



Impact of various teaching tools on learning in Pharmacology: a cross-sectional study among second year M.B.B.S students

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Abstract

Background: *Our study aims to assess and compare the impact of teaching tools like chalk and talk method and power point presentation on different areas of learning in pharmacology.*

Methods: *This cross sectional questionnaire based survey was done on 100 second prof MBBS students. The questionnaire included set of questions about different areas of learning in pharmacology and their preference of teaching tools against each question.*

Result: *Majority of the students preferred chalk and talk method as the most interesting, interactive and concept building teaching tool in pharmacology. For learning various parts of a chapter, students preferred both chalk and talk method and power point presentation.*

Conclusion: *Chalk and talk method emerged as the most efficient and powerful learning tool in pharmacology in our study. Power point presentation should be used as an add on and not as a substitute of chalk and talk method.*

Keywords- *Power point presentation, chalk and talk method, teaching tools*

Introduction

Pharmacology is a dynamic and ever expanding branch of medical science which deals with study of all aspects related to drugs. The purpose of teaching pharmacology is to enable the medical students to have a clear basic concepts about drugs so that they can rationally use their knowledge in patient care¹. There is a constant need to improve teaching methods and skills to empower students with the basic knowledge of drug aspects. There are various teaching methods which can be employed to facilitate learning in pharmacology. One is a

contemporary chalk and talk method and another one is through use of audio-visual aids. Audio-visual aids provide multi-sensory experience² which tends to stimulate and reinforce learning. The knowledge of the teacher alone is not enough, the correct presentation of the lecture is very important for the students to understand the topic. Chalk and talk method and power point presentation are commonly used in teaching³.

Power point is an advanced teaching tool which allows the teacher to present their topic in a more dynamic way by equipping it with different types of colourful media like images, animations etc.

On the other hand, chalk and talk is a basic, conventional yet effective teaching technique in which the teacher gives information on the must know area of the topic. Seth et al found that the performance of students taught with chalk & talk was better than those taught with Powerpoint.⁵

Our study aims to get students feedback on various aspects of learning in pharmacology relative to these two teaching tools i.e. Chalk and talk method and Power point presentation, in order to make necessary improvements in our teaching methodology.

Results

Table: 1 Showing preference of teaching methods by students (n=100)

QUESTIONS	TEACHING METHODS		
	POWER POINT (%)	CHALK & TALK (%)	COMBINATION OF BOTH (%)
INCULCATING INTEREST IN TOPIC	07	78	15
RETENTION OF TOPIC	19	56	25
CONCEPT BUILDING	05	62	33
ENHANCED STUDENT TEACHER INTERACTION	10	83	07
LEARNING CLASSIFICATIONS OF DRUGS	52	43	05
UNDERSTANDING MECHANISM OF ACTION OF DRUGS	10	09	81
LEARNING ADVERSE EFFECTS AND USES OF DRUGS	16	20	64

The maximum number of students found chalk and talk method more convincing for inculcating interest in the subject (78%), retention of topic (56%), concept building (62%) and enhanced student teacher interaction (83%).

For learning classifications of drugs, maximum number of students preferred power point (52%) whereas a combination was liked by 81% of students for understanding mechanism of action of drugs, adverse effects and uses (64%).

Discussion

In the present study Chalk and talk emerged to be the most preferred method for inculcating interest in the subject, retention of topic, concept building and enhanced student teacher interaction. Chalk and talk is the most common, easiest and oldest method of instruction focusing the most average student of the class with the aim of covering the must know area of the topic.

Methods

The present study was a cross sectional questionnaire based study conducted in Pharmacology Department of a medical teaching institute of Madhya Pradesh. A semi structured questionnaire was prepared and distributed to 100 Second prof MBBS students who consented to participate in the study. They were asked to tick a single option of teaching method against various questions in the table. The filled questionnaires were collected and the data was analysed.

Chalk and talk method helps in moderating the pace of the lecture in accordance with the response of the students in the class. Moreover, the topic is displayed in a step by step fashion, capturing and sustaining the interest of the students till the end of the lecture. It is more interactive as the teacher can develop two-way communication with the students. It is also more helpful in improving performance of the students as compared to power point presentation as reported in a study done by Seth et al.⁴ For learning classification of drugs, students preferred power point. The probable reason may be when the names of the drugs are displayed on the power point, it becomes easier to memorize them. In a study done by Kumar et al majority of students preferred power point for diagrams, flow charts and notes taking.⁵ On the other hand, in some cases, power point presentation can be terribly monotonous if the teacher overloads the slides making them illegible and simply keeps on reading

them word by word. With the use of power point, the teacher becomes more like a facilitator.

A combination of both the teaching method was preferred for understanding mechanism of action, adverse effects and uses of drugs. The mechanism of action of drugs is very important for an overall understanding of topic in pharmacology. They can be well illustrated with the help of diagrams and flow charts on the power point combining with slow display on the board.

In order to improve our teaching skills, it is very important to have student's feedback on teaching methodology. So majority of students in our study opted for Chalk and talk method as the most interactive and interesting way of teaching pharmacology which helps in concept building and retaining the topic well. For learning and understanding various parts of a chapter in pharmacology, they preferred combination of Chalk and talk and power point presentation.

So based on the findings in our study, Chalk and talk method came out to be the most basic, efficient and interactive learning tool. The use of Power point presentation should be adjunctive and not as replacement of Chalk and talk method in delivering lectures in Pharmacology. So, we arrived at a conclusion that "old is gold".

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