



Student's Perceptions Regarding Teaching Communication Skills Using the "Motivational Interviewing Method" in a Chronic Disease Patient to Improve Medication Adherence

Sachidananda Adiga¹, Swathi Acharya^{2}*

Department of pharmacology, K.S.Hegde Medical academy, Nitte deemed to be university, Mangaluru, India.

Abstract

With increasing burden of chronic diseases and their morbidity and mortality, medical students need to learn how to help patients to change their behaviors and improve their medication adherence to improve their health outcomes. Motivational interviewing (MI) is one of the methods found to be effective in treating lifestyle, behaviors and diseases. Objective of the study was to assess the perception of students on the motivational interviewing method used in teaching the above competency. In this cross-sectional study, students of II MBBS were taught the various components of MI : Initial lecture class followed by video demonstrations, and later, they were assigned case scenarios to perform the role-play using the principles taught in both components. Role-play session was designed to assess the application of various component of MI in communicating to the patient with chronic disease. 360⁰ feedback was taken on the role play session and students perception on the entire module was obtained. Students opined that learning about MI was beneficial to them in understanding the need for behavioral change in patients with chronic disease. They also got an unique insight into the technique of rolling with resistance and addressing all issues of patients before enforcing them for medication adherence. The study results revealed that role-play session was very interesting and helped in learning communication skills. The 360⁰ feedback obtained was beneficial in identifying their lacunae and scope for improvement in the future. Concept of Motivational interview , video demonstration, and simulated doctor-patient case scenarios was useful for the students understanding the patient perspective in chronic diseases and motivate them to adhere to the medication

Keywords: Motivational interview, medical graduate, adherence, chronic disease

Full length article

*Corresponding Author, e-mail: swathiacharya@nitte.edu.in

1. Introduction

Patient-doctor communication is an integral part of clinical practice. A physician obtains information from and shares information with a patient, leading to an excellent therapeutic patient-doctor relationship or dissatisfaction on both sides [1]. Patients with a better understanding of their treating doctors are more likely to acknowledge their health problems, understand their treatment options, modify their behavior, and follow their medication schedules [2]. Studies have shown that medical students who undergo basic communication skills training perform better while communicating with patients [3]. According to the revised Graduate Medical Education 2019 regulations, an Indian Medical Graduate must communicate appropriately and effectively with patients, families, colleagues, and the community, making him a quality communicator. Early clinical exposure also necessitates precise and formal training of students on acquiring communication skills [4].

A hybrid program that uses different instructional strategies to accommodate different learning styles is desirable in training. Didactic sessions supplemented by

small group discussions with appropriate instructions are essential that highlight skills that the medical student needs to acquire to be a Communicator. Students need an environment where their beliefs, attitudes, and behaviors can be observed, analyzed, and challenged, which can be achieved in a skill laboratory. Practicing specific communication skills like explaining the drug medications to peers or standardized patients can be done in these sessions. [5]. "Chronic diseases" are defined as all impairments or deviations from normal, which may be permanent or they leave residual disability, they are caused by non-reversible pathological alteration or they require special training of the patient for rehabilitation or they are expected to require a long period of supervision, observation or care [6].

Adherence to prescribed medications is associated with improved clinical outcomes for chronic disease management. Nonadherence to the prescribed medication is associated with higher rates of hospital admissions, increased morbidity and mortality, and increased healthcare costs. Using motivational strategies to improve medication adherence can significantly help to overcome this issue. [7]

Motivational interviewing (MI) is a counselling approach used and evaluated extensively in the last decade. This approach greatly impacted addiction management and disorders related to lifestyle and treatment adherence. Knowing that adherence behavior has a complex nature and that motivational interviewing can address those complexities, proper training and evaluation of such activity is essential. [8] Motivational interviewing aims to foster patients' intrinsic motivation. Therefore, performing MI does not imply convincing the patient to do what the physician thinks is best; instead, it makes the patient introspect on health issues and make the best decision for his condition.

