



Original Research Article

A cross sectional questionnaire based study on self medication practice of analgesics among M.B.B.S. students at Dr. B. R. Ambedkar Medical College, Bengaluru

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ABSTRACT

Background: Self medication with analgesics is prevalent worldwide among medical students due to easy availability of drugs. Present study was done to assess Knowledge, Attitude, Practice and Perception of Self Medication of Analgesics among MBBS students at Dr. B. R. Ambedkar Medical College, Bengaluru. **Materials and Methods:** A cross-sectional study was conducted on 3rd Term MBBS students of Dr. B. R. Ambedkar Medical College, Bengaluru in November 2019. A Pre-designed validated questionnaire was used to collect relevant information on self medication of analgesics. Data was analysed using descriptive statistics.

Results: 78.4% of 3rd term MBBS students practiced self medication with analgesics. Students had some knowledge regarding definition of self medication 84.8%, and side effects of analgesics 75.9%. They had no knowledge regarding dose, duration of treatment timing of drug administration, drug interactions and banned analgesics.

Common reason for using analgesic self medication was headache (75.8%) and Nonsteroidal Antiinflammatory drugs (80.6%) were commonly used. Analgesics were used for quick relief (67.7%) and source of information was from previous doctor's prescriptions (64.5%). Students stopped taking analgesics after symptoms disappeared (83.8%). Students agreed that self medication is acceptable for medical students (48.1%).

Conclusions: This study has found that self medication with analgesics was common among undergraduate medical students for minor illness. It is necessary to create awareness and educate students regarding dangers of analgesic self medication.

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1. Introduction

According to the WHO's definition "Self medication is the use of drugs to treat self – diagnosed disorders or symptoms, or the intermittent or continued use of a prescribe drug for chronic or recurrent diseases or symptoms."¹ In studies conducted within India, the prevalence of self-medication among the undergraduate medical students was shown to be ranging between 57.1% and 92%.²⁻⁴

Academic level is an important predictor of practicing self-medication as shown in the study conducted by

Klemenc-Ketis et al. which stated that senior health science students were found to be more likely consumers of analgesics, compared to junior students.⁵ Having adequate knowledge about medications is also a possible risk factor for self-medication among health sciences students.⁶

Pain is an important symptom for self medication with analgesics. Analgesic self-medication is widely prevalent among undergraduate medical students. A study conducted at the All India Institute of Medical Sciences, New Delhi observed that self-medication was considerably high among under-graduate medical and paramedical students in India and it increased with medical knowledge.⁷

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Being future medical practitioners, self medication has a special impact on medical students.

This raises concerns of incorrect self-diagnosis, drug interactions, and use of drugs other than for the original indication. Hence, the present study was conducted to assess the Knowledge, Attitude, Practice and Perception of Self Medication of Analgesics among MBBS students at Dr. B. R. Ambedkar Medical College, Bengaluru

2. Materials and Methods

This was a cross – sectional study conducted on 3rd Term MBBS students of Dr. B. R. Ambedkar Medical College, Bengaluru in the month of November 2019. The study protocol was approved by the Institutional Ethics Committee, of Dr. B. R. Ambedkar Medical College, Bengaluru. Students not willing to participate in the study were excluded from the study.

A pre-designed semi-structured validated questionnaire was used to collect the relevant information, like Age, Gender, Year of study of MBBS, and Knowledge, Attitude, Practice and Perception of self medication of analgesics. The questionnaire was a newly designed one, based on similar studies conducted previously, inputs from the faculty and validated by senior faculty.

The questionnaire was distributed to 3rd Term MBBS students of Dr. B. R. Ambedkar Medical College, Bengaluru. The students were briefed on the objectives of the study. They were also informed that the information collected would be kept confidential and participation would be totally voluntary. Only completely filled questionnaire were included for statistical analysis and incompletely filled questionnaire were excluded for the analysis.

2.1. Statistical analysis

Data collected was analysed using descriptive statistics and results were expressed in numbers and percentage

3. Results

Among 106 students belonging to 3rd Term MBBS, 79 students participated in the study and filled the questionnaire. All 79 students completely filled the questionnaire.

50 (63.2%) were female and 29 (36.7%) were male students. They were in the age group of 19 – 20 years.

Majority of students had some knowledge regarding definition of self medication 84.8%, and side effects of analgesics 75.9%. They did not have knowledge regarding the difference between opioid and non opioid analgesics, dose, duration of treatment, timing of drug administration, drug interactions and banned analgesics as shown in Table 1.

3.1. Assessment of self medication practices of analgesics

78.4% of 3rd term MBBS students practiced self medication with analgesics. Most common reason for using self medication was headache (75.8%), fever (74.1%), muscle pain (54.8%), joint pain (19.3%), dysmenorrhea (19.3%) and sinusitis (16.1%).

