



Perception of Teaching and Learning Using Medical Simulation Methods Related to Primary Psychological Counseling and Prevention—a Multicultural Focus Group Study

Aleksandra Rutkowska¹ 

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Abstract

Medical simulation, especially role-playing, allows students to learn how to practice medicine and help patients without the risk of harming them. A subject, which behaviorally helps to prepare medical students for the role of the doctor is Medical Psychology. Psychology deals with behavior—human functioning in different situations and under an influence of various psychological factors. The aim of the study was to describe how first and second year medical students learn and perceive their role-playing in simulated methods used to improve communication skills. This study applied a retrospective qualitative analysis of interview performance featuring feedback from first and second year medical students and judges. In each scenario, medical students were required to provide clinical consultation to patient-actors in accordance with their knowledge of Behavioral Sciences and Applied Medical Psychology. After the exercise, all participants were instructed to write down their opinions upon their experiences. Particularly important were the self-evaluation reports regarding the emotional state and body language. The reports were contrasted with the impressions of two observing judges who are psychologists. The results reflect conclusions drawn from the thematic analyses as well as from the written remarks of self-reflection regarding the students' performance from two independent evaluators. All of the students who took part in the scenarios that were assuming the role of a doctor reported feeling a lack of psychological competence used in communication. Most of the participants noted difficulty in delivering bad news to aggressive or demanding patients, along with cancer patients. Students over the age of 30 were more likely to handle these situations appropriately. This study offers an insight into how students studying in Poland experience challenges while acquiring proper communication skills. Notably, older medical students dealt with simulated patients better. However, these skills can be taught especially to younger medical students through dedicated training. All results and discussions allow to recommend an unambiguous simulation method suitable to the needs of future doctors in training.

Keywords Multiculturalism · Medical simulation · Role-playing · Psychology · OSCE

Introduction

During the first and second year of studying, medical school students focus their attention mainly on exploring anatomy and physiology, along with other subjects regarding the detailed structure and biochemistry of human functioning. An

additional subject, which helps to prepare medical students for the role of the doctor, is Medical Psychology. Especially important for medical students is the psychology of those who are sick, suffering, or mentally disturbed. Psychology deals with behavior—human functioning in different situations and under an influence of various psychological factors [1]. These factors also affect the patient's motivation to cooperate with their doctor. Various studies have shown the attitude of the doctor and the skills of empathetic listening and communication to influence the success of treatment [2]. Therefore, psychological skills have an important role in the education of medical students. The primary communication skills include making contact with the patient, conducting an interview in conditions of limited privacy, and transferring information. In

✉ Aleksandra Rutkowska
alexarutkowska@gmail.com; <http://www.csmlublin.pl/index.php/en/>

¹ Department of Didactics and Medical Simulation, I Faculty of Medicine, Medical University of Lublin, Chodzki 19 Street, 2nd Floor, 20-400 Lublin, Poland

addition to different techniques of verbal and nonverbal communication, it is important for students to understand the meaning of empathy and to know how to listen actively [3–5]. Psychology classes, which are conducted in most medical schools, enable students to assume a role of the messenger while being monitored and supported by the teacher. The main goal of study and activities presented within was to assess and improve the students' skill development while at the same time allowing them to plan and think in safe conditions how best to manage the patients' care using their psychological resources. Additionally, the aim was to investigate the judges' and the students' perception of simulation-based methods related to primary psychological counseling and prevention. The simulation methods, although common in teaching Medical Aids or Basic Clinical Skills at the Medical University of Lublin, are being introduced for the first time in regard to teaching psychological skills to students of Medical Psychology. Every student was asked to role-play as a doctor and a patient in a particular arranged scenario, concerned with psychological consultations and prevention. Situations presented in the scenarios required from them to provide help to people in various health emergencies, critically ill in relation to mental and physical health along with those who were posing a threat to the physician, such as those who are aggressive, drug addicted, or mentally impaired patients. In every scenario, despite the established framework, the process happened spontaneously, according to the state of mind and actions of an individual student (actor). After each scenario, performance of the doctor-student and the patient-student was analyzed, and students were asked for feedback based on the assigned role and their own feelings.

Materials and Methods

The study applied a retrospective qualitative analysis of performance with which first and second year students were able to conduct an interview. Participants (students) were asked to take part in simulated clinical scenarios, instructed to assume the role of the physician or the patient, or a family member. The students were required to provide clinical consultation in accordance with knowledge of behavioral sciences and applied medical psychology. Students who played the roles of patients and family members were abided by the same rules as physicians, but their role was to use their understanding of medicine to rationalize why they should not receive treatment and to question the doctor.