The basic principles of MI are to Express empathy, Develop discrepancy, Avoid argument, Roll with resistance, and Support self-efficacy.[9] The use of open-ended questions, affirmations, Reflective listening, and summarizing the whole process will help the patient to ensure their self-efficacy and autonomy and eschew any attempt to coerce or "trick" them into healthier behaviors and choices. Motivational interviewing (MI) helps clinicians to support patients in overcoming ambivalence while maintaining self-determination. Objective of the study was to assess the perception of students about MI method employed in motivating patient to adhere to the treatment in chronic disease.

2. Materials and Methods

This cross-sectional study was conducted in the Department of Pharmacology after obtaining approval from the Institutional Ethics Committee (INST.EC/EC/005/2022). The study was performed in April 2022. The study participants included were the third-term MBBS students who consented to participate. A total of 75 students were enrolled in the study; 69 students consented to give feedback. Group dynamics was followed as explained in Figure 1 and the steps were followed in inculcating communication skills to the medical students as explained in Figure 2. We used three standard case scenario of the patients with endogenous depression, HIV infection and Type II DM who were put on antidepressants, antiretroviral drugs and antidiabetic drugs respectively for students to demonstrate MI role-play. We expressed the responses obtained in the predesignated google form questionnaire in terms of descriptive statistics using percentages.

3. Results and Discussions

The perception of the students about all three aspects i.e., initial brief lecture, video demonstration and role play sessions were taken on the predesigned validated questionnaire using Likert scale [10] and few open-ended questions for improvement of the sessions revealed that most students appreciated the whole exercise.

3.1. Feedback on the initial lecture session revealed that it helped them understand the need to motivate patients to adhere to medication better (100%). It enabled them to understand the various components of the Motivational interview (98%) and the transtheoretical theoretical model of change (93%). It helped students to learn the competency (98%) actively. (► Table 1).

3.2. Students perceived that video demonstration made the session enjoyable (99%). They felt they learned the

aspect that could not have been known in a didactic lecture (98%), and 97% of students felt facilitators should use this kind of video for teaching all communication competency. They also opined that facilitators must include more videos of this kind and animated videos. (► Table 2).

3.3. The feedback on the role-play session suggested that it made the learning session more attractive (98%); 89% of the students felt they understood and applied the concepts taught using lecture and video, and 97% of them thought the facilitator's feedback helped them to understand the need for the improvement in understanding and demonstrating the skill 87% felt peer feedback was very important for this kind of activity. (► Table 3).

3.4. Overall feedback revealed that 98% of the students felt this kind of teaching activity would provide them with a collaborative environment for learning and help content to be delivered satisfactorily, and 99% of them thought the content was more understandable. Open-ended questions suggested that around 88% of the students felt there was no need to change any methodology of teaching the specific competency; however, a minor percentage of them opined to reduce the initial lecture part and conduct such sessions in the bedside teaching. Students also perceived that these sessions would help them with behavioral changes by understanding the importance of communication in increasing adherence and the need to demonstrate empathy in communication, techniques of motivating the patient to enhance their communication skills in the future, and 86.5 % felt the need for these kinds of the session to be conducted regularly. Open-ended questions regarding suggestions for improvement were answered by 50% of students. They included suggestions like introducing different scenarios (9%), improving time management for sessions (9%), and conducting the session in a real setting, like in bedside teaching (4%), as a few of the essential suggestions. (► Table 4 and Table 5).

The present study evaluated the student's perceptions regarding teaching communication skills using the "Motivational interviewing method" in a chronic disease patient to improve medication adherence. Communication and trust are the critical elements in building a healthy relationship. [11] According to the revised regulations on Graduate Medical Education 2012, Indian Medical Graduate must be able to demonstrate the goals as clinician, leader, lifelong learner, leader and function as communicator with patients, families, colleagues and community appropriately and effectively. Medical students usually learn the affective domain from their teachers or seniors (a hidden curriculum). In the present CBME curriculum for the medical graduate, the need for improving these communication skills has been highlighted. Competencies like communicating effectively and empathetically with the patient, use of drug and devices appropriately, motivating patients to adherence to the medication, cost and compliance, educating about Over the counter drugs, communicating the hazards drug addiction and dependence and measures to overcome it along with medicolegal aspects of prescription writing have been added, especially in the second year of MBBS, as the students will be visiting the hospital regularly.

