



Knowledge Of Drug Prescription Among Dental Students – Questionnaire-Based Survey

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Abstract

Aim- To assess third-year, final-year, and interns' understanding of prescription medication knowledge at a private dental institution.

Methodology: A total of 148 online surveys were given to third-year, fourth-year, and internship dental students at Maharashtra state colleges in order to perform the study.

Survey Heart served as the platform for posing different queries regarding the awareness of prescription drug usage. There were twenty multiple-choice questions on the survey. To ensure the validity and reliability of the surveys, the questions underwent pretesting.

Results: The pharmacology course (35 percent of students) and professors are the usual sources of information for students seeking prescription drugs (26 percent). Seventy-four percent of dentistry students were aware of the required dosage. Pain was the most prevalent medical condition treated. This study demonstrates that dental and medical students have a moderate level of prescription medication awareness.

Conclusion: It was discovered that the primary factor for medicine prescriptions was pain. The most often used antibiotic at the time was amoxicillin. The primary cause of the pupils' blunder was their ignorance of the posology of drugs.

Keywords: Antibiotics, drugs, NSAID's, medicine, Prescription, students

Introduction

Living things in the modern world are afflicted with a wide range of diseases as a result of their lifestyle choices. Nowadays, medication is the recommended first aid for all illnesses. Medicine has been used from the beginning of time till the present. The course at Bachelor of Dental Surgery lasts five years in total. In their third year, students start their clinical practical, when they interact more with patients from the many clinical courses (dental surgery, endodontics, etc.) and are frequently in charge of writing prescriptions.^[1]

Providing a prescription involves specifying the medication(s) to give the patient, how much of them to take, and how long the treatment will last.^[2] The health of their patients may be impacted by primary prevention through prescription drugs.^[3] Rational

drug prescribing is the practice of using the fewest number of medications to accomplish the best result in the shortest length of time and at a reasonable cost.^[4] Accomplished medication use necessitates five essential components: accurate diagnosis, appropriate prescription, accurate delivery, suitable packaging, and patient commitment. Worldwide, the practice of prescribing inappropriate drugs is not uncommon.^[5] Risky or ineffective therapy, an increase in the severity or length of the illness, patient suffering and harm, and higher costs are some of its consequences.^[6]

It's highly typical for doctors to prescribe medications incorrectly, especially to newly qualified specialists. The underlying problem that exacerbates this illogical prescription is that undergraduates studying

clinical and therapeutic studies receive inadequate training, and in the cases where they do receive instruction, it is theoretical only. Prescribing medicine has become a crucial issue in dental colleges and hospitals as well.

The way that young people utilise medications exposes intricate relationships between health, knowledge, and behaviour that need to be taken into account in order to provide safe and efficient drug usage.^[7]

One of the key elements to obtaining rational drug usage is sound prescription. The primary objective of the current investigation was to evaluate the prescription knowledge and common errors made by third- and fourth-year dental students in a dental institute in a state of Maharashtra.

Materials and Methods:

A cross-sectional study was conducted at the Dental College in the state of Maharashtra's Marathwada region. The study was approved by the research committee of the college in March 2023.

We created a survey consisting of twenty multiple-choice questions. Students in their third and final years as well as interns who agreed to take part in the study were given the questionnaire. It was carried out in order to assess the dentistry students' behaviour and knowledge.

Twenty questions about knowledge of drug prescription and a few demographic questions were framed for an online survey.

Questionnaire:

1. What are the Sources of information for drug prescription you use?
2. What are the Common mistakes you make during prescription?
3. Which are the most common routes of drug administration in dentistry?
4. Why do you prescribe drugs to the patient most commonly?
5. The most common antibiotics you prescribe in dentistry?
6. What are the common problems you face during prescription?

7. Do you know the dosage of drugs you prescribe?
8. The drug most commonly prescribed by you?
9. Do you prescribe the antacids before prescribing other drugs?
10. Do you know the side effects of drugs you prescribe?
11. What are the most common allergic reactions you observe?
12. Are you aware of the dosage and duration of intake of drugs?
13. Amoxicillin and clavulanic acid are usually taken?
14. Antacids are taken?
15. Commonly prescribed NSAIDs by you?
16. What are the side effects of amoxicillin?
17. Are you aware that the drugs you prescribe may cause life-threatening reactions?
18. Most common emergencies in dental offices?
19. Most common drug used in emergency in the dental office?
20. Most common topical steroids used in dentistry?