The main content of each simulated session was not known to the students. Their performance lasted for maximally 15 min, and the sessions were video-recorded upon permission for qualitative analysis. After each scenario, each team was briefed on their performance, thoughts, and feelings related to their assigned case. Remarks featuring feedback were recorded for all participants. Qualitative analysis included

understanding of student performance in the dynamically simulated scenarios. Each team was culturally diverse and scenarios included a variety of different sociocultural situations. After the exercise, students were prompted to write down brief notes about their experiences and feelings regarding their performance. Particularly important were the notes based on the self-evaluation of expressed emotions and the body language used. The notes were later juxtaposed with the impressions reported by two observing judges (two trained psychologists). Their observations allowed us to evaluate student's performance in a given dynamic scenario and to contrast their self-perceived evaluation with expert judges. The analyses allowed us to consider how such factors as pride and leadership skills influenced decision making and self-perception from the perspective of an outside psychological observation. Thanks to the recorded scenarios, we were able to understand the students' learning process along with their perception of themselves and their personal self-evaluations.

For the analysis, the documentation of 7 simulation acts, involving 15 first year students of medicine was used. Among the participants there were 10 men and 5 women. The students ranged in age from 21 to 28 years old and came from the USA, Poland, and Taiwan. Ethnically, three participants were Black (from the USA), one Asian (from Taiwan), and the rest were Caucasians (a mix of students coming from the USA and Europe). Simulation scenes were a part of a practical subject, "Medical Psychology." Every participant was instructed separately regarding their role and the setting in which they had to play in the scenario. The further course of the exercise was spontaneous. After the end of the simulation, the students were asked to perform self-assessment while judges provided their own observations. Collected data were used in further analysis.

Data analysis was performed using a method of a qualitative analysis, along with the principles of grounded theory. Firstly, all written reports and remarks were collected into a single database and assessed using MaxQDA, version 12. After the database was created, two researchers independently coded text lines with unique codes, which represented a contextual representation of the main theme of the discussion line. Subsequently, the codes were combined thematically to yield main topic points. Reported results reflect conclusions drawn from the thematic analyses as well as from the remarks on self-reflection of the students' performance and evaluation from two independent judges.

Results

The results suggested that all students which took part in the scenarios, from the role of the doctor, reported feeling that they were lacking practical communication skills in terms of psychological competence. Most of the students demonstrated conversational difficulties when it came to appropriate word

use, content of speech, or the appropriate form on information used in trauma scenarios.

At that point, an interesting question was posed, mainly: what was responsible for the inability to communicate effectively, a lack of language skills, shyness, over-appreciation of clinical skill over communication ones, or other factors? As evaluated self-reported data shows, students often exhibited narcissistic traits which might have prompted them to falsely believe that basic medical knowledge should be prioritized in the context of medical care. Many described their own performance as highly proficient and informative, which was in disagreement when compared to the reports of the psychologist evaluators. This case appears to be similar to those described by the existing literature that consistently show that medical professionals prioritize medical knowledge over communication skills. The results have further ramifications for the ongoing debate about how medical students should learn to deliver medical knowledge to people.

In addition, the most noted difficulty was caused by an inability to transfer bad news to simulated patients (cases 1, 2, 3). While students noted that they had difficulty dealing with patients, who became frantically frustrated with their diagnosis, not a single participant offered a clue as to why they failed at delivering the bad news. Psychologist evaluators have found that students started performing poorly in transferring bad information to their stimulated patients as soon as the patient raised their voice, often inviting family members to join the conversation. With more people present in the room, the participants typically became confused as to who they were talking to regarding the diagnosis.

Students reported fear and anxiety associated with scenarios that required them to perform consultations at the patient's home. The main reason stated by the participants was an inability to feel comfortable while being in an unfamiliar place, e.g., previously mentioned house in which the patient lives.

In case of contact with an aggressive or demanding patient, or providing information about the irreversible damage to the body, students struggled tremendously. All of the participants did not know how to handle the situation as soon as two or more students acting as the patient and family members expressed resentment and disapproval for their advice. Questioning the doctor's training almost always instantly constricted the doctor's ability to continue the conversation with the patient. Questions about the quality of medical education were particularly hurtful. Students reported in their remarks that as soon as the patient questioned their authority and knowledge, they felt violated and unjustifiably attacked. There was no evidence of students reflecting on the principle of not taking patients, who were questioning their level of competence serious. Therefore, basic clinical preparation through behavioral science training may be insufficient to prepare students that are going to face disrespectful patients.

