over the counter drug, dentistry

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I. Literature review:

Over-the-counter (OTC) drug abuse is a growing concern in India, particularly among young adults and adolescents. OTC drugs are easily accessible and can be purchased without a prescription, which makes them attractive to individuals seeking to self-medicate or get high. However, the indiscriminate use of OTC drugs can lead to various adverse effects and complications, including addiction, overdose, and organ damage. The most commonly abused OTC drugs in India are cough syrups and painkillers. Cough syrups containing codeine or dextromethorphan are commonly abused for their sedative and euphoric effects. Painkillers, such as tramadol and codeine, are also frequently abused for their pain-relieving and mood-enhancing properties. The easy availability and low cost of these drugs make them attractive to individuals seeking to get high or manage their stress and anxiety.

The abuse of OTC drugs is a significant public health concern in India, with several studies reporting high rates of abuse among adolescents and young adults. The lack of awareness regarding the risks associated

with OTC drug abuse and the low perceived risk of these drugs can contribute to the high prevalence of this practice. Therefore, public health interventions, such as health education campaigns and stricter regulations on the sale of OTC drugs, are needed to address this growing public health concern. OTC drug abuse is a growing concern in India, particularly among young adults and adolescents. Cough syrups and painkillers are the most commonly abused OTC drugs, and the easy availability and low cost of these drugs make them attractive to individuals seeking to self-medicate or get high. Public health interventions are needed to address this growing public health concern and increase awareness regarding the risks associated with OTC drug abuse.

Self-medication in dentistry refers to the practice of using over-the-counter drugs to treat dental problems without consulting a dentist. This practice is common in many countries, including India, where the availability and accessibility of over-the-counter drugs are high. However, self-medication in dentistry can lead to various adverse effects and complications, including drug interactions, allergic reactions, and masking of underlying dental problems, delaying proper diagnosis and treatment.

Dental pain is the most common reason for self-medication in dentistry. Analgesics, such as acetaminophen, ibuprofen, and aspirin, are the most commonly used drugs for self-medication in dental pain. However, the indiscriminate use of antibiotics for self-medication in dental problems is also prevalent in many countries, including India, which can lead to the development of antibiotic resistance. Self-medication in dentistry is a significant public health concern, particularly in developing countries where access to healthcare facilities and dental care services is limited. The lack of awareness regarding the risks associated with self-medication in dentistry can contribute to the high prevalence of this practice. Therefore, public health interventions, such as health education campaigns, are needed to increase awareness regarding the appropriate use of over-the-counter drugs and the potential risks associated with self-medication in dentistry.

Moreover, Self-medication in dentistry is a common practice, particularly in developing countries such as India, where access to healthcare facilities and dental care services is limited. The indiscriminate use of over-the-counter drugs for self-medication in dental problems can lead to various adverse effects and complications, emphasizing the need for public health interventions to promote the appropriate use of drugs and increase awareness regarding the risks associated with self-medication in dentistry.

A study conducted by Saini et al. (2012) aimed to assess the prevalence and pattern of self-medication among dental patients in North India. The study found that approximately 65% of the patients had self-medicated for their dental problems, with analgesics being the most commonly used drug. Furthermore, the study reported that the most common reason for self-medication was the perception that the dental problem was not severe enough to warrant a visit to the dentist¹. Another study by Sharma et al. (2017) investigated the prevalence of self-medication among dental patients in Western India. The study found that 83.5% of the patients had self-medicated for their dental problems, with analgesics being the most commonly used drug. The study also revealed that a significant proportion of the patients had used antibiotics without a prescription, which could lead to the development of antibiotic resistance². A systematic review by Kumar et al. (2018) evaluated the prevalence of self-medication among dental patients in India. The findings indicated that the prevalence of self-medication ranged from 23% to 83.5%. The review also highlighted that analgesics were the most commonly used drugs for self-medication, and a significant proportion of the patients had used antibiotics without a prescription^{3,4,5}.