Result:

A total of 148 students who were studying in 3rd year, final year, and interns consisting of males [92] and females [56] have participated in this study [Figure-1]. The most common source of information about drug prescription is from the pharmacology course [34.46%], professors [25.68%], medical representatives [22.97%], and classmates [16.89] [Fig- 2]. The most common routes of drug prescription in dentistry are oral [74.32%], Intravenous [13.51%] intramuscular [6.08%], and topical [6.08%] [Fig-3]. The most common reason for giving prescription to the patients was pain [63.51%], infection [21.62%], ulcers [8.11%], and others [6.76] [Fig-4]. The most common problems faced by the students during prescription are, they don't know about the dosage of the drugs [29.05%], others [26.35%], don't know what to prescribe [25.68%], don't know about the frequency of the dose [18.92%] [Fig-5]

The most commonly prescribed drugs by dental students are analgesics [46.62%], antibiotics [32.43%], antioxidants [13.51%], and muscle relaxants [7.43%] [Fig-6]. The most commonly prescribed antibiotic by students is plain amoxicillin 46.62%, followed by a combination of Amoxicillin and clavulanic acid [30.41%] [Fig-7]. About 62.16% of dental students know about the side effects of drugs they prescribe, 22.97% of students sometimes know about side effects, 13.51% of students don't know about the side effects, and 1.35 % of students are unaware of the side effects of the drugs [Fig-8]. According to the students most common allergic reactions are nausea and vomiting [53.38%], skin rashes [26.35%], diarrhea [18.24%], and asthma

[2.03%] [Fig-9]. About 51.35% of students are aware of the life-threatening reactions of drugs they prescribe, 22.97% of students sometimes know about it, 18.24% don't know, and 7.43 % of students are unaware of it [Fig-10]. According to the students most common emergency in a dental office is excessive bleeding [39.19%], anaphylaxis 33.78%, asthma [14.86%], rise in BP [12.16%]. About 47.30% of students use adrenaline as an emergency drug, aspirin [25%], glucose 14.19%, and salbutamol inhaler [13.51%] [Fig-11]. Most common topical steroids used in dentistry are triamcinolone acetonide 33.78%, hydrocortisone [33.11%], prednisolone [28.38%], and clobetasol propionate [4.73%] [Fig-12].

Figure 1

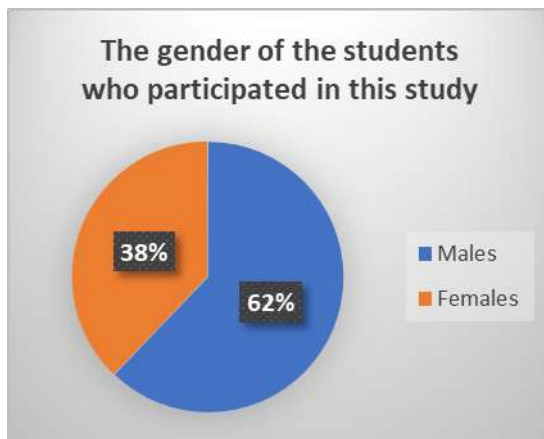


Figure 2

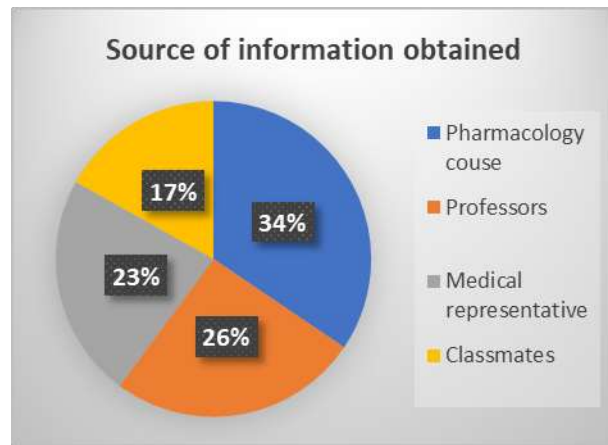


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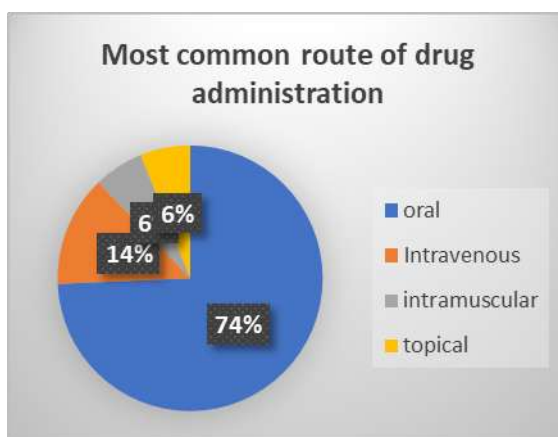