Difficulties in understanding the needs of a given patient accompanied the students especially in situations of

confrontation with patients from different races or cultures, who may express emotions differently (cases 2, 5, 6). Also, it is important to note that there was difficulty involved in terms of conducting a full medical history review and providing a prognosis for treatment of children and the mentally ill patients (cases 4 and 5).

Maturity mattered as well—the older the student was, the more conscientious he or she was about acting the role of the physician. What was worth noting, they also listened attentively along with collecting notes throughout the interviews whereas their junior counterparts appeared to be less prone apt at these skills.

Interestingly, Black students reported feeling the obligation to play an assertive doctor. They claimed that the cultural perceptions towards Black people influenced their tendency towards louder verbalizations and more unrestricted body postures during the scenarios. Another interesting finding was that the students from Asian countries actually reported a difficulty with expressing their emotions. These students noted that they never thought that the doctor should be good with expressing feelings since body language does not affect the efficiency of a good doctor; however, they did acknowledge that good clinical judgment does.

Feedback from all of the participants indicates that cultural background and educational background largely influenced their ability to show openness, good communication skills, and signify respect for traditional expressions of emotions. Without a doubt, mastery of the language matters too; some students did better with choosing appropriate words than others, which reflected their educational background and influenced execution of the task.

Contact with the patients from different ethnicities was perceived as difficult, even though the students recognized that the simulated patients were their classmates playing the roles. Intrinsic racial beliefs inevitably influence perceptions about others, not only in real-life situations, but also in simulated scenarios. Discouragement expressed by patients during conversations generally resulted in negative emotions and aroused a misunderstanding between the physician and the patient.

Most of the students reported feeling tired after partaking in two scenarios. Furthermore, all participants expressed frustration over their colleagues which were difficult to cooperate with. Not always, however, students were able to learn from their experiences gained during the scenarios, which was confirmed by the self-reflection which was confirmed by the self-reflection provided by the participants written remarks (Table 1).

Discussion

Specialists of medical education agree that health professionals require a high level of empathy and communication

Table 1 Description of scenes involving students in the role of doctor and patient

Case	Age	Gender	Ethnicity	Type of scenario	Goal	Task	Course	Feedback from the student	Feedback from the teacher
1/Doctor	25	M	AM/White	Doctor's office, consultation	To provide information about terminal illness/show understanding and support	Initiating the conversation, use verbal and non-verbal communication techniques, giving support, answering patient's tough questions, closing the session	The doctor has been previously instructed, but the course of the session is developing spontaneously. Student/doctor tries to present the result of a routine examination (the neoplastic tumor) to the unaware patient.	Huge difficulties in imagining and empathizing the situation of the patient, selecting proper words What should one do when the patient gets aggressive or emotional? Should I tell him the truth, that he deserved cancer by smoking? "I felt aggrieved and disappointed. I had the impression that the doctor did not understand me."	Empathy and silent listening to the patient gives more than arguing. The sick person has the right to be claiming and criticizing. Doctor must be aware that he is not the actual aim of the patient's attack.
Patient	25	M	AM/Black	Doctor's office, consultation	The role of a young patient finding out about him being terminally ill	Visualizing the patient's situation attempting to play the role of the one surprised with information about the illness.	The patient is surprised, speaks with the raised voice, starts crying, cannot believe it, attacks the doctor verbally	"I am feeling attacked for no reason at all. I have no idea, how to pass such news. Is that a good idea to inform the parents about their right to abortion?"	An exercise for every student: please consider in what way would you like to receive the message/news about your terminal illness?
2/Doctor	24	M	AM/White	Doctor's office, the doctor's conversation with a patient—woman in her first pregnancy, whose fetal screening examination results reveals a baby having Down syndrome	To provide the mother and the father with information about the irreversible damage of their first child	Beginning the conversation, use of verbal and non-verbal communication techniques, giving support, answering tough questions, closing the session	The student/doctor has been informed in advance, but the course of the meeting is developing spontaneously. Student/doctor is trying to inform the future parents about screening examination results showing the fetus with Down Syndrome. The doctor has to face the obscene behavior of the husband, and at the same time answer the future mother's questions	In this case, we need to show great empathy with the woman. She needs time to acknowledge the message. One ought not to use words like: There is nothing we can do, etc. Remember that she is expecting the child, not a fetus and she probably already love it. Try to explain to her what kind of medical, educational, and developmental chances the child may have in the future. If you mention the right to abortion, the psychological aspects of that decision have to be explained to the mother.	Reactions of the mother may vary from emotional shock to loud, hysterical crying. Doctor should give her time, wait, reserve enough time for the meeting. The most important is to never take away the hope from the parents.
Patient mother	23	F	Asian	Doctor's office, the doctor's conversation with a patient—woman in her first pregnancy, whose fetal screening examination results reveals a baby having Down syndrome	The role of a young woman, which gets to know about the genetic defects of her first, unborn child.	Encompassing the situation of the surprised and horrified mother.	The woman shows surprise, she covers her face with her hands, does not believe, asks the doctor many questions: "What now? Are you sure?"	"It's really difficult to show the true feelings at such moment. What can she feel? Apathy, shock, no further chances for the happy motherhood?"	Reactions of the mother may vary from emotional shock to loud, hysterical crying. Doctor should give her time, wait, reserve enough time for the meeting. The most important is to never take away the hope from the parents.
Father	25	M	AM/Black		The role of the father surprised with the diagnosis	Facing emotions of the father. Conducting the conversation on	Father's reactions are aggressive. He stands up, sits down,	"How is it possible? Is there something is wrong with my	This can also be a reaction of the father. Doctor should explain the

