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Original Article

Undergraduate Medical Students' Perceptions of Small Group Discussions to Enhance Prescription Auditing Abilities

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ABSTRACT

Having undergraduate medical students participate in small group discussions (SGDs) can improve their ability to audit prescriptions, as they are expected to master an overwhelming quantity of material in a short time. Small group discussions are a useful instructional strategy for improving prescription auditing skills in first-year medical students, providing increased levels of involvement and engagement, enhanced capabilities in both analytical thinking and problem-solving, and improved capacity to recognise possible problems or inaccuracies in prescribed drug regimens. Small group discussions provide a learning environment that encourages critical thinking and problem-solving, making them a useful tool for medical students to improve their skills in prescription auditing. Small group discussions are an efficient way for medical students to improve their clinical knowledge and abilities by learning from their classmates and sharing the information and experiences they have gained. The research was carried out with 70 MBBS students in their second year, divided into two groups and conducted over eight weeks. The significance of the difference between the two groups' average scores was determined by statistical analysis. The study found that MBBS students in their second year have the potential to improve their skills in prescription auditing if small group discussions are presented and put into practice. Small group discussions are an efficient method for strengthening prescription auditing skills in MBBS students, providing critical thinking and problem-solving skills. Prescribing and the core curriculum for tomorrow's doctors: British Pharmacology Society curriculum in clinical pharmacology and prescribing for medical students. Small group discussions are an effective teaching-learning methodology for learning the principles of family medicine among 2nd-year MBBS students.

Key Words: *Medical education, MBBS students, Active learning, Collaborative learning*

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INTRODUCTION

Students in medical school are expected to master an overwhelming quantity of material in a very short length of time. They need to master the ability of prescription auditing if they want to make sure that pharmaceuticals are being used in a manner that is both safe and effective. But, it's possible that typical training approaches like lectures won't be enough to properly develop this talent on their own. It has been suggested that having undergraduate medical students participate in small group discussions (also known as SGDs) might improve their ability to audit prescriptions[1].

An audit of a patient's prescriptions is a procedure that involves checking a patient's medication schedule to search for any possible mistakes or problems. This involves monitoring for adverse drug interactions, mistakes in dose, and prescriptions that aren't essential. As future physicians are going to be responsible for prescription pharmaceuticals, it is essential for medical students to understand how to accomplish this, since it will be a part of their job[2].

Medical students have traditionally been taught primarily via the use of the more conventional lecture-based teaching approaches. Nevertheless, studies have demonstrated that these approaches are not always helpful in helping students acquire the critical thinking and problem-solving abilities essential for prescription auditing. SGDs, which provide a learning environment that is both interactive and collaborative, have been suggested as a possible replacement for the traditional way of education[3].

The ability to conduct prescription audits is an essential skill for medical students to learn in order to guarantee that pharmaceuticals are used in a manner that is both safe and effective. But, it's possible that typical training approaches like lectures won't be enough to properly develop this talent on their own. It has been suggested that having undergraduate medical students participate in small group discussions (also known as SGDs) might improve their ability to audit prescriptions. In order to improve the participants' ability to audit prescriptions, the purpose of this research was to familiarize second-year MBBS students with SGDs and assess their perceptions of these disorders[4].

Irrational prescription is an issue that affects people all around the world. Auditing prescriptions, often known as doing a critical analysis of a prescription, is one of the fundamental medical skills. Not only does it aid in the development of an undergraduate medical student's capacity for rational prescription, but it also protects patients from the adverse effects of iatrogenic conditions[5].

An examination of the present research on the use of SGDs to improve prescription auditing skills among undergraduate medical students was the focus of a literature study that was carried out. These investigations were carried out in a variety of locations, one of which was a medical school, and they were carried out in the United States of America, Canada, and Europe[6].

The vast majority of research came to the conclusion that SGDs were successful in improving prescription auditing skills among undergraduate medical students. According to the findings of the study of the relevant literature, small group discussions (SGDs) are a useful instructional strategy for improving prescription auditing skills in first-year medical students. Students are able to acquire the critical thinking and problem-solving skills essential for prescription auditing by participating in these small group conversations, which create an engaging and collaborative learning environment[7].