Drug abuse is a significant problem in India, affecting individuals of all ages, genders, and social classes. While many studies have focused on the abuse of prescription and illicit drugs, there is growing concern about the abuse of OTC medications. OTC drugs are widely available in India and can be purchased without a prescription, making them easily accessible to anyone who wishes to buy them. A study conducted in Delhi in 2017 found that 40% of drug abusers reported using OTC medications, with the most commonly abused drugs being cough syrups containing codeine. Another study conducted in Mumbai in 2019 found that 22% of drug abusers reported using OTC medications, with the most commonly abused drugs being analgesics and sedatives. Several factors contribute to the abuse of OTC medications in India. One factor is the easy availability of these drugs. OTC drugs can be purchased from pharmacies, grocery stores, and even roadside vendors, making it easy for individuals to obtain them. Another factor is the lack of regulation of the sale of OTC drugs. There is little or no monitoring of the sale of these drugs, making it difficult to prevent their abuse. Another factor contributing to OTC drug abuse is the lack of awareness among the public about the dangers of these drugs. Many individuals believe that because these drugs are available without a prescription, they are safe to use. However, OTC drugs can have serious side effects, especially when abused or taken in combination with other drugs. The misuse of over-the-counter drugs for self-medication can lead to adverse effects, including drug interactions, allergic reactions, and drug resistance. Furthermore, self-medication can mask the underlying dental problem, delaying the diagnosis and appropriate treatment, which can lead to further complications.

II. Background:

Self-medication practice (SMP) is the use of medicine without any medical guidance or knowledge⁶. It has now become a global phenomenon wherein an individual involved in such practice has no knowledge about dosage and side effects of the drug⁷⁻¹⁰. Self-medication is a human behavior in which an individual uses a substance or any exogenous influence to self-administer treatment for physical or psychological ailments¹¹. The most widely self-medicated substances are the over-the-counter drugs used to treat common health issues at home as well as dietary supplements⁶.

The major problem associated with such practice is the human pathogen resistance to ANTIBIOTICS⁷. Also, the use of NSAIDS without the knowledge can cause gastrointestinal problems related with it. One of the reasons behind self-medication practice can be the easy availability of drugs at most of the pharmacy stores in India for common illnesses such as common cold, fever and the patient doesn't want to spend time in the hospital or clinic and get into the procedure of case writing and waiting for appointments⁹⁻¹². This can lead to inappropriate, incorrect, missed diagnosis or undue therapy of a patient. This may result into serious effects such as antibiotic resistance, skin problems, hypersensitivity reactions, peptic ulcers, and many more¹³.

There is a need to conduct awareness amongst individuals regarding the same. Social media can play a major role for creating such awareness amongst majority of the population as it is the easiest and the fastest means of communication today.

III. Material and Methods: -

This study was conducted using a survey (table 1) adopted from which was disseminated via social media and electronic mail. The survey rendered 317 responses. This survey, which was conducted, included 8 questions with two options "Yes" and "No". All the individuals taking this survey were informed about the confidentiality of their responses and were also informed about the purpose of conducting this survey. The Non-Medical background population above the age of 25 were included for this survey. The evaluation of the result was done electronically using the interface provided by the common survey software conducting site available on internet.

Table 1: Survey Questionnaire

| Sr. No. | Entity | Score |
|---------|--|-----------|
| 1 | Do you take self-medication without reading leaflet/package insert? | Yes No |
| 2 | Have you given your prescription to someone who has similar symptoms? | Yes No |
| 3 | Do you take drugs for self-medication for fever and cold? | Yes No |
| 4 | Do you take self-medication for long period of time without any medical advice? | Yes No |
| 5 | Are you given the drug easily without having prescription at the pharmacy? | Yes No |
| 6 | Do you tell your symptoms to the pharmacist and ask the pharmacist to give you suitable medications? | Yes No |
| 7 | Have you ever treated yourself with antibiotics(self-medication)? | Yes No |
| 8 | Do you know the dosage of drug before self-medicating yourself? | Yes No |

IV. Results:

The survey collected from 317 individuals showed that nearly 37.2% people self-medicated themselves without reading the leaflet/package insert (Figure 1). Around 62.8% individuals offered their prescription to people with similar symptoms (Figure 2). 63.7% people self-medicated themselves for fever and cold (Figure 3). 46.8% people took medications for a long time without any medical advice (Figure 4). 54.1% of population were given the drug easily at the pharmacy without prescription (Figure 5). 51.1% people told their symptoms to the pharmacist and asked him to provide suitable medications for the same (Figure 6). 53.2% people treated themselves with antibiotics without medical supervision (Figure 7). Now this is a very serious point to be taken into consideration keeping in mind the resistance of the drug to human pathogens. 43.8% people weren't aware of the dosage of the drug before self-medication themselves (Figure 8). This is now even a bigger risk for self-medication practice

which can lead to serious medical conditions as hypersensitivity reactions as even side effect of the drugs were not known to the people. Also, there was a complete lack of knowledge about the drug interactions since few of them were already on other medications for their respective conditions.