Table 1 (continued)

Case	Age	Gender	Ethnicity	Type of scenario	Goal	Task	Course	Feedback from the student	Feedback from the teacher
3/Doctor	21	M	PL/White	An Intensive Care Unit, a patient wakes up after several hours of coma, after an accident in which he lost both legs.	of his first, unborn child that changes everything.	the patient's communication level.	waves hands, speaks to the doctor with his voice raised, asks: "Who are you? What kind of a doctor are you? What kind of nonsense are you saying?!"	sperm? Everyone has healthy children, but I fathered a Down??"	meaning of this genetic defect and its reasons calmly and with an appropriate language. The active listening technique, like reflecting feelings should be used: "I see you are surprised", "I admit that such news can be confusing (...), but nowadays medicine and education can support the child's development very well."
					The conversation with the patient, who is unaware of what happened. He does not remember the accident and has no idea where he is now. He should be informed about the situation and his disability.	Establish contact with the patient awoken from the coma, who is in pain. Make an assessment of his psychological and mental state, check if he is ready to receive information about his disability. Pass the proper amount of information on the communicative level of the patient.	The doctor gently approaches the patient and introduces himself. Firstly, he explains what have happened and then explains the problem of the patient.	"I don't know how to initiate the talk and what is going to happen next. When actually should I say the worst news, that he lost both legs above the knees?"	Not everything should be said in the beginning. Check how the patient responds to every part of the following story: "it was an accident, you has been injured, how are you now? Do you remember your name? Do you recall anything from the accident?"
					The role of a shocked patient, who is in pain and has no idea where he is or what happened. He is a young athlete.	An attempt to step into the mental world of someone who turned from the young sprinter into a disabled man in 1 s and is informed by the doctor immediately after waking up.	The patient is laying on the prepared bench. He is looking around, trying to recognize his surroundings. Doctor bends over the patient and talks to him calmly. Patient is listening for a while; then, he appears to be very shocked and confused. He starts moving nervously on the bench.	"I am young. I was a sportsman. Is this some kind of a nightmare? Am I going not to run anymore? What about my career, girlfriend, life? Leave me alone!"	Doctor should stay with the patient as long as it is possible; he ought not to use false consolation such as "everything will be fine". He should neither judge nor blame the patient and provide him with rational support. In case the patient needs to stay alone, the doctor should say: "I'll be right there if you need me."
4/Doctor	22	M	AM/White	The pediatric emergency room. A 5-year-old child suffering from a strong stomach ache and vomiting. The kid is really afraid of being examined. The child is crying and screaming.	Examining the terrified kid.	Establish contact with the child, who is a difficult patient. The child is feeling both fear and pain.	The doctor tries to initiate a contact with the child who is crying. The kid hides his face in his hands, does not respond to doctor's questions. Doctor tries to approach him from different sides and initiate the dialog. After some time, the child allows to	"I am really tired, I give up. The kid is stubborn and doesn't understand anything, what should I do?"	Cooperation with a child is based on fun. One should adjust the language and distract the child from the pain and discomfort it feels. Toys and gadgets can be useful. The doctor should be calm, due to the fact that children are sensitive to the nervous behavior, getting irritated if the

Table 1 (continued)

