

The Development of Community Based Education (CBE) Model's to Support the Achievement of Empathy Competence: First Year of Medical Students

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ABSTRACT

Community-Based Education enables interaction, communication and empathy with the patient, family and society. This study aims to develop a model of CBE that can support the achievement of student's empathy competence. Its research method included survey questionnaire, observation and correlational study involving 159 students of first semester and four lecturers at a selected university in Indonesia. Data was analysed using exploratory factor analysis (EFA) and path analysis. Learning methods in CBE using lectures, discussions, role play and field practice were also examined. It was found student empathy in communication increases with field practice, compared with role play

Keywords: Communication, Community-Based Education (CBE), competencies, empathy

INTRODUCTION

A doctor is expected to be proactive in efforts to promote health including having a positive and able to provide a holistic health care needs. This is instilled during his or her studies and manifested in the form of community-based education (CBE), and which should be implemented during his

first year at university. This is in order to enable medical students to interact with the public as early as possible. The CBE that can be used as part of community-based care is a form of social responsibility in medical education institutions.

Implementation CBE at Fakultas Kedokteran Universitas Muhammadiyah Malang (FK UMM) indicate that the active role of the community is not optimal. The results showed that CBE does not entail much public involvement in the identification of health problems resulting in society becoming less enthusiastic

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when asked to discuss their medical needs (Kristina, Majoor, & Van der Vleuten, 2005).

The active role of the community is needed in order to carry out intervention out smoothly and fully supported by the former. Students should also be given the task to carry out health interventions to evaluate their results and so they are more responsible (Kristina, 2011).

Community-based education is an opportunity to establish “the five stars doctors” according to the WHO overview of the 21st century doctor. In this context, doctors act as “the agent of change”, and who are capable of and serves as a care provider, decision maker, communicator, community leader and manager (Moeloek, 2007). Good communication, for example between doctor and patient, will be effective when accompanied by empathy.

Many earlier studies have found a decreased empathy in medical education and medical practice. Research shows that education interventions do and can have a huge and lasting impact on students’ ability to show empathy during patient interactions. This became the impetus for educators to incorporate empathy learning programmes aimed at improving medical students’ communication skills and professionalism. For example, many schools have learning programme that addresses on how to “give bad news”.

The success of communication between doctors and patients in general will resulting in a mutually satisfying outcome, in particular by creating empathy for the

patient. Empathy can be achieved by making sure doctors have sufficient listening and conservation skills that can be achieved through exercise. Bylund and Makoul (2002) were emphatic in their writings on Physician-Patient Communication in Encounter, stating the importance of empathy and how it is conveyed. In this context, empathy is defined as: (1) the cognitive ability of a physician to understand the needs of the patient (a physician cognitive capacity to understand patient’s needs), (2) shows affection / sensitivity of doctors to the feelings of the patient (an affective sensitivity to patient’s feelings), (3) the physician’s behaviour shows / conveying empathy to the patient (a behavioural ability to convey empathy to patient) (Ali & Sidi, 2006).

Based on the identification of needs by previous study, learning of empathy is needed in CBE. By involving the community in CBE early, students can understand and learn to interact, communicate and empathise with patients, their families or communities in a real setting so that communication and empathy competencies can be increased.

Competence in communication is the ability to have mutual communication even if it means doctors have to face many obstacles or barriers intellectual, socio-economic, and language. Intrapersonal skills are the ability of doctors to know as much about himself as possible. This ability is needed to eliminate suspicion that can affect the patient-physician relationship (Soetjningsih, 2008).

Therefore, it is necessary to conduct a research in order to develop a Community-Based Education Model (CBE) to support the achievement of empathy competence in terms communication for first year medical student. This study hence, focused on the Learning, Humanities and Ethics module during the 1st Semester and analysed the relationships between CBE structure components in the Faculty of Medicine, University of Muhammadiyah Malang.

MATERIALS AND METHODS

This study used research and development method (quantitative and qualitative) that included survey questionnaire, Focused Group Discussion, observation and correlational study involving 159 first year medical students who studied block Learning, Humanities and Ethics; Four related lecturers were also analysed.