Table 1. Students perception on Short lecture on “Concept of chronic disease , Medication Adherence and methodologies to motivate patients”

Q.NO	Questions	Strongly agree	Agree	No comments	Disagree	Strongly disagree
1.	Learning objectives were apt for the competencies being taught	44 63.76%	24 34.78%	1 1.44%	--	--
2	Session helped in understanding the need for motivating patient	48 69.56%	21 30.43%	--	--	--
3	Briefing session was appropriate for the competency	44 63.76%	23 33.33%	2 2.898	--	--
4	I understood the various component of MI	42 60.86%	26 37.68%	1 1.44%	---	--
5	I understood the various component of transtheoretical model (TTM) of change	41 59.42%	23 33.33%	4 5.79%	--	--
6	Session helped in active learning of the competency	47 68.11%	20 28.98%	2 2.898%	---	--

Table 2. Students Perception On Video Demonstration

Q.NO	Questions	Strongly agree	Agree	No comments	Disagree	Strongly disagree	
1	It made the session interesting	49 71.01%	20 28.98%	--	--	--	
2	I learnt the aspects which could not have been learned in didactic lecture	47 68.11%	19 27.53%	3 4.34%	--	--	
3	Video sessions should be used in all the communication competencies	48 69.56%	20 28.98%	1 1.44%			
4	Suggestion for selecting the videos for these kind of classes	1. Good with present video 11.6% 2. Interactive videos with open ended questions 1.44% 3. Shorter duration video 1.44% 4. Animated video 1.44%					

Table 3. Students perception on “Role play activity”

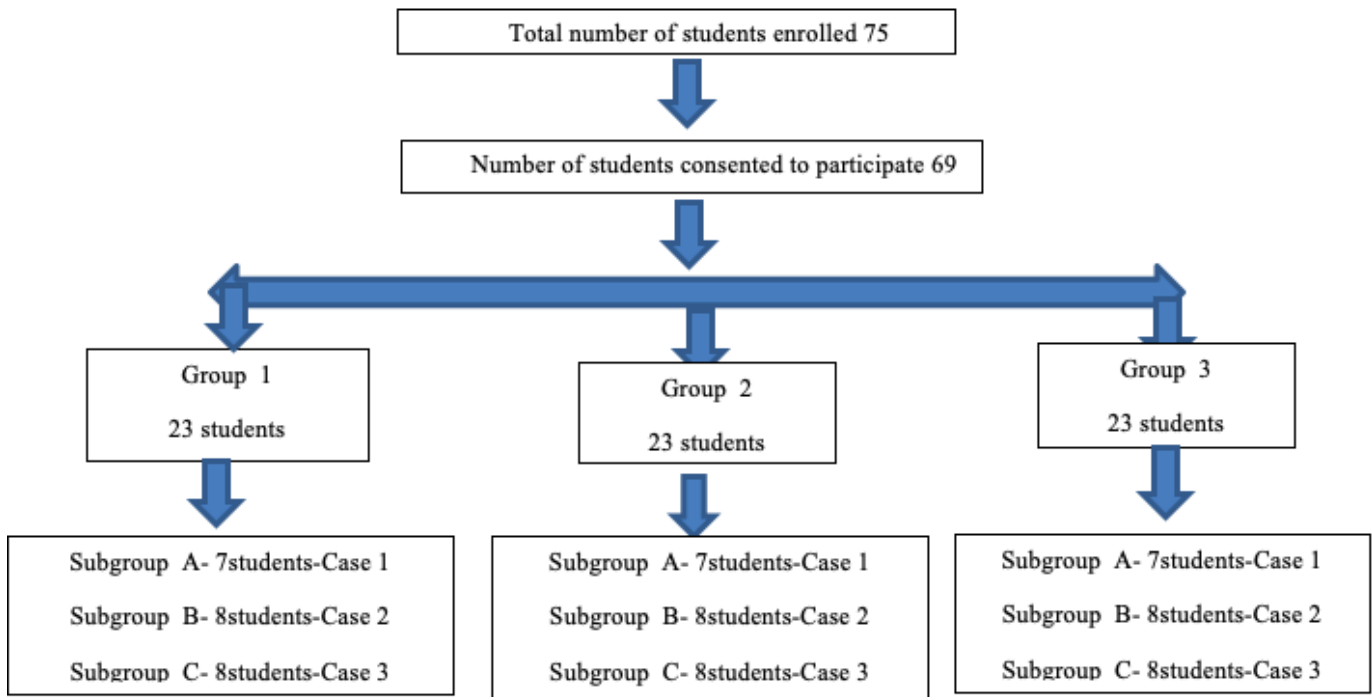
Q.NO	Questions	Strongly agree	Agree	No comments	Disagree	Strongly disagree
1	It made the session interesting	32 46.37%	24 34.78%	11 15.9%	2 2.8%	----
2	Able to understand and apply the concepts taught in lecture and video.	37 53.62%	25 36.25%	5 7.24%	2 2.8%	-----
3	Feedback by the peers is important in such kind of activity	35 50.72%	25 36.23%	6 8.69%	3 4.34%	----
4	Feedback by the facilitators helped in understanding the need for improvement	44 63.76%	24 34.78%	1 1.44%	---	---