Case	Age	Gender	Ethnicity	Type of scenario	Goal	Task	Course	Feedback from the student	Feedback from the teacher
Patient	23	F	AM/White	The pediatric emergency room. A five-year-old child suffering from a strong stomach ache and vomiting. The kid is really afraid of being examined. The child is crying and screaming.	To show how a 5-year-old child can react. The kid is scared. The child does not understand medical procedures and does not want to cooperate.	Role of a 5-year-old, who is afraid of everything new, especially the doctor wearing a white apron.	be partially interviewed and touched. The doctor calls a nurse which entertains the child. The distracted kid lets the doctor to perform further examination. The child is covering his face and struggling, he is sure to be in danger. Only after a nurse entertains the kid with toys it is possible to attract the kid's attention with something else but fear.	"It is hard, but we can imagine how such a kid feels in a strange place, suffering from the pain. The doctor was talking to me using strange words. The nurse made me feel safer."	doctor is expressing his nervousness. The nurse's help (especially when the patient's mother is absent) is very important. Usage of an appropriate tone of voice and facial expression is crucial. A child senses the atmosphere through non-verbal means of communication. In cases of psychiatric patients with unpredictable behavior, it is good to be assisted by male nurses. Giving up in such cases is not a professional failure; instead, it might be a strategy. Calling a male doctor, and even black, increases the chance of a patient feeling safe.
5/Doctor	24	F	AM/White	Doctor's office during the night shift in a psychiatric hospital. The doctor on duty is being called to a patient suffering from a strong stomach pain.	To interview the patient suffering from psychosis with the sudden, severe stomach pain.	Initiate the dialog, interview, and examine the hyperactive patient.	The doctor tries to convince an aggressive patient to be allowed to touch him. The patient does not maintain eye contact, briefly answers the questions, and rejects a request to be touched. After a while, the doctor gives up and calls another doctor from another department.	"I'm annoyed. They woke me up in the middle of the night to help someone, who does not even bother with responding to my questions. I am afraid of such patients, what should I do? I give up."	
Patient	27	M	AM/Black	Doctor's office during the night shift in a psychiatric hospital. The doctor on duty is being called to a patient suffering from a strong stomach pain.	A role of the hyperactive patient, who has difficulties with contact and a correct judgment of the situation. Because of the stomach ache, he is aggressive and less eager to submit to the doctor's requests. He disagrees to be touched and engages in a fight with the doctor.	An attempt to imagine how a disordered patient can respond. He is unable to perceive the situation properly. He feels threatened and confused.	The black patient demonstrates lack of trust, fear, and disregard to the doctor. He covers his stomach with both hands and does not allow anyone to touch it. He stares at the wall and does not respond to the doctor's requests.	"She is young and inexperienced. I have no idea what she wants from me. I'm in severe pain. I do not know what is going on. No, never!"	Not only people of other races feel uncomfortable in a relation with the doctors of the opposite sex. You should always try to imagine what the patient may feel, use his way of thinking and valuing at that moment.
6/Doctor	25	F	AM/UKR/Jew	Family doctor's office. A patient, who abuses alcohol comes to receive the medical tests results, performed because of his stomach ache.	To interview the patient who is probably addicted to alcohol. Convince him not to be ashamed of the disorder, start	Initiate the session, proceed with the interview, and convince the patient to the treatment at the addiction specialist.	Doctor tries to determine how often the patient drinks alcohol. She realizes how serious the situation of the patient is and tries to explain him the	"I understand it's difficult for the patient, but if he won't give up drinking, his liver will break into pieces... it is definitely his fault.	In a case of addictions, it is worth to study the cultural context of the patient's place of origin. In Eastern Europe, alcohol drinking is a part of important social

Table 1 (continued)