Figure 1.

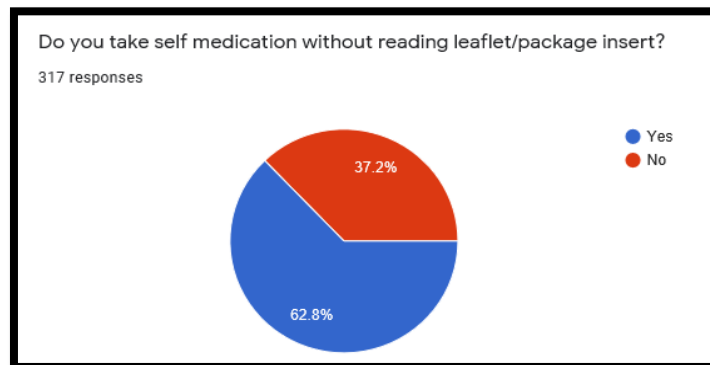


Figure 2.

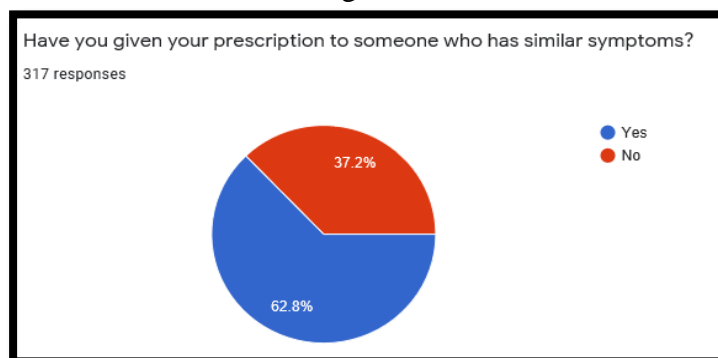


Figure 3.

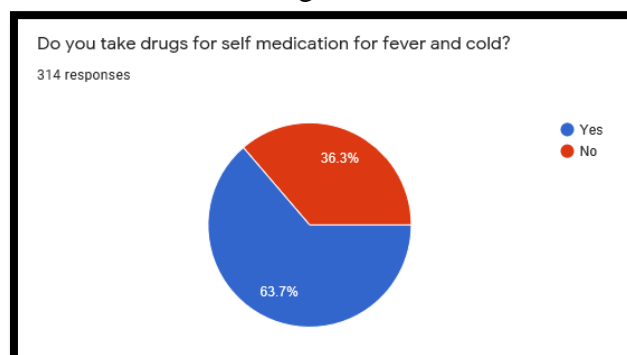


Figure 4.

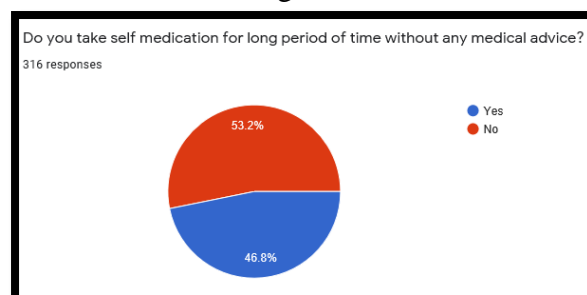


Figure 5.

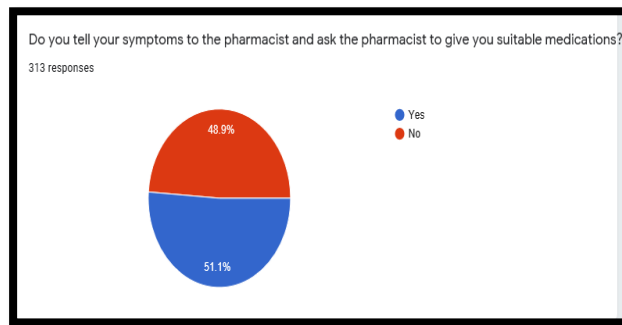


Figure 6.

