Section: Miscellaneous

Original Research Article

UTILIZING THE STUDENT-DOCTOR METHOD OF CLINICAL TRAINING TO DEVELOP EMPATHY AMONG UNDERGRADUATE PSYCHIATRY STUDENTS—A FEASIBILITY AND EFFECTIVENESS STUDY

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ABSTRACT

Background: The development of an empathetic approach should begin before the start of professional practice, during undergraduate medical training, as it lays the foundation of a future professional identity. The student doctor teaching method gives the students a first-hand experience of difficult procedures and unpredictable situations. This study aims to evaluate the feasibility and effectiveness of the student doctor teaching method in fostering empathy among medical students. **Aim:** To utilize the student-doctor method of clinical training to develop empathy among undergraduate medical students. **Materials and Methods:** This educational intervention study was conducted on 56 Phase III MBBS students and 04 faculty members of Government Medical College, Baramulla, J&K, from March to June 2024. To assess the development of empathy quotient among students, Jefferson's Scale of Empathy—Student Version (JSE-S) was used before and after intervention. A question guide was prepared, which helped the students to interview the patients with psychosocial context in mind and helped them better understand the patient and develop empathy. Self-rated questionnaires based on the Likert scale were used to get the feedback of students and faculty/residents regarding the effectiveness and feasibility of this teaching-learning method, respectively. Students were also asked to write their reflections about their experience of clinical clerkship. Data was compiled in a tabulated form, and analysis of the data was done using appropriate statistical methods. **Result:** The study used a sample size of 56 participants. The differences between the pre-test and post-test scores were analyzed using descriptive statistics and a paired samples t-test. (Table 1) The mean score for the pre-test JSE-S was 103 (median = 105, SD = 5.64). The mean score for the post-test was 124 (median = 127, SD = 6.44). A statistically significant difference was found between the pre-test and post-test scores {t (55) =-15.6, $p<0.001$}. **Conclusion:** The student-doctor method utilized in our study to develop empathy among medical students was an effective and feasible method. It provides students with the opportunity for one-to-one mentoring. This model puts no additional financial burden on the medical colleges and can be easily fitted into the existing NMC schedule.

INTRODUCTION

Empathy is defined in the medical literature as the understanding of a patient's emotions, concerns, and situations; communicating that understanding to the patient; and acting on that understanding.[1] Developing an empathetic attitude is of utmost importance, as it improves diagnostic accuracy, patient satisfaction and compliance, and lowers psychological distress.[2-5]

No consensus has been reached to date regarding whether empathy is a state or a trait. Empathy as a trait is defined as a personal disposition that determines one's ability to recognize, experience, and react to others' emotions, while as a state, it is the

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extent to which one empathizes with others in a specific event at a specific time.[6]

Empathy is a complex interplay of factors like evolution, genetic predisposition, individual development, education, and personal experiences.[7] Factors like gender, personality, career choice, and work environment can affect an individual's level of empathy.[8] The development of an empathetic approach should begin before the start of professional practice, during undergraduate medical training, as it lays the foundation of a future professional identity.[9] In the traditional teaching approach, where the relationship between a student and patient is cross-sectional, the student does not get an opportunity to be involved in continuous patient care, thus creating a learning gap and a decline in empathy.[10] In the recently introduced student doctor method of teaching, each student under supervision of a faculty preceptor is involved in one-to-one interaction with their assigned patients and their families.[11] The student doctor teaching method gives the students a first-hand experience of difficult procedures and unpredictable situations. It also provides them the advantage of "implicit transfer" of skills by just being with an experienced preceptor.

The limited studies and systematic reviews on empathy in undergraduate medical students reveal mixed results. Some studies report a decline in empathy, whereas others report either no change or an increase in empathy with training.[12-14] Most of the studies have employed the traditional teaching methods, which are cross-sectional and do not take into consideration the effect of time spent in medical training. This study aims at studying the feasibility and effectiveness of the student doctor teaching method in imbibing empathy in medical students.

Aims and Objectives

Aims

To utilize the student-doctor method of clinical training to develop empathy among undergraduate medical students.

Objectives

1. To evaluate the effectiveness of the student-doctor method of clinical training in developing empathy among undergraduate medical students.
2. To assess the feasibility of this method of teaching.