Case	Age	Gender	Ethnicity	Type of scenario	Goal	Task	Course	Feedback from the student	Feedback from the teacher
				The yellowish hue of the skin and eyeballs suggests liver problems. Doctor suspects alcohol addiction. The tests show the severe liver disease.	the psychotherapy, and quit drinking. Doctor should also inform the patient about the outcomes of further alcohol intake.		medical tests results. The conversation is difficult. The doctor has an impression that the patient is not aware of how severe the liver damage is. He does not seem to notice the relation between the damage and alcohol.	should I mention that??"	situations. People drink during family and social occasions, but admitting to be addicted is connected with a feeling of shame, perceived as a sign of degeneration. That is why breaking such news must be always done gently and sensitively. One should not inform the patient about his addiction being the main source of problems with his liver. In such case, the patient might go on an alcohol bender.
Patient	26	M	AM/PL/White	Family doctor's office. A patient, who abuses alcohol, comes to receive the medical test results, performed because of his stomach ache. The yellowish hue of the skin and eyeballs suggests liver problems. Doctor suspects alcohol addiction. The tests show the severe liver disease.	Role of a patient, which is addicted to alcohol, but refuses to see it due to the usage of repression mechanisms—minimization, negation, and repression. Refusal of treatment may result in possible liver failure and eventual death.	Attempt to play the role of a man who refuses to admit to his alcohol addiction.	Patient was expecting a short visit during which he would be given a receipt for the medicine for stomach ache. If he did not feel pain, he would never come. He is surprised and impatient.	"I am here because of pain, but she is accusing me of being an alcoholic. I don't drink more than others. It must be the reason for that ache. I am not addicted. It would be shame! I am not going to do anything with this! What would my friends say if I went to a psychologist for help! Besides, if I stop drinking with my friends, I'll be alone..."	Addicted people constantly try to protect their personality from the fact of being dependent from any substance. Accepting it as a fact is the first step to abstinence and health. Doctor should emphasize the fact, that there are many advantages of asking for help. If the patient asked for help, he would be not alone with the problem. Also, he would be informed about the nature of his addiction and receive the support.
7/Doctor	28	M	AM/UKR	Doctor's office. The doctor speaks with a patient, who is a famous top model, about the diagnosis of breast cancer. Due to late recognition, the disease is in a high stage of development.	Introduce information about the test results and convince her to start the surgical treatment and chemotherapy immediately.	Start a conversation with the patient about the oncological treatment; try to convince her to pause her professional life.	Doctor starts the conversation by informing the patient about her health state. He indicates the problem to be very severe and demanding immediate surgical and oncological intervention.	"It is obvious that health is more important than career. Thinking differently is irrational. I am shocked by the fact that in such circumstances she says she has enough time."	Doctor does not have full influence on patient's decisions, even in such situations. Sometimes, despite the great effort put in persuading the patient, there is no chance of convincing the patient to start the treatment. The awareness of doctor's limitations helps to avoid the feeling of helplessness and quick burn out syndrome.
Patient	25	F	AM/PL	Doctor's office. The doctor speaks with a patient, who is a famous top model, about the	The patient feels good and she is at the top of her career. The information about	To assume a role of the patient in displacement of the information about her health state.	Patient does not believe the doctor. She thinks there is enough time for medical intervention. At that	"I've been working for my success for a long time. I'm not going to stop while being so close to the	Not everyone sets their health as a top priority. People are not always able to imagine the possible outcomes of health negligence. If people

Table 1 (continued)

Case	Age	Gender	Ethnicity	Type of scenario	Goal	Task	Course	Feedback from the student	Feedback from the teacher
				diagnosis of breast cancer. Due to late recognition, the disease is in a high stage of development.	the illness and necessary treatment ruin her plans for the professional career.		moment, she must finish the important professional projects. She feels good and is not going to lose her beauty.	top. I don't feel any pain. I think the doctor is wrong. Tomorrow I'll visit another one..."	were able to predict them so easily, no one would use drugs or smoke cigarettes.

skills in order to be efficient in relation to future patients [6–9]. How can we improve the communication skills training program? The simulation methods can be as effective as traditional contact with a live patient, at the beginning of the medical course in particular [10]. Medical students must be aware of their limitations, especially when it comes to communication and psychological coping. Scenarios which students participated in and reflected on in the form of written remarks indicated that their biggest fear is the inability to distance themselves from their professional duties. Role-playing verifies the sense of self and humility of being a future doctor [11, 12]. Not every patient needs a doctor that has an authoritative demeanor. Instead, however, they may prefer cooperative style, which helps in treating difficult cases.

If doctors conducting clinical classes are not able to prepare young physicians as competent practitioners, who will know how to maturely use their emotions and communication skills to understand the patient? For students having problems with communication, it may be necessary to perform an assessment with psychological tests on communication and personality to individually tailor the simulation-based practice scenarios in order to improve their performance. In addition, one should strongly emphasize the necessity of classroom simulated “doctor-patient” communication being conducted by a psychologist earlier than any clinical classes with a live patient [13].