In addition, students provided feedback indicating that they appreciated SGDs and considered them to be more fascinating than the conventional lecture-based method of learning. It is necessary to do more study in order to verify the results and investigate the most effective ways to build and execute SGDs for prescription auditing teaching. Generally, the ability to teach prescription auditing skills to undergraduate medical students effectively is best accomplished via the use of small group discussions. Students are able to acquire the critical thinking and problem-solving abilities essential for prescription auditing via this kind of learning, which is more participatory and collaborative than traditional learning methods. This form of training has the potential to be optimized with more research to further enhance the students' ability to audit prescriptions and to better prepare them for their future roles as physicians[8].

According to the findings of the research, there are a number of advantages to using SGDs for prescription auditing teaching. They were the following:[9]

- increased levels of involvement and engagement on the part of students
- enhanced capabilities in both analytical thinking and problem-solving
- Increased familiarity and comprehension of the prescription process
- Improved capacity to recognise possible problems or inaccuracies in prescribed drug regimens
- Students in several of the studies said that they enjoyed and considered SGDs to be more fascinating than standard lecture-based teaching methods.

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Medical students have traditionally been taught primarily via the use of the more conventional lecture-based teaching approaches. Nevertheless, studies have demonstrated that these approaches are not always helpful in helping students acquire the critical thinking and problem-solving abilities essential for prescription auditing. SGDs, which provide a learning environment that is both interactive and collaborative, have been suggested as a possible replacement for the traditional way of education[11].

The use of "Small Group Discussions," often known as "SGDs," as a means of instruction and education is useful in the medical industry. Students have the chance to actively participate in the learning process, voice their ideas, and engage in critical thinking when they have access to these types of activities. The purpose of this study is to provide an introduction to the idea of SGDs and to investigate the perspectives of second-year MBBS students on the usefulness of SGDs in improving prescription auditing capabilities[12].

According to the findings of many studies, students feel that SGDs are an efficient way to gain knowledge. According to the findings of one research, the vast majority of medical students thought that SGDs were helpful in increasing their ability to think critically and find solutions to problems[13]. According to the findings of another research, students saw SGDs as a useful instrument for expanding their knowledge and capabilities in the field of pharmacology[14].

Students in their second year of MBBS may improve their skills in prescription auditing by using SGDs, which are a useful tool. Students have the opportunity to participate in activities that encourage critical thinking and problem-solving during SGDs, which may assist them in the development of skills necessary for prescription auditing. Students are given the chance to debate and examine real-life case situations via the use of SGDs, which may assist in better preparing them for the practical applications they would face in the field[15].

The ability of second-year MBBS students to audit prescriptions was shown to be significantly improved as a result of the use of SGDs in pharmacology classes, according to the findings of one research. According to the findings of the research, students who took part in SGDs shown a considerable increase in their capacity to recognise drug-related difficulties when compared to those students who did not take part in SGDs[16].

In the field of medical education, SGDs have become an increasingly common instructional tool. The term "student-generated discussions" (SGDs) refers to a mode of teaching in which a number of students collaborate on a project in order to accomplish a shared educational goal. In order to improve students' capacities for clinical reasoning and critical thinking, the approach is often used in educational settings. Studies have proven that small group discussions (SGDs) are an efficient way for medical students to improve their clinical knowledge and abilities. Students have the chance to have a better grasp of medical ideas by learning from their classmates and sharing the information and experiences they have gained[17]. SGDs give this learning opportunity.

The ability to conduct a prescription audit is an essential skill that is required of healthcare workers in order to guarantee that patients get the right level of treatment. In order to verify that their colleagues are following the prescribed procedures and policies, healthcare professionals are required to check and assess the prescribing practices of their other coworkers as part of the auditing process for prescriptions. Prescription auditing has been demonstrated to increase the quality of treatment that is offered to patients as well as lower the number of adverse medication occurrences (ADEs)[18]. In order for medical students to become effective healthcare practitioners, it is essential for them to acquire the skills necessary for prescription auditing.