Most commonly used drugs were Nonsteroidal Anti-inflammatory drugs (NSAIDs) (80.6%), opioid analgesics (16.1%) and a combination of opioid and non opioid analgesics (16.1%). Frequency was self medication with analgesics was on as needed basis (91.9%) followed by weekly (4.8%) and monthly (3.2%).

Common reasons for using self medication with analgesics was for Quick relief (67.7%) followed by prior experience of illness (59.6%), as it was convenient (40.3%), illness too trivial for consultation (29%), for cost saving (22.5%), self confidence regarding awareness of medication (17.7%), had practiced self medication in past year (14.5%) and reluctance to spend money on doctor consultation and lab investigations, pharmacists advice and first method to treat all problems (11.2%).

Most common source of information for self medication with analgesics was from previous doctor prescriptions (64.5%) and opinion of family members (50%). Other source of information were as follows : My own experience (35.4%), pharmacists advise (27.4%), medical textbooks (22.5%), opinion of friends (14.5%), recommended by internet (14.5%) and advertisement (12.9%).

Selection of analgesics was based on their Indication (50%), side effects (48.3%), type of analgesics (38.7%), brand (38.7%) and price (17.7%). Students obtained analgesics from community pharmacy (85.4%), left over from previous prescriptions (11.2%) and e – pharmacies (11.2%). 58% of them checked the package insert and among them 52.7% of students had partly understood the instructions given in the package insert.

51.6% of the students were satisfied with the use of analgesics and 25.8% of them experienced side effects with analgesic self medication. The students normally stopped taking self medication with analgesics after the symptoms disappeared (83.8%) while only 8% of them stopped after consulting a doctor / pharmacist. Only 17.7% of them were sure that they could successfully treat themselves with analgesics while 54.8% of the participants were not sure that they could successfully treat themselves with analgesics and 27.4% of them responded as no.

56.4% of the students thought that self medication with analgesics for self care is an acceptable practice and 25.8% of them responded that it was an unacceptable practice while only 17.7% of them said it was a good practice.

Table 1: Assessment of knowledge on self medication of analgesics

S. No	Knowledge regarding self medication of analgesics	1Number (%)	2Number (%)	3Number (%)
1	Do you have the knowledge about definition of self medication ?	7 (8.8%)	67 (84.8%)	5 (6.3%)
2	Do you know the difference between opioid and nonopioid analgesic ?	42 (53.1%)	31 (39.2%)	6 (7.5%)
3	Do you know the dose of analgesic used in the treatment of the concerned disease ?	51 (64.5%)	28 (35.4%)	0 (0%)
4	Do you know the duration of treatment with analgesic for the concerned disease ?	51 (64.5%)	28 (35.4%)	0 (0%)
5	Do you know the available dosage form of the analgesics ?	39 (49.3%)	38 (48.1%)	2 (2.5%)
6	Do you know the timing of administration of analgesics ?	48 (60.7%)	31 (39.2%)	0 (0%)
7	Do you know the side effects of analgesics ?	19 (24%)	60 (75.9%)	3 (3.7%)
8	Do you know the drug interactions with the use of analgesics ?	46 (58.2%)	32 (40.5%)	1 (1.2%)
9	Do you have knowledge about banned analgesics ?	46 (58.2%)	32 (40.5%)	1 (1.2%)

1 – Not At All, 2 – Some, 3 – Very Much

Table 2: Assessment of attitude on self medication of analgesics

S.No	Attitude regarding self medication of analgesics	1Number (%)	2Number (%)	3Number (%)	4Number (%)	5Number (%)
1	Self medication is acceptable for medical students	15 (18.9%)	38 (48.1%)	21 (26.5%)	3 (3.7%)	2 (2.5%)
2	Medical students have good ability to diagnose the symptoms	2 (2.5%)	56 (70.8%)	13 (16.4%)	7 (8.8%)	1 (1.2%)
3	Medical students have good ability to treat the symptoms	5 (6.3%)	44 (55.6%)	23 (29.1%)	4 (5%)	3 (3.7%)
4	Self medication would be harmful if it is taken without proper knowledge of drugs and disease	58 (73.4%)	15 (18.9%)	4 (5%)	0 (0%)	2 (2.5%)
5	Medical license is required for better administration of drugs	50 (63.2%)	23 (29.1%)	2 (2.5%)	2 (2.5%)	2 (2.5%)
6	Pharmacist is a good source of information regarding treatment of minor ailments	19 (24%)	28 (35.4%)	16 (20.2%)	13 (16.4%)	3 (3.7%)
7	Should be careful with over the counter drugs	39 (49.3%)	27 (34.1%)	13 (16.4%)	0 (0%)	0 (0%)
8	Medical students should read the package insert	39 (49.3%)	33 (41.7%)	5 (6.3%)	1 (1.2%)	1 (1.2%)
9	It is a part of self care	28 (35.4%)	32 (40.5%)	14 (17.7%)	3 (3.7%)	2 (2.5%)
10	Continue with self medication practice	13 (16.4%)	28 (35.4%)	25 (31.6%)	10 (12.6%)	3 (3.7%)