Table 4: Overall feedback about the session

Q.NO	Questions	Strongly agree	Agree	No comments	Disagree	Strongly disagree	
1	Overall feedback on the whole session	44 66.66%	23 33.33%	1 1.44%	1 1.44%	-----	
	Collaborative learning environment was provided	47 68.11%	21 30.43%	1 1.44%	---	---	
	Competency to be taught was delivered satisfactorily Content delivered was understandable	44 66.66%	25 33.23%	--	--	--	
2	Any need to improve the teaching of communication? a. Content b. Delivery	Required(11.59%) SHORTEN THE INITIAL LECTURE PART Not required(88.40%) Required(8.69%)/Not required (91.30%)					

Table 5. Open Ended Questions about the sessions

<p>1 . How did the present session influence behavioral changes in your communication skill.</p> <ol style="list-style-type: none"> 1. Understood the importance of communication better – 18.84% 2. Increased the confidence in talking to the patient – 13.04% 3. Understood the need for empathy in communication – 10.14% 4. How to motivate the patients using different techniques – 10.14% 5. Understand the subject better – 7.24% 6. Understand how physician has to tackle patients in different situation- 5.79%
<p>2. What is the one new thing you learnt by this session?</p> <ol style="list-style-type: none"> 1. Various approaches in Motivational interviewing- 34.68% 2. Better communication skills- 20.28% 3. Explaining the need of medications to the patients – 11.5% 4. Importance of proper communication = 7.24% 5. Adherence vs compliance 5.79% 6. Empathy towards patient -4.34%
<p>3. Suggestions for improvement in future session</p> <ol style="list-style-type: none"> 1.Nothing 37.68% 2.More videos to be included 23.18% 3. Debate to be included 4.34% 4. Module to be announced well in advance – 4.34% 5. Session can be made more shorter 4.34% 6. To be conducted bed side in real setting- 4% 7. Enact of roleplay by the faciliators-2.88% 8. More role play session to be included- 2.88% 9.To prepare a checklist for all the component which will help as guide to students- 2.88%



