

## Attitude, Perception and Feedback of Second Year Medical Students About Their Interest in Pharmacology: A Questionnaire-Based Study



### Medical Science

**KEYWORDS :** Medical students, Pharmacology, Questionnaire

**Dr Abhilasha Rashmi**

Assistant Professor, Department of Pharmacology, Second floor, College Building, Lokmanya Tilak Municipal Medical College & General Hospital, Sion, Mumbai-22, Maharashtra

**Dr Sudhir Pawar**

Professor & Head, Department of Pharmacology, Second floor, College Building, Lokmanya Tilak Municipal Medical College & General Hospital, Sion, Mumbai-22, Maharashtra

### ABSTRACT

**Background:** This study is done to get a feedback of second MBBS exam going students on their attitude towards Pharmacology so that special stress can be given on the topics considered difficult.

**Methods:** A questionnaire containing 10 questions was given to 103 IInd MBBS students of a municipality run medical college in Mumbai to mark the suitable option. Thirty minutes time was allotted. Analysis was based on the percentage wise distribution of the parameters.

**Results:** 40% of them found Pharmacology to be very important, interesting & useful. Majority found Central nervous system, Endocrine and Cardiovascular system as most interesting topics. CNS was considered most difficult. Drug Classification, Mechanism of action, Adverse reactions, Indications, Contraindications and Interactions are liked by most, whereas Drug history & doses were considered boring. 87.1% students are in favor of a refresher course in Pharmacology before starting clinical practice/during internship.

**Conclusion:** The study revealed the perception and feedback of students regarding their interest in Pharmacology which was found positive and constructive

### INTRODUCTION

Knowledge is to acquire, retain and use information for skill. Attitude is to react and interpret events. Good practice is progress of knowledge and technology executed in an ethical manner.<sup>1</sup> During undergraduate course, medical students are trained in Pharmacology in II year of MBBS curriculum. Knowledge of Pharmacology is essential in safe and effective practice of medicine. In India, it is introduced in third semester to the medical students and is horizontally integrated with other paraclinical subjects like Pathology, Microbiology & Forensic Medicine. Learning Pharmacology is found to be a major challenge among students.<sup>2</sup> Most of the students consider Pharmacology as very difficult and volatile subject. So, this questionnaire based study attempts to get a feedback of the students on their attitude towards the subject so that special stress can be given on the topics considered difficult by them. Confidentiality of the participating students and batch is maintained.

### MATERIAL AND METHODS<sup>3,4</sup>

This study was conducted in a municipality run medical college in Mumbai. Medical students who have completed para clinical curriculum and have studied Pharmacology for one year were recruited after getting verbal informed consent explaining the intention of the study.

**Sample size:** It consisted of 103 subjects.

**Inclusion criteria:** Medical students of second year with willingness to participate.

**Exclusion criteria:** Fresh medical students.

A questionnaire containing 10 questions- with some sub-questions, was made to assess the overall attitude and interest of the students towards Pharmacology. It was given to each student and they were asked to mark the suitable option. Students were instructed not to reveal their identity in the questionnaire. Thirty minutes time was allotted for answering the questionnaire. It was based on previous studies undertaken on the evaluation of perception and feedback about Pharmacology and was suitably modified for second MBBS exam going medical students. Completed questionnaire was collected and data was analyzed.

### RESULTS

A total of 103 students participated in the study and all of them completed the questionnaire. Analysis was based on the percentage wise distribution of the parameters used in the questionnaire.

- According to this study, 70% of students knew a little bit about Pharmacology before entering second MBBS, and 30% didn't know anything.
- In present MBBS curriculum, according to 40% of students, Pharmacology is "very useful, very important and interesting". 35.7% students find it "useful & interesting" and 24.3% "useful but boring".
- Regarding the topics of interest, Central Nervous System Pharmacology was considered interesting in 64.3% students, followed by Endocrine System (57.1%), Cardiovascular System (54.3%), Respiratory System (50%), Autonomic Nervous System (47.1%), Chemotherapy (34.3%), Gastrointestinal System (28.6%), Autacoids (27.1%) and General Pharmacology (22.9%).
- Their idea about different drug related topics is as follows-

History of drugs was found "very boring" by 32.9% of students, while 21.4% considered it to be "boring", 21.4% "tolerable" and 21.4% "interesting".

34.3% of the students found Drug classification "interesting" and same number "tolerable". For 21.4% it was "boring". Only 3% considered it "very interesting".

Mechanism of action of drugs was "very interesting" for 51.4% and "interesting" for 32.9% of students. None of them found it "very boring".

Adverse drug reactions were provided the status of "interesting" topic by 47.1% of students and "very interesting" by 32.9% of them. None of them found it "very boring".

52.9% of the students found Drug indications "interesting" and 20% "very interesting". None of them found it "very boring".

Drug contraindications were considered "interesting" by 44.3%, "tolerable" by 25.7% and "very interesting" by 22.9%.

Drug interactions were found "interesting" by 27.1%, "tolerable" by 22.8%, "boring" by 21.4% and "very interesting" & "very boring" equally by 14.3% of students.

Regarding Drug doses, 27.1% found it "very boring" and 24.3% "boring". None of them found it "very interesting".