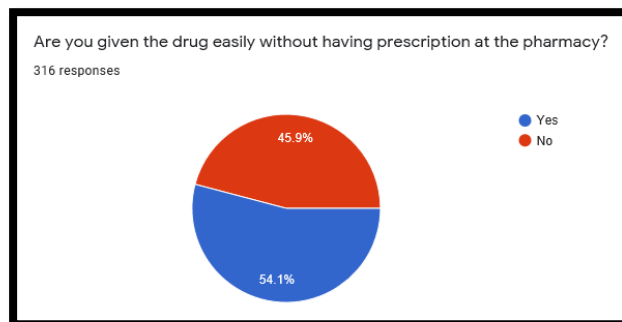


Figure 7.

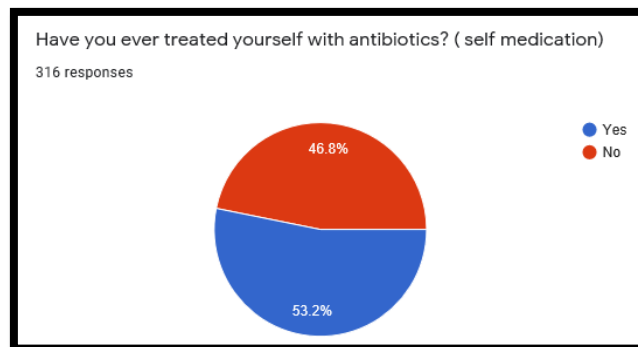
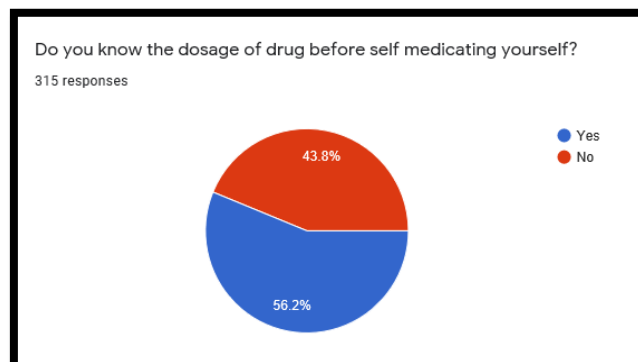


Figure 8.



V. Discussion:

Now, by this survey, we understood that self-medication can be influenced by many factors such as society, education, availability of over-the-counter drugs, family and many more reasons. Modern consumers tend to wish to take a greater role in maintaining their own health by themselves for looking small illnesses like cold, fever, and has managed to cure themselves with ANTIBIOTICS and NSAIDS¹³⁻¹⁷. But also have failed to take it seriously at times and have delayed the diagnostic period and have suffered from chronic illnesses sometimes turned to acute life-threatening diseases¹³⁻¹⁷. This also resulted in hospitalization and sometimes death. By this study, it is very much clear that a part of society is blindly taking certain medications on suggestions of family or neighbors, sometimes not even knowing the dosage of drug. There is a need to create proper awareness regarding self-medication and over-the-counter drugs and the side effects of those drugs including the importance of drug interactions. The reason behind SMP (self-medication practice) can be numerous, can be an urge to cure self, sympathy towards family member in sickness, economic status, educational and sometimes pure laziness to go to a hospital or clinic.

In a study conducted by Dr Shilpa Patrick and Dr Dinesh Badyal (in press) in 2018 amongst 500 individuals stated that 45.84% people practiced self-medication for fever, 18.34% people for pain and 10.87% for headache. 49.4% people self-medicated themselves with antibiotics. The reason for 39% of people to involve themselves in self-medication was the source from local chemists/pharmacy, that is 39% people were dependent on the pharmacists to give them suitable medication for their conditions by telling the pharmacists their symptoms. The results of our study stated the percentage of people taking antibiotics by themselves were 53.2%, people taking self-medication for fever were 63.7% and around 51.1% people were dependent on the pharmacists for their illness. The reason for the above-mentioned results can be lack of awareness amongst Indian population regarding self-medication and its side effects.

VI. Conclusion:

Within the limitations of this study it is clear that there appears to be a lack of awareness amongst the general Indian population regarding self-medication and its side effects.

- There is easy availability of over-the-counter drugs in India.
- Awareness should be created amongst individuals regarding the side effects and serious adverse effects of drug interactions.
- Encouragement should be done within family members and society for taking proper medical advice before taking any medication for a long period of time.
- As a dentist, it is our prime duty to create awareness amongst a mass of population through social media, posters, and health talks.
- Further studies need to be conducted in larger population sizes.

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