Case 1: Patient suffering from endogenous depression and on antidepressants

Case 2: Patient suffering from HIV infection and on antiretroviral therapy

Case 3: Patient suffering from Type II Diabetes and on antidiabetic medication

Figure 1. Group dynamics and case allotment

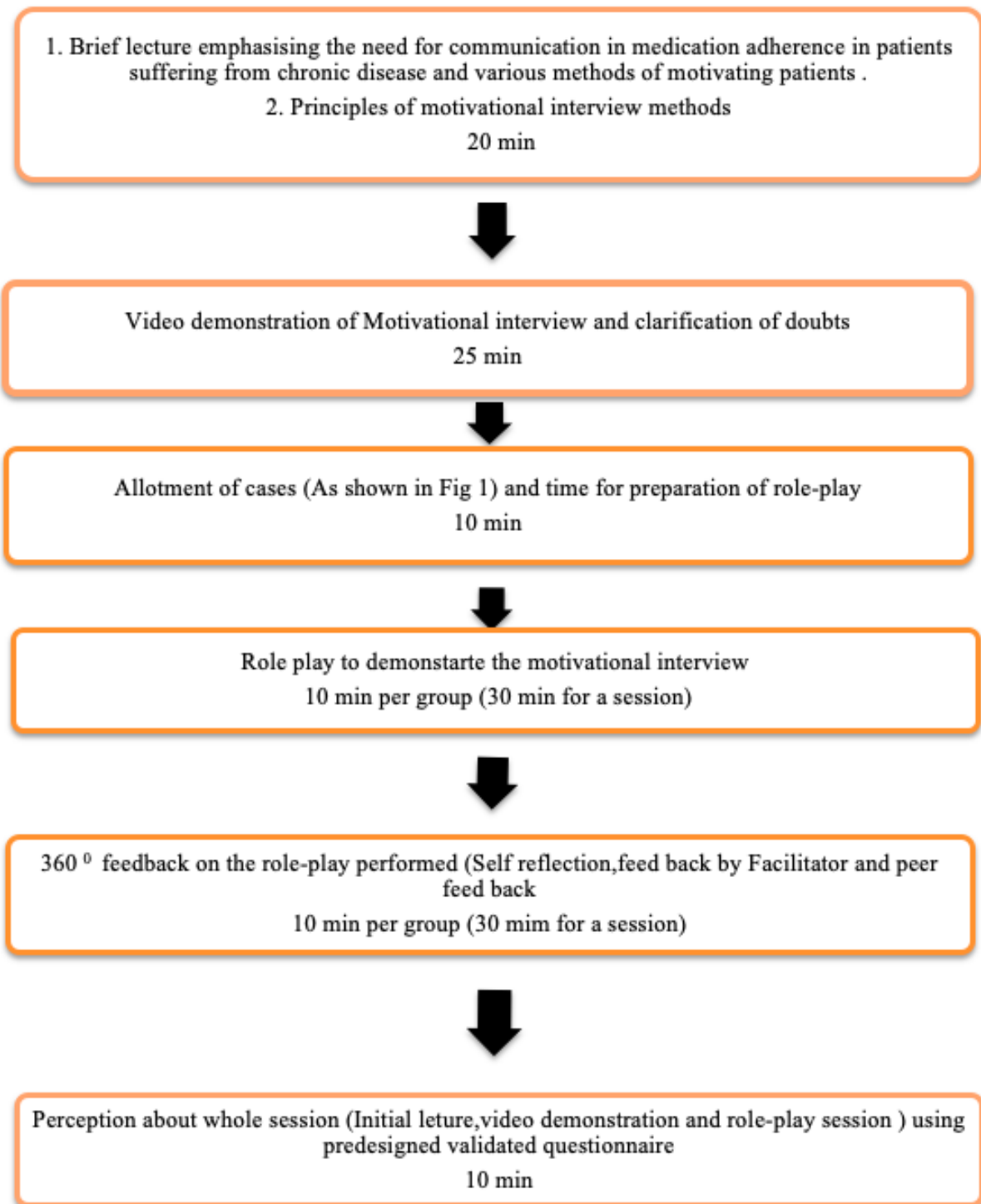


Figure 2. Flow chart depicting the sequence of events in methodology

These sessions will help them to develop these communication skills from their initial professional career. Teaching these communication skills using effective modes

will be more challenging. Various teaching methods have been identified to be essential, including patient interaction, small group learning, learning through display of video, and rehearsal. [12] Miller and Rollnick [13] developed this concept of motivational interviewing, which was initially created to treat addictive disorders. It is applied in various other diseases like alcohol consumption, eating, and obesity disorder; it has enhanced the participation of pain patients in workshops imparting pain management strategies and reduced risk behavior in adolescents who previously had been treated due to an injury, increased health-promoting behaviors in adolescents with HIV, improved the attitude of patients with type 2 diabetes toward health-promoting behavior changes and reduced regeneration of caries mediated by mothers' preventive behaviors. [14] Motivational interviewing (MI) is a directive, patient-centered counseling style that explores patient ambivalence and attempts to resolve their resistance to change. [15] This approach provides negotiation techniques and a specific attitude, called the motivational interviewing spirit, that helps the physician build a reliable doctor-patient relationship and enhance patients' intrinsic motivation for behavior change for the utilization of an indicated medical treatment.