Following the comments of judges, we see that students should be also taught more about verbal and nonverbal communication. The conclusion is that less important is the content of what you say, but instead how you say it [14]. Medical students should be trained on how to make verbal and nonverbal communication more consistent. Six main emotions that are indicated through mimic expressions in a similar manner are anger, sadness, surprise, happiness, disgust, and fear. The most reliable are the eyes, for their expressions are physiologically dependent and are not subject to conscious control of man. Subconsciously, we realize that the eyes usually reveal our true intentions. Therefore, one of the main symptoms of lying is avoiding eye contact. Another facial element, which is often manipulated, is the mouth. Facial expressions are ambiguous, e.g., a smile can mean joy, embarrassment, ridicule, or contempt. Patients are attentively watching the doctor's face during an interview and waiting for facial expressions even more than for verbal communication, especially during announcing bad news [15, 16]. A good doctor should also know how to interpret human emotions. Among the most serious mistakes made by the untrained in the study of body language is to interpret individual gestures in isolation from other gestures or circumstances. Listening about the patient's illness (and remembering about the fact that their history is very subjective), doctors should follow their narration entirely—including verbal and non-verbal communication [15, 16]. There is a variety of communication skills that

Table 2 Judge's perception of the doctor role-playing

Case no.	Verbal communication			Nonverbal communication			Tone of voice			Body position			Distance			Conclusion
	Judge 1	Judge 2	Judge 1	Judge 2	Judge 1	Judge 2	Judge 1	Judge 2	Judge 1	Judge 2	Judge 1	Judge 2	Judge 1	Judge 2		
	Too many words, a little bit too fast	Reaching the point of conclusion too quickly, a little bit too much sophisticated language	Eye contact and mimicry correct/matched	Gesticulation toned	Adjusted	Correct/appropriate	It is also possible to lean towards the patient a little bit more	Correct	Appropriate	Correct, without crossing the line of intimacy	Pay attention to the speaking speed/and word selection; you should speak slowly and choose language adequate to the situation					
1/Terminal disease	Appropriate choice of words	Message clear and simple	Reduction of doctor's emotional tension	Body language too strong	At some moments, too high, inappropriate	Emotional detectable tension	Many involuntary movements	Even when patient stands up, the doctor should stay seated	Too much body movement	Too variable	Defensive stance of the doctor, more emotional distance necessary					
2/Pregnancy with Down Syndrome	Appropriate	Correctly	Calm and empathic	Consistent voice message	Matching context	Appropriate	Appropriate body position to the patient's trauma	Correct	Appropriate	Correct	There is no golden solution; everyone is different and needs to be approached individually					
3/Patient after accident	“Too mature language”	A little bit too formal and serious	Restlessness, impatience	Discouragement, no smile	Causes anxiety	The pitch inappropriate at some moments	Does not look down upon the child	Better to squat in front of the child	Too variable, nervous	Doctor changes body position and shortens distance too quickly	Talking to the child, only using children's language, creating a calm and safe atmosphere					
4/A child in the emergency room	Too gently, the message should be more direct and simple	The language not appropriate to the state of the patient. Too gentle, too little dominating	Visible fear of the patient	Gentleness and fast discouragement	Voice too quiet and withdrawn	Not adjusted to the aggressive patient	Too much body movement	Too variable, because of anxiety of the patient and the nurse	Too quick attempt to touch the patient	Too close, the touch without the warning is like attack	Doctor should be experienced in the contact with persons of different cultural backgrounds and races					
5/Psychiatric patient	Too formally, vague	Should express the appropriate meaning of words	Eye contact correct, body language not enough, empathic	A little bit more empathic, patient could feel misunderstood	Correct	Appropriate	Body language and position correct	Body position more towards the patient	Too far from the patient	Too big distance is not good while speaking about difficult matters	Not enough knowledge about human psychology					
6/Addicted patient	Correct, but too quickly came to	Language appropriate,	Doctor speaks like he is	Too confident, an eye contact	A little bit too loud	Looks irritated sometimes	Too close to the patient	Looks persistent	Distance correct	Too close, can be uncomfortable for the patient	Future doctors should be aware that in					

Table 2 (continued)

Case no.	Verbal communication		Nonverbal communication		Tone of voice		Body position		Distance		Conclusion
	Judge 1	Judge 2	Judge 1	Judge 2	Judge 1	Judge 2	Judge 1	Judge 2	Judge 1	Judge 2	
	the conclusion	but too fast	infallible, judging	should not be persistent							mutual relationship with a patient, they need to be humble and aware of their limitations

students of medicine should be taught before practicing on live patients.