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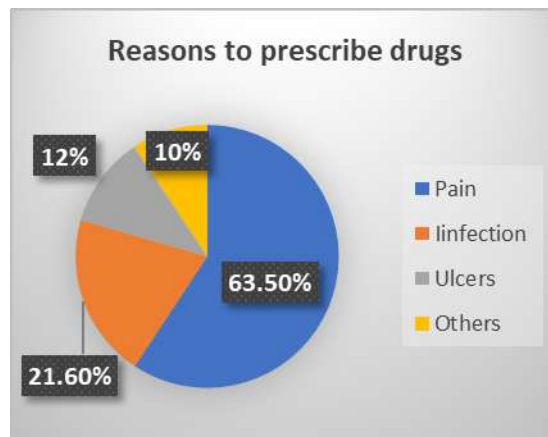


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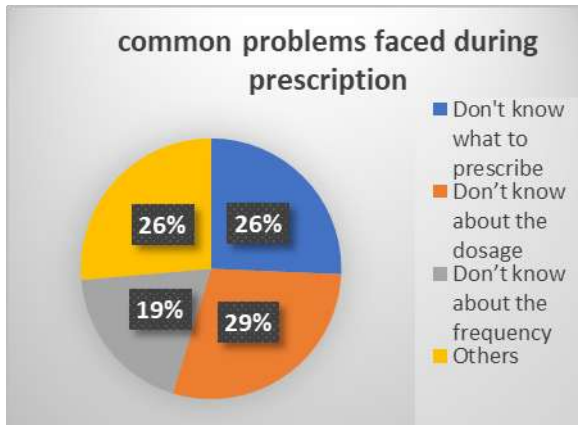


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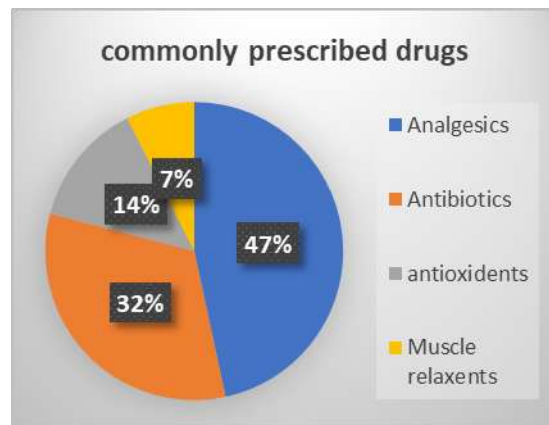


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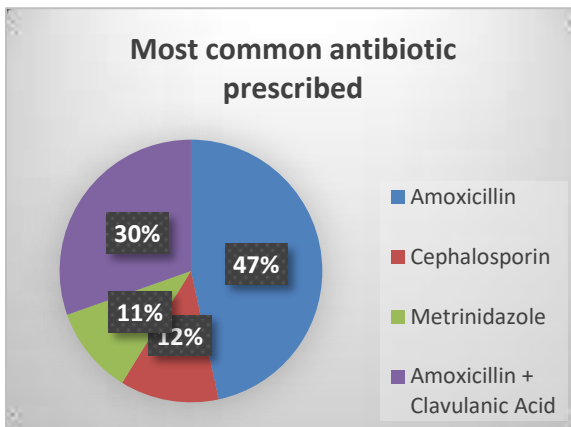


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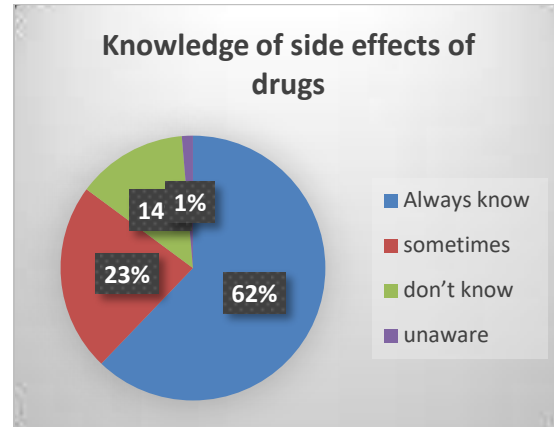


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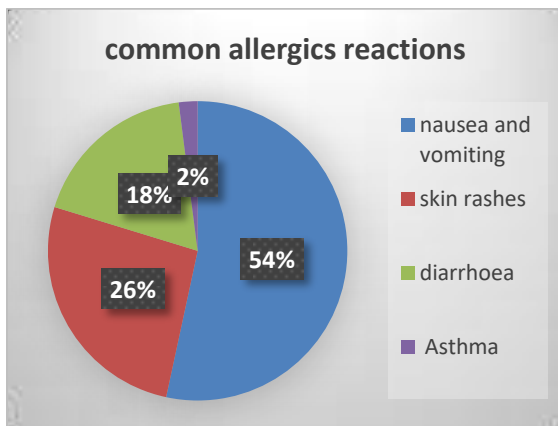