The study involved three components consisting of a small lecture followed by a video demonstration on the aspect of motivational interview and practical activity as substantiated by the recent systematic review; Berkoff et al. identified that a combination of didactic and practical components appeared to have the most significant positive impact on communication skills improvement. [16]. In the present study, we evaluated the perception of all the aspects of the teaching activity. The first section of the small lecture helped to understand the various reasons or factors affecting medication adherence in patients suffering from chronic disease, and it also made them understand the need for behavioral change in a patient with chronic illness to increase medication adherence. It emphasized the different newer techniques like motivational interviewing and the transtheoretical model of change to address the level of the patient's acceptance of the present treatment condition.

The second component of the video demonstration helped the students understand the principles taught in didactic sessions and the practical issues related to the principles of applying the MI, and the role-play session helped them experience the realistic challenges if given the cases in real bedside settings. Overall, using the blended approach in teaching the motivational interview method was very effective in systematically introducing a new concept for second-year MBBS students. Our study results echoed the result of studies done by Erschens et al. [17] done in Germany as a part of introducing the Motivational Interview method into medical curriculum and Jacobs NN et al. [18] Using the Motivational interview method helps the students develop empathy, intercultural Sensitivity, and sensitization to understand the need for behavioral changes for increasing adherence to the medication, especially in the management of chronic diseases, as the treatment is lifelong in some of the disorders as suggested in few of the studies done in pharmacy students. [19] There are studies to show that this kind of Video demonstration could complement the lecture in teaching Motivational Interviewing to develop students' initial attitudes and skills. [20] Also, using simulated patients for in-depth practical training is widely accepted and Adiga and Acharya., 2023

perceived to be of great value for students. [21], As is peer role play as a simulation-based training method. [22] To the best of our knowledge it is one of the first kind of study in our Indian setting to introduce the motivational interview in teaching the medical students. Overall feedback given by the students helped us to understand that this kind of session needs to be conducted regularly as this would build confidence in the students in acquiring the skills and the assessment of the skill attained using the standard tool kits available for the MI would help them to understand and self-reflect upon their performance and the need of improvement for future sessions as substantiated by the study done by Erschens R et al. [17]. Students suggested to conduct this kind of sessions in the bedside settings which would open up other practical difficulties for them to understand and that would lead to experiential learning for them.

3.5. Limitations

As it was just one session with sensitization to the new concept of motivational interview, students suggested to conduct frequent sessions with more scenarios in future. Attention and feedback to the student at the individual level was not given, which can be improved in future sessions by involving more facilitators with adequate pre-planning. The other limitation could be to assess the long-term impact of the session, which would translate into real-world clinical experiences with patients, and to assess whether these will result in improved health outcomes for patients.

4. Conclusions

The present blended learning session has positively impacted communication skills in undergraduate students. Standardized doctor-patient case scenarios will provide us with the opportunity for such direct evaluation of trainees. Similar sessions at different phases of their curriculum will hold promise in gaining the needed skills in undergraduate students. The student's perception regarding the new methodology of teaching communication skills through the Motivational interviewing technique helps us to plan future sessions along with the assessment component.

Acknowledgment

We would like to acknowledge all the students who wholeheartedly participated in the study.

Conflict of interest

None

Reference

- [1] A.H. Crisp. (1986). Undergraduate training for communication in medical practice. *Journal of Royal Society of Medicine.* 79(10): 568-74.
- [2] M.A. Stewart. (1995). Effective physician-patient communication and health outcomes: a review. *Canadian Medical Association Journal.* 152(9): 1423-33.
- [3] D.M. Kaufman, T.A. Laidlaw, H. Macleod. (2000). Communication skills in medical school: exposure, confidence, and performance. *Academic Medicine.* 75(10): S90-2.
- [4] A. Supe. (2019). Graduate Medical education regulation 2019. Competency-driven contextual

curriculum. *National Medical Journal of India*. 32: 247-61.