- About their overall difficulty level in understanding the subject, 47.1% found it "not so difficult", 25.7% "difficult", 17.1% "easily understandable", 5.7% "very difficult" and 3% "very easy".
- According to the students, the most difficult topic in Pharmacology is CNS (24.3%), followed by ANS (20%), CVS (17.1%), Chemotherapy (14.3%) and General Pharmacology (11.4%).
- 97.4% of the students opine that Pharmacology should be studied daily, by reading & discussion, to attain good knowledge.
- The study time allotted daily to the subject should be two hours according to 45.7%, one hour by 27.1% and more than two hours by 22.8%.
- The knowledge of Pharmacology is "very useful" in clinical practice according to 75.7% of students.
- 87.1% of them think that a refresher course in Pharmacology is required before starting clinical practice or during internship.

## DISCUSSION

It is very important to emphasize the academic need of reviewing the teaching programs from time to time and making adequate modifications, to keep pace with progress in the subject and to cope with the requirements of the beneficiaries.<sup>5</sup> Although majority of the entrant students had somewhat knowledge about Pharmacology, there was a group of students who were totally unaware of the subject; hence, there is a need to conduct subject orientation program before the students enter into medical education. Most of them found the subject to be very important, interesting & useful, while about one fourth of the students considered it useful but boring. Majority found Central nervous system, Endocrine system and Cardio vascular system as the most interesting topics in Pharmacology, whereas Autonomic nervous system, Respiratory system, General Pharmacology and others were the less interesting topics. So, these topics need to be emphasized more to draw attention of the students. This could be done by microteaching sessions, problem-based learning, patient-related teaching and interactive teaching. Involvement of students improves learning, and thereby their performance in university examinations.<sup>6</sup> Surprisingly, the most interesting topic (CNS) was considered most difficult by around one fourth of them.

Among different drug related topics, Classification, Mechanism of action, Adverse reactions, Indications, Contraindications and Drug interactions are liked by the majority, whereas Drug history & doses were considered boring by most. The subject is found difficult to understand by about 30% of students.

Maximum students have the opinion that Pharmacology should be studied daily by reading & discussion and the study time allotted daily to the subject should be two or more hours. According to them, the knowledge of Pharmacology is very useful in clinical practice.

87.1% of them are in favor of a refresher course in Pharmacology before starting clinical practice or during internship. Some studies mentioned about the inability of doctors in writing rational prescription and it is suggested that there should be incorporation of some training of clinical pharmacology in the internship.<sup>7</sup>

In light of the results of the present study, we should understand that all these issues must be taken into consideration while updating the undergraduate curriculum. The competence of teachers, student engagement, and the creation of proper educational strategies is necessary to have a sense of accomplishment to understand the subject.<sup>8</sup>

## CONCLUSION

The study revealed the perception and feedback of the students regarding their interest in Pharmacology which was found positive and constructive. It also revealed the priority areas for improvement. It is important to know what our students need and whether they feel comfortable with the ever expanding course and limited duration of time. Regular feedbacks may help teachers to plan the curriculum and improve their teaching for undergraduate students.

## QUESTIONNAIRE

Please put tick marks on suitable answers-

**How much did you know about Pharmacology before second MBBS? (Mark only one)**

Didn't know anything

A little bit

Very well

**What do you think about Pharmacology in present MBBS curriculum? (Mark only one)**

Useless and boring

Useful but boring

Useful and interesting

Very useful, very important and interesting

**According to you, which are the interesting topics in the subject? (Mark more than one)**

General Pharmacology

Autonomic Nervous System

Cardiovascular System

Central Nervous System

Gastrointestinal System

Respiratory System

Endocrine System

Chemotherapy

Autacoids

**What is your idea about these drug related topics? (Mark only one in all questions)**

History of drugs-

Very boring    b. Boring    c. Tolerable    d. Interesting    e. Very interesting

Drug classification-

Very boring    b. Boring    c. Tolerable    d. Interesting    e. Very interesting

Mechanism of action of drugs-

Very boring    b. Boring    c. Tolerable    d. Interesting    e. Very interesting

Adverse drug reactions-

Very boring    b. Boring    c. Tolerable    d. Interesting    e. Very interesting

Drug indications-

Very boring    b. Boring    c. Tolerable    d. Interesting    e.

Very interesting

Contraindications of drugs-

Very boring b. Boring c. Tolerable d. Interesting e.

Very interesting

Drug interactions-

Very boring b. Boring c. Tolerable d. Interesting e.

Very interesting

Drug doses-

Very boring b. Boring c. Tolerable d. Interesting e.

Very interesting

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**What is your overall difficulty level in understanding the subject? (Mark only one)**

Very difficult

Difficult

Not so difficult

Easily understandable

Very easy

**Which according to you is the most difficult topic in Pharmacology? (Mark only one)**

General Pharmacology

Autonomic Nervous System

Cardiovascular System

Central Nervous System

Gastrointestinal System

Respiratory System

Endocrine System

Chemotherapy

Autacoids

**Do you think Pharmacology should be studied (by reading & discussion) daily to attain good knowledge? (Mark only one)**

Yes b. No

**If yes, what should be the time imparted to the subject daily? (Mark only one)**

Half an hour b. One hour c. Two hours d. More than two hours

**If no, how many hours do you study the subject per month? (Fill up the blank)**

**What do you think about the knowledge of Pharmacology in clinical practice? (Mark only one)**

Not useful b. Useful c. Very useful

**Do you think a refresher course in Pharmacology is required before starting clinical practice or during internship? (Mark only one)**

Yes b. No c. Don't know

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