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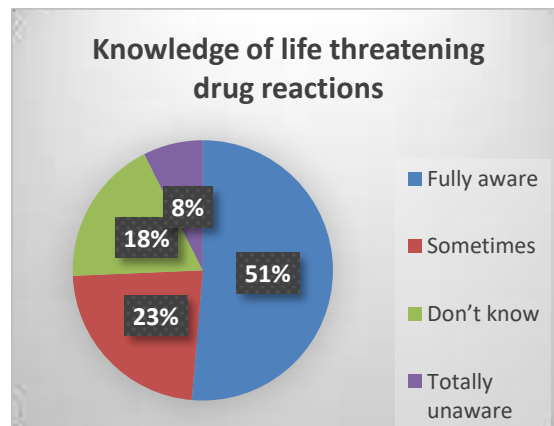


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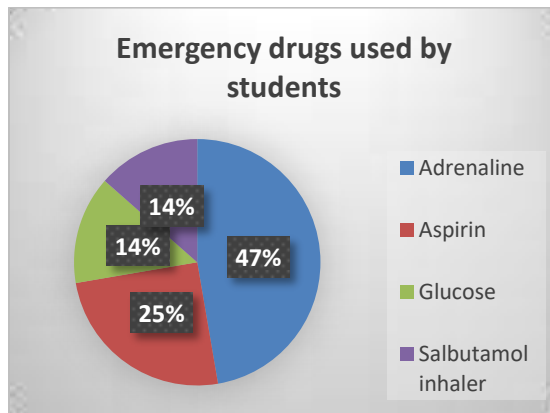
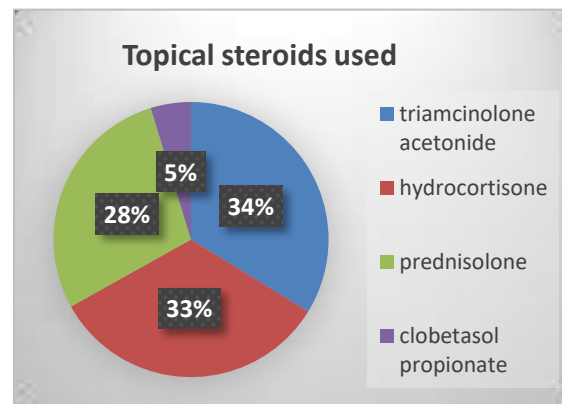


Figure - 12



Discussion:

In India, pharmacology courses are taken by second-year BDS students, covering prescription writing and comprehensive knowledge of pharmaceuticals.^[8]

It's critical that they become aware of prescription medication usage as soon as possible before they start their clinical years.

In order to prevent improper therapy, incorrectly prescribed medications, or erroneous dosage, the doctor must obtain an accurate medication history before writing a prescription.^[9]

Students frequently made prescription errors because they were unaware of the patient's sensitivities, which might be toxic.^[10] By putting the study based on blended learning into practice, these errors caused by the students might be decreased.

A pharmacology course is selected as the source of drug prescription information based on the Eachempati et al study. Therefore, the knowledge of prescription among dental students is greatly influenced by improvements in instruction.^[11] According to Jain et al., the most common medical problem addressed by dental students was discomfort.^[2] in contrast to Guzmán-Álvarez et al disagreement.^[1] According to our research, amoxicillin was the most commonly recommended antibiotic for dental students, which is consistent with findings by Jain et al.^[2,12] The majority of students (41.89%) typically prescribe diclofenac and paracetamol, which is contrary to earlier research where the majority of students prescribed ibuprofen.^[1]

Adverse events can occur with any prescription, even over-the-counter items. The severity of these occurrences varies depending on the patient and the drug. Ineffective prescribing practises can cause serious illness or even death in patients, as well as harm the doctor-patient bond to the point of potential lawsuits.^[13] The pharmacology course and the professors were the primary sources of information for prescribing, and they were excellent at this point in the students' development. The fact that nearly 17% of students seek counsel from their peers or even medical professionals (23%) is deeply unsettling.

The WHO has recommended regulations on the prescription of drugs, which should address the patient's and physician's identity, the method of administration, the pharmaceutical form, the dosage, frequency, and duration of the therapy, as well as patient advice.^[14]

In conclusion, pharmacology coursework, understanding of how to write prescriptions, medication dosages and frequency should be given more attention by dental students. To find out whether this problem has an impact on the standard of patient care as well as the efficacy and safety of treatments, more research is required.

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