MATERIALS AND METHODS

This educational intervention study was conducted on 56 Phase III Part 1 MBBS students and 04 faculty members of Government Medical College, Baramulla, J&K, from March to June 2024. After approval from the Institutional Review Board was taken, a written informed consent was taken from both students and the participating faculty members. A preliminary interview was conducted, in which socio-demographic details of students were taken. This was followed by a sensitization session among the participants on the aim of the study. The following study tools were used in the study:

- Jefferson Scale of Empathy-student version (JSE-S): it is a 20-item scale that assesses empathy in medical students. Each item is scored on a 7-point Likert scale, ranging from "strongly disagree" to "strongly agree." It measures 3 components of empathy: perceptive taking, compassionate care, and standing in the patient's shoes.
- A pre-validated question guide to help students interview the patients: After introducing oneself, the student-doctor asked a total of 18 questions based on the patient's background, exploring feelings, understanding the patient's experiences, addressing communication and support, and understanding the preferences of the patient.
- A pre-validated questionnaire based on the Likert scale to assess the effectiveness and feasibility of the study.
- Students were also asked to write reflections based on Rolfe's method of 'What happened,' 'So what,' and 'What next.'

Data Collection: A sensitization session was given to the participants on empathy. The pre-test JSE-S questionnaire was filled by the participating students before the commencement of their clerkship. During their clerkship, they were assigned faculty preceptors, which gave them first-hand exposure to clinical situations. The students were provided a questionnaire, which they used on patients admitted to the psychiatry ward. The students were given brief verbal instructions on the importance of active listening and a non-judgmental attitude during the interview. Students were free to ask for clarification if required.

After one week of clerkship, participants were asked to fill out a post-study JSE-S. On the last day of their clerkship, they were asked to provide their reflections and feedback.

Feedback from faculty on the effectiveness and feasibility was taken at the end of the study period.

Data Analysis: Data was compiled in MS Excel, and responses were analyzed using descriptive statistics. The mean of the pre- and post-test scores was analyzed using the paired Student's t-test by Jamovi Software Version 2.3.28.

RESULTS

The study used a sample size of 56 participants. The differences between the pre-test and post-test scores were analyzed using descriptive statistics and a paired samples t-test. (Table 1) The mean score for the pre-test JSE-S was 103 (median = 105, SD = 5.64). The mean score for the post-test was 124 (median = 127, SD = 6.44). A statistically significant difference was found between the pre-test and post-test scores {t (55)=-15.6, $p<0.001$}. The mean difference was -21 with a 95% confidence interval

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ranging from -23.7 to -18.3. These results indicate a significant improvement in scores from the pre-test to the post-test, suggesting that the intervention of the student-doctor method had a measurable effect.

Table 1: Difference in mean scores of Pre & Post Test JSE-S Scale

JSE-S	N (No. of Students)	Mean (SD)	dF	p	95% CI
Pre Test	56	103 (± 5.64)	55	<0.001	-23.7 to -18.3
Post Test	56	124 (± 6.44)			

Table 2 depicts the students' feedback on the effectiveness of the student doctor method in teaching empathy to medical undergraduates. A 5-point Likert scale was used to collect responses. The responses ranged from strongly disagree to strongly agree. Almost all the participants either agreed or strongly agreed on most of the questions, like the student doctor method enhancing the understanding of empathy, encouraging students in developing empathy skills, empathy exercises being beneficial, more confidence in demonstrating empathy, valuable feedback from student doctors, and integrating this TLM into the curriculum. Questions on student doctors effectively demonstrating empathy, role-play scenarios, and this TLM addressing the challenges in teaching empathy had neutral responses as well. However, none of the participants disagreed or strongly disagreed on any of the questions, indicating that students perceive this method as an effective TLM to develop empathy.

Table 2: Student Feedback on Effectiveness of this TLM

Questionnaire	Strongly disagree	disagree	neutral	agree	Strongly agree
The Student Doctor method effectively enhances my understanding of empathy in medical practice.	0%	0%	0%	37.5%	62.5%
I feel that the Student Doctor approach encourages me to develop empathetic skills.	0%	0%	0%	37.5%	62.5%
Student Doctors effectively demonstrate empathy during teaching sessions.	0%	0%	41%	39%	20%
The empathy exercises conducted by Student Doctors are beneficial for my learning.	0%	0%	0%	45%	55%
I feel more confident in my ability to demonstrate empathy towards patients after participating in Student Doctor sessions.	0%	0%	0%	43%	57%
Student Doctors provide valuable feedback that helps me improve my empathetic skills.	0%	0%	0%	66%	34%
The role-play scenarios used by Student Doctors effectively simulate real-world patient interactions and enhance my empathy skills.	0%	0%	21%	38%	41%
The Student Doctor method adequately addresses the challenges associated with teaching empathy in medical education.	0%	0%	12.5%	25%	62.5%
I believe that integrating the Student Doctor method into medical curriculum can improve overall empathy levels among medical students.	0%	0%	0%	32%	68%
Overall, I find the Student Doctor method effective in teaching empathy in medical education.	0%	0%	0%	37.5%	62.5%

A 5-point Likert scale was used to receive the faculty feedback on the feasibility of this teaching method. (Figure 1) A questionnaire was provided to the faculty at the end of the sessions. 75% strongly agreed and 25% agreed that the student-doctor method was feasible in teaching empathy to medical students.