1 – Strongly Agree, 2 – Agree, 3 – Unsure, 4 – Disagree, 5 – Strongly Disagree

Table 3: Perception of students to prevent self medication practice

S.No	Perception of students to prevent self medication practice	1Number (%)	2Number (%)	3Number (%)	4Number (%)	5Number (%)
1	Prevent dispensing of medicine without a valid prescription	34 (43%)	31 (39.2%)	7 (8.8%)	3 (3.7%)	4 (5%)
2	Creating awareness regarding side effects of self medication	60 (75.9%)	16 (20.2%)	3 (3.7%)	0 (0%)	0 (0%)
3	Making health care facilities affordable and easily available	54 (68.3%)	18 (22.7%)	6 (7.5%)	0 (0%)	1 (1.2%)

1 – Strongly agree, 2 – Agree, 3 – Neutral, 4 – Disagree, 5 – Strongly Disagree

3.2. Assessment of attitude on self medication of analgesics

Majority of students agreed that self medication is acceptable for medical students (48.1%) and it is a part of self care (40.5%). Students strongly agreed that Medical license is required for better administration of drugs (63.2%) as shown in Table 2.

3.3. Perception of students to prevent self medication practice

Students strongly agreed to prevent dispensing of medicine without a valid prescription (43%) and also to create awareness regarding side effects of self medication (75.9%) as shown in Table 3.

4. Discussion

Analgesics have been the most commonly used and abused drugs for self medication. In our study, the prevalence of self medication with analgesics was found to be 83.3% while in studies done by Badiger S et al.,⁴ Shivamurthy S et al.,⁸ M. Al Essa et al.,⁹ found prevalence of analgesic self medication to be 92%, 63.6% and 73.2% respectively. Our study thus supports earlier studies with similar results signifying increasing self medication practice among Medical students.

In our study, female students (63.2%) practiced self medication more than male students (36.7%) which differs from study conducted by Badiger S et al.,⁴ where male students practiced self medication (94%) more than female students (91%)

In our study, majority of the students had some knowledge about the actual definition of self medication (84.8%) and side effects (75.9%) of analgesics. They did not have knowledge regarding dose of analgesic used, duration of treatment (64.5%), timing of administration (60.7%), dosage form (49.3%), drug interactions and banned analgesics (58.2%). In a study done by Rani N et al.¹⁰ comparing self medication practice among MBBS and BDS students, showed that 99% of the MBBS students were aware of self medication compared to 70% in dental students. Sufficient pharmacological knowledge enables

medical students to indulge in self medication practice.

In our study, self medication with analgesics was used for headache (75.8%) and Nonsteroidal Anti inflammatory drugs (NSAIDs) (80.6%) were the commonly used drugs which is similar to studies done by Shivamurthy S et al.,⁸ M. Al Essa et al.,⁹ where headache (68.2% and 92% respectively) was the most common indication and NSAID paracetamol (47%, 96.5%) was most commonly used analgesic. This practice of self medication with analgesics for minor illness is common as they believed that no medical intervention is required.

The most common reason for self medication in our study was quick relief (67.7%) which is similar to studies done by Gupta V.¹¹ Prior experience of illness (59.6%) reported in our study was also seen in studies done in Zafar SN et al.¹² and Abay SM et al.¹³ Time saving was the reason for self medication with analgesics was reported by Shivamurthy S et al.⁸ which is different from our study. This trend of analgesic self-use could mask the actual diagnosis of the underlying disease.

In our study, most common source of information was previous doctor prescriptions (64.5%) which is similar to study done by Shivamurthy S et al.⁸ (33.3%). The students indulge in self medication practice owing to their sufficient pharmacological knowledge whereas in our study only 17.7% referred the Medical textbooks.

In our study, students normally stopped taking self medication with analgesics after symptoms disappeared (83.8%) while only 8% of them stopped the analgesics after consulting a doctor. In a study done by M. Al Essa et al.,⁹ 53% of the students visited the physician one to three times during the previous year to consult the doctor for medical illness while 46% of them had sufficient knowledge to deal with minor illness.

In the present study, 40.5% of the participants think that self medication with analgesics is a part of self care while it was higher 91.9% in a study reported by Shivamurthy S et al.⁸ 63.2% of the students in our study also strongly agreed that Medical license is required for better administration of drugs. Self medication with analgesics is practiced by the medical students for minor illness and gives them the confidence to deal with their own health

5. Conclusion

This study has found that self medication with analgesics was common among undergraduate medical students for minor illness. This trend of using over the counter analgesics can mask the actual diagnosis of the underlying disease. Though the participants think that self medication is a part of self care the students strongly agree on the facts that medical license is required for better administration of drugs. It is also necessary to create awareness among medical students regarding the dangers of self medication.

6. Source of Funding

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7. Conflict of Interest

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