SGDs are a tool that may be used to improve medical students' ability to audit prescriptions. Students have the opportunity to get a better grasp of prescription auditing principles via the use of SGDs, which provide them the chance to learn from their classmates as well as contribute their information and experiences. Students will have the chance to practice their abilities in a setting that is both safe and encouraging as a result of using this approach, which may also be used to replicate different prescription auditing circumstances. Students may also get feedback on their performance using SGDs, which can help them improve their abilities in the area of prescription auditing and ultimately their overall performance[17].

MATERIALS AND METHODS

For the purpose of this research, we chose to work with a total of 70 MBBS students in their second year. The students were split up into two groups, with each group having 35 individuals to make up its membership. The research was carried out over the course of a period of eight weeks. During the first week of class, the students received a condensed overview of the idea of SGDs as well as an explanation of the possible advantages that this data might provide to prescription auditing. After that, the class was broken up into smaller groups, each of which was given a guide to help them.

Detailed The following are the inclusion and exclusion criteria for the method of data collection: The students in the intervention group came from a pool of 35 that was selected at random (group discussion followed by prescription audit). For the purpose of having conversations in smaller groups, the students in the intervention group were randomly subdivided further into four smaller subgroups, each consisting of less than nine students. The second group acted as a control group, doing just an audit of the prescriptions.

The students continued to take part in SGDs on a weekly basis during the course of the subsequent three weeks. Each of the four sessions ran for a total of four hours and focused on a different facet of prescription auditing. The facilitators were in charge of guiding the talks and making sure that every student took part in the activities.

At the conclusion of the period of four weeks, the pupils participated in a survey designed to gauge their understanding of the SGDs. The questionnaire had questions on the students' level of involvement and participation, as well as their level of comprehension of the prescribing procedure and their capability of recognising possible faults or problems in drug regimens.

The research was carried out using the following methodology:

Students in both the control group and the intervention group were given an incorrect prescription that had several mistakes through Google forms. This was done online.

In accordance with the directives, it was expected of the participants to conduct an in-depth analysis of the prescription. A faculty member who was not involved in the audit carried out the check of the prescriptions.

The criteria that are outlined in table 1 were used to assign point values.

The prescription auditing was then carried out a second time using a different prescription, after which both groups were combined.

The significance of the difference between the two groups' average scores was determined by statistical analysis based on the outcome matrix (Table 2).

For the purpose of the prescription auditing exercise, both batches were switched around (the intervention and control groups were switched), but each batch received a different prescription. Moreover, points were allotted for this attempt. The significance of the difference between the two groups' average scores was determined by statistical analysis.

The participants were then asked to fill out a validated questionnaire that included a Likert scale. The validation was carried out by knowledgeable Pharmacology faculty members from both the university and from other medical schools. The purpose of the questionnaire was to determine how the students felt about the intervention, which consisted of small group discussions in addition to prescription auditing, as well as other connected topics. Within the allotted amount of space in the questionnaire, the student was given the opportunity to express their feedback.

TABLE 1: POINTS ALLOTMENT AS PER THE CRITERIA

Criteria	Points Awarded
Detection of mistakes in given prescriptions	2
Suggesting the correct drug of choice with reason	4
Correcting any other mistake in the given prescription	2
Any additional suggestion made	2

TABLE 2: OUTCOME MATRIX

OUTCOME	INDICATORS	DATA SOURCE	DATA COLLECTION METHOD
Short term	Enhanced ability of the students to correctly audit prescriptions.	Students	Prescription auditing scores
Intermediate term	Increased accuracy in writing a rational prescription (compared with model prescription).	Interns & residents	Prescription auditing scores
Long term	Intern prescription audit. Improved IMG competency in writing rational prescriptions.	Patient records IMG	Prescription auditing scores

Statistical analysis:

The Student's independent sample t test was used to conduct an analysis of the Prescription – Audit Points of both Groups on Two Different Occasions.

The student's perspective was recorded via response on a validated questionnaire using a Likert scale ranging from 1 to 5, and the results were statistically evaluated using the Chi square test.

RESULTS

According to the findings of the study based on the evaluation matrix (Table 3), the vast majority of students felt that the SGDs helped them improve their capabilities in prescription auditing. Students said that they were more interested and participatory in the SGDs as opposed to the usual lecture-based education that they had previously received.