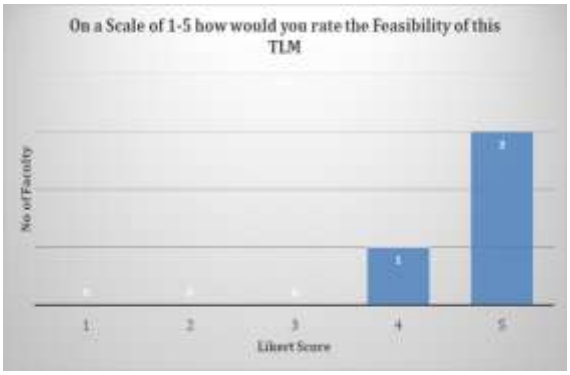

Figure 1: Faculty Feedback on Feasibility of this TLM

DISCUSSION

This interventional longitudinal study assessed changes in empathy among undergraduate medical students. With the intent of assessing the feasibility and effectiveness of the student-doctor model in teaching empathy, we used the Jefferson Scale of Empathy (JSE-S) on the student-doctors both before and after the clerkship. This was followed by feedback taken from faculty preceptors and reflections taken by student doctors.

This study indicates that the intervention administered in the form of a clerkship between the pre-test phase and post-test phase was effective in enhancing the empathetic skills. These findings contradict the earlier studies, which did not utilize the student-doctor method and instead employed the traditional teaching methods. Some earlier studies reported a decline in empathy during training, whereas others reported either no change or a decrease in empathy.[15] This could be explained by

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increasing distress resulting from exposure to agony, diseases, and death at a young age, when young students find it difficult to handle grief and other deep emotional experiences. Another reason could be lack of positive role models and the limited time frame of traditional teaching methods.[16] The inability to relate to patients could be due to lack of life experience or limited contact with patients, which could decrease empathy. In contrast, emphasizing the value of empathy during training, interaction with supervisors, and communication trainings provided by preceptors could improve empathy.[17] A longitudinal study conducted on medical students in Japan showed that communication skill education could improve empathy, but the effect was short-lived.[18] The exclusive focus on social skills felt forced into the teaching curriculum, as often the same could not be felt in simulated settings.[19] More sustainable Impact was made by Shapiro et al.[20] by targeting multiple factors like communication skills along with coping skills, well-being-enhancing techniques, and extended exposure to patients, which used a more realistic approach.

Our study highlights the need for health care professionals to be equipped with necessary skills, experience, and guidance to react empathetically in clinical settings, which can be imbibed by the student-doctors. Our study is based on contextual learning, where students are exposed to real patients rather than simulated patients. Bell et al. (2009) reported that participants value real patients as an instructional resource that makes learning more real.[21] Participants in the same study reported learning through visual pattern recognition, dialogue, and physical examination. Positive affective outcomes reported are enhanced confidence, motivation, satisfaction, and a sense of professional identity. Real patient learning helped participants to link theory with practical experiences.

A recent qualitative study reported that real patient interaction, observation in outpatient departments, case presentations, and interactive lectures are facilitators in learning skills in Psychiatry.[22] Many recent meta-analyses, which find empathy teaching programs in medical education as effective strategies, further validate the findings of our study.[23-24]

This study has few limitations, which include the fact that data from a single medical college was collected, which led to a small sample size. Psychological factors that influence empathy were not evaluated in the students. The study was conducted over a short time period, and the level of developed empathy could not be followed.

CONCLUSION

The student-doctor method utilized in our study to develop empathy among medical students was an effective and feasible method. It provides students with the opportunity for one-to-one mentoring. This model puts no additional financial burden on the medical colleges and can be easily fitted into the existing NMC schedule.

Implications: The faculty members may utilize this model for teaching the affective domain in general and empathy in particular. Studies conducted at multiple centers with a larger sample size can provide more accurate results.

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