Feedback allows to take a closer look into the personal resources and limitations of a student in the role of the doctor. This opens up a possibility of deep reflection and letting the student ask themselves questions such as: “Am I strong enough mentally to perform the role of a doctor?”, “Am I able to handle the stress accompanying the profession?”, and “What are the psychological characteristics I should cultivate?”. Another advantage of this method is that it gives the possibility of cooperation between students from different countries as well as belonging to different religions. Thanks to the multicultural student community, they have the possibility of direct contact with students from completely different culture. This allows future doctors to learn how to understand religious and cultural differences and overcome their own prejudices and stereotypes, which should be eradicated from the medical profession. In addition, reacting to various social phenomena, such as violence against women and addiction among people from different cultural backgrounds, opens up opportunities to discuss these issues internationally and compare the prevalence of pathology in various parts of the world. In the study, seven cases of students playing the role of physicians in difficult situations were psycho-medically analyzed and assessed in detail. The remarks and discussions allow for an unambiguous recommendation of a simulation method in the psychological training of future doctors-practitioners. The medical simulation and role-playing method offers a lot of possibilities to be used within medical school (Table 2).

Strengths and Limitations

The strength of the study is that it contains a comparison of self-reported student opinions about their performances during specific scenarios, while at the same time being compared to the opinions of two experienced psychologists. This analytical approach has allowed me to show how students often overestimate their own competence, although the expert’s assessment clearly shows the shortcomings in their preparation to work with patients, and above all, communication problems.

Grounded theory was used in the analysis of the psychological components allowing for the examination of the external aspects that affect the quality of communication between the medical student and the patient. Most of the research in the field of medical communication uses questionnaires to study how doctors and medical students communicate with their patients along with how to convey information. Unfortunately, this method of data collection did not present a complete picture of what factors affect the quality of communication. This study revealed certain elements such as that of, the type of patient (aggressive vs. silent), the setting

situation (ordinary consultation vs. breaking bad news about cancer diagnosis), as well as other factors such as body language all affect the quality of the conducted consultation. In addition, this study is grounded in the understanding that the student after completing courses in psychology is actually able to reliably reflect what is learned in theory on their medical practice in the hospital.

The main limitation of this study is that it includes only a description of the experiences of one institution of learning; therefore, extrapolation of the results to the global trends is limited. Nevertheless, these experiences may help other institutions that are planning to teach applied psychology through the role-playing method.

The group of respondents is relatively small. Qualitative study, however, generally uses a group of people not counting more than 15 people. The research was based on a group of foreign students studying in Poland; therefore, we cannot create a generalization applicable to students internationally—the research group can be perceived only as a representative of students which visit our university. In order to be able to extrapolate the results, it might be required to conduct an evaluation of a bigger group of participants. Another problem may be that the research has been done on a group of students in a simulated situation where some students played the role of patients and other ones the role of doctors—its results may not fully reflect their behavior in a situation when a similar case occurs in real life. In future studies, an interesting solution would be to watch the students at work with the actual, hospitalized patients, although aspects such as ensuring patient privacy can prevent this type of testing in a clinical setting.

Conclusions

The possibility to practice psychological competencies in safe, simulated conditions enables students to better prepare themselves to enter the medical profession as practicing physicians. Diversity between ethnic groups gives students an opportunity to widen their knowledge and understanding of how diverse their patients can be in the future. Exercises in psychological skills through simulated scenarios allow future doctors to gain a better understanding of their own emotional reactions, resources, and psychological limitations when confronted with a difficult patient. What is more, the impact of our teachers and judges is very significant. The analysis of verbal, non-verbal communication, body position, and distance was very detailed and significantly contributed to the research. Thanks to the research performed, especially students' feedback, it is now clear that students need more practical exercises in their curriculum to enhance their empathy and psychological skills for their

future profession. They also require more psychological training within the medical school to help them better understand their psychological resources and limitations in cases of difficult or aggressive patients.

The manuscript presents the study and the reflections about the way of teaching medical psychology from the sides of both participants and judges. New methods are going to be developed and used to create the standards used to evaluate the communication skills of medical students, to include OSCE, that would further be used to assess the students' level of communication and psychological skills. The Medical University of Lublin is working on introducing OSCE as a permanent way of assessing the students' capabilities of conducting a proper doctor-patient interview.

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Compliance with Ethical Standards

Conflict of Interest The author declares that she has no conflict of interest.

Statement on Ethics This is a retrospective observational study and there are no ethical concerns to declare.

Consent All students participating in the study have voluntarily consented to participate in the scenarios and agreed to have the notes from observational sessions used in future reporting.

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