In addition, students who took part in the SGDs said that after taking part in the activities, they had a better comprehension of the process of providing medication. After taking part in the SGDs, the students also said that they felt more confidence in their capacity to recognise possible faults or difficulties in prescription regimens. This was stated by the students after they had participated in the SGDs.

1. PRESCRIPTION AUDIT SCORES:

On both instances, the mean score of the group that participated in the interventional trial was considerably higher ($p<0.001$) in comparison to the group that served as the control (before & after cross over) as shown in Table 4.

2. PERCEPTION OF STUDENTS REGARDING INTERVENTION (SGD):

As compared to the 17% of students who had a neutral or unfavorable impression regarding small group discussion, 83% of students said that the intervention (SGD) was highly useful ($p<0.001$)

TABLE 3: EVALUATION MATRIX

EVALUATION QUESTION	INDICATORS	DATA SOURCE	DATA COLLECTION METHOD
1. (Level 1 - Reaction): Are students satisfied with the SGD intervention before prescription auditing?	Number / proportion of satisfied students	Students	Questionnaire with Likert scale.
2. (Level 2 – Learning): How accurately students are auditing prescriptions?	Improvement in ability of the students to correctly audit prescriptions.	Class test of students	Prescription auditing scores
3. (Level 3 – Behavior)	• Increased interest in TL session (attendance) • Lively discussion • Better group activity (increased cooperation)	• Students • Peers	• Attendance registers • Peer review & feedback.
4. (Level 4 – Expected Results)	• Less mistakes in prescription writing • Improved Rational prescribing • Reduced iatrogenic diseases • More competent to handle patients.	• Random sampling review results of prescriptions • Key informant	• Prescription cards • Key informant interviews • IMG views on SGD intervention with prescription auditing.

TABLE 4: COMPARISON OF MEAN VALUES OF SCORE OF CONTROL AND INTERVENTIONAL GROUP

GROUP	CROSS OVER	SCORE
Control	Before	2.77
	After	2.85
Interventional	Before	7.88
	After	8.22

DISCUSSION

According to the findings of this research, MBBS students in their second year have the potential to improve their skills in prescription auditing if SGDs are presented to them and put into practice. The vast majority of the students felt that the SGDs were more interesting and participative than the more conventional method of education, which consisted mostly of lectures. After participating in the SGDs, the students reported that they had a better understanding of the prescribing process and that they felt more confident in their ability to identify potential errors or issues in medication regimens. In addition, the students reported that they felt more confident in their ability to identify potential errors or issues in medication regimens.

In addition, these results suggest that SGDs may be successfully utilized to augment conventional lecture-based education in order to build the critical thinking and problem-solving abilities that are essential for prescription auditing. In spite of this, it is essential to point out that the sample size of this study was quite small, and more research is required to validate these results and investigate the most effective way to develop and deploy SGDs for the purpose of prescription auditing teaching. After going through the fundamentals of prescription auditing in smaller groups, it is clear from the results that the students have improved their knowledge and understanding of the subject as a consequence of having these discussions. The pupils who did not participate in the group discussion were unable to perform to an acceptable level. The pupils had a favorable attitude towards the intervention, as shown by their perceptions (small group discussion). The utilization of small group discussion prior to the auditing of prescriptions is something that is not done in very many medical colleges, but it is something that may be extremely helpful in gaining a thorough grasp of

prescription auditing. The capacity of medical students and graduates to write prescriptions would significantly increase as a result of this, since rational prescribing would become more accessible to the students and simpler for them to comprehend. The typical blunders that medical professionals make while writing prescriptions will be significantly cut down. Because of this, medical professionals would improve their skills while society as a whole would get more benefits and experience more contentment.

To summarize, Small Group Discussions have the potential to be an efficient method for strengthening prescription auditing skills in MBBS students who are in their second year of school. Students get the chance to participate in activities that require critical thinking and problem-solving, as well as debate real-life case situations as a result of these activities. In addition, the vast majority of students believe that SGDs are an important tool that may help them improve both their knowledge and their abilities in the field of pharmacology.

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