[5] W. Levinson, P.A. Pizzo. (2011). Patient-physician communication: it's about time. *Journal of American Medical Association*. 305(17): 1802-3.

[6] Commission on chronic illness (1956). *Chronic illness in the US. Vol. II, Care of the long term patient*. Cambridge, Mass, Harvard University Press.

[7] M.R. DiMatteo. (2004). Variations in patients' adherence to medical recommendations: a quantitative review of 50 years of research. *Medical Care*. 42: 200–9.

[8] W.R. Miller. (2004). Motivational interviewing in service to health promotion. *The art of health promotion: Practical information to make programs more effective*. *American Journal of Health Promotion*. 18(3): 1–10.

[9] E.R. Levensky, A. Forcehymes, W.T. O'Donohue, K. Beitz. (2007) Motivational interviewing: An evidence-based approach to counseling helps patients follow treatment recommendations. *American Journal of Nursing*. 107(10): 50-58.

[10] R. Likert. (1932) A technique for the measurement of attitudes. *Archives of Psychology*. 140: 1–55.

[11] B. McKinstry, R.E. Ashcroft, J. Car, G.K. Freeman, A. Sheikh. (2006). Interventions for improving patients' trust in doctors and groups of doctors. *Cochrane Database of Systematic Reviews*. 19(3): CD004134.

[12] J. Silverman. (2009) Teaching clinical communication: a mainstream activity or just a minority sport? *Patient Education and Counseling*. 76(3): 361-7.

[13] W. Miller, S. Rollnick. (1991). *Motivational interviewing: Preparing people to change addictive behavior*. New York, NY, Us. Guilford Press.

[14] A. Palacio, D. Garay, B. Langer, J. Taylor, et al. (2016). Motivational interviewing improves medication adherence: a systematic review and meta-analysis. *Journal of General Internal Medicine*. 31(8): 929-40.

[15] W Miller, S.R Rollnick. (2002). *Motivational Interviewing: Preparing People to Change*, 2nded. New York: The Guilford Press.

[16] M. Berkhof, H.J. Van Rijssen, A.J. Schellart, J.R. Anema, A.J. Van der Beek. (2011). Effective training strategies for teaching communication skills to physicians: an overview of systematic reviews. *Patient Education and Counseling*. 84(2): 152-62.

[17] R. Erschens, B. Fahse, T. Festl-Wietek, A. Herrmann-Werner, K.E. Keifenheim, S. Zipfel. (2023). Training medical students in motivational interviewing using a blended learning approach: a proof-of-concept study. *Frontiers in Psychology*. 14: 1204810.

[18] N.N. Jacobs, L. Calvo, A. Dieringer, A. Hall, R. Danko. (2021). Motivational interviewing training: a case-based curriculum for preclinical medical students. *MedEdPORTAL*. 17: 11104.

[19] G. Ekong, J. Kavookjian, A. Hutchison. (2017). Predisposition for Empathy, Intercultural Sensitivity, and Intentions for Using Motivational Interviewing in First Year Pharmacy Students. *American Journal of Pharmaceutical Education*. 81(8): 5989.

[20] D.F. Malewski, S.P. Desselle, R. Kali-Rai. (2021). Use of a Team-Based Video Simulation to Complement a Lecture in Motivational Interviewing to Develop Students' Initial Attitudes and Skills. *Innovations in Pharmacy*. 12(3): 10.24926/iip.v12i3.2310.

[21] J. Kaplonyi, K.A. Bowles, D. Nestel, D. Kiegaldie, S. Maloney, T. Haines, et al. (2017). Understanding the impact of simulated patients on health care learners' communication skills: a systematic review. *Medical Education*. 51: 1209–1219.

[22] A. Gelis, S. Cervello, R. Rey, G. Llorca, P. Lambert, N. Franck, et al. (2020). Peer role-play for training communication skills in medical students: a systematic review. *Simulation in Healthcare*. 15: 106–111.