The variables in this study include: Module of empathy and communication; the role of medical teacher(as tutor and lecture) when delivering introductory lectures, guided discussions and guiding role play; students response to the learning/lecture; empathy in communication is students skill in communication which includes body language (gesture) and verbal communication and assessed by the lecturer based check list; Active listening is the desire to be able to absorb the information as a whole through hearing activity, judged by themselves (student/self-assessment); Student Empathy is the understanding and participation of students in the feelings

of others to share their emotions and experiences, according to his own self, judged by themselves (students/self-assessment); Student empathy is judged by peer assessment during role-play using the same instrument as empathy assessment as for the patient; Student empathy was assessed by client (community) whom they meet during field practice.

Learning methods in CBE involved lectures, discussions, role play and field practice. Interactive lectures involved introduction, discussion groups and independent activity aimed at obtaining information about the subject of empathy, communication, humanities and ethics. The aims of the discussion group were: Increase interaction (communication based on empathy) and discuss properly; Sharing (brainstorm) or acquire new knowledge; Training and cooperation in the group to make a report. Self-experience relates to the student's own experiences and communication based on empathy, such as: do your own active listening and implement the measures of communication in the group with the guidance of tutors and conduct field practice for interviews with patients or their families as well as visits to hospitals, clinics, nursing homes, disability foundation or school for disable person (Yayasan Penderita Anak Cacat, Sekolah Luar Biasa) hospitals or other health facilities. Results of field work are reported in writing and recorded by the group and discussed in plenary. Plenary sessions were held to discuss the results of field practice, and representatives of each

group provide a group. Feedback obtained from student attendance list showed that role play is based on a check list by tutors; Report of the group; Video recording field work and communication assessment-based empathy by tutors and institution where the practice field

Evaluations consisted of the assessing learning outcomes and programme evaluation. Evaluation of the achievement of learning outcomes include: (a) continuous observation by the tutor: Assessment includes attendance of each student and role play based on check list assessment by tutors (formative); (b) Report of the group: a report on the practice field / visits to various places

related to health; and (c) Assessment based on a checklist of empathy: Performed by the tutor and the head of the institution during the field practice and based on students' video recordings. Programme evaluation consists of an assessment sheet filled out by students at the end of the block and a questionnaire filled out by each student at the end of the block. Data was analysed via exploratory factor analysis (EFA) and path analysis using AMOS software version 20.

RESULTS AND DISCUSSION

The table below shows EFA results of measuring 5 questionnaire items, divided into 2 components

Table 1
Results of factor analysis module

Description	Component	
	1	2
1. The learning objectives can be understood clearly	0.838	0.086
2. The module can be understood clearly	0.795	0.045
3. The Instruction is delivered clearly	0.579	0.488
4. References are adequate	-0.054	0.839
5. The task of read / write which given, can help you to understand the module	0.257	0.765
Eigen value	2.189	1.087
% Diversity	43.771	21.734
% Cumulative Diversity	43.771	65.505

KMO = 0.686

The first factor encompasses learning objectives, content and ease of understanding the duty charge. It explains 43.771% of the

modules. The second factor encompasses completeness and role assignment references in the book to understand the module. It

explains 21.734% in the module. In sum, the module is a good guide containing objectives in accordance with the learning activities, easy to understand and contains clear module task.

The EFA outcome shows: (1) the strong role of the lecturer is lies in his or her ability to provide an opportunity for questions during role play discussion sought to be alive, immediate feedback is important and great care must be undertaken when students are practising role play and encourage students to continue to seek information from various sources; (2) a good response from the students is possible when they have additional insight and knowledge related to empathy and communication during role play at lectures; (3) ability in active listening is vital whereby students need constant eye contact as they try to understand the material; they also need quick and direct advice; (4) student empathy is increased when they get to know the patient's personal experience and thoughts, feelings and emotions of patients; and (5) a good empathy according from peer/partner is a where information is given calmly and not in rushed manner

In order to be effective, empathy must be perceived by the patient. Patient perceptions of this should be an important standard for this intervention. Mercer and Reynolds (2002) developed a tool to assess the patient's perception of empathy. Patient characteristics such as age, gender, ethnicity, disease states, or the severity of the disease may affect a student's ability to be empathetic. No studies have examined whether the harmony between students and patients in age, gender, ethnicity, or socio-economic status can affect empathy, although this would seem to have a major impact. Studies of this nature would show a good client empathy illustrated by the willingness to provide answers about what happens in everyday life, communicate feelings openly, show respect and concern for the patient. The empathy competence (client/community assessment in CBE) is influenced by study guide/module, the role of medical teacher (as tutor/lecture), student responses in teaching learning, empathy in communication (tutor assessment), active listening skills, and student empathy (self-assessment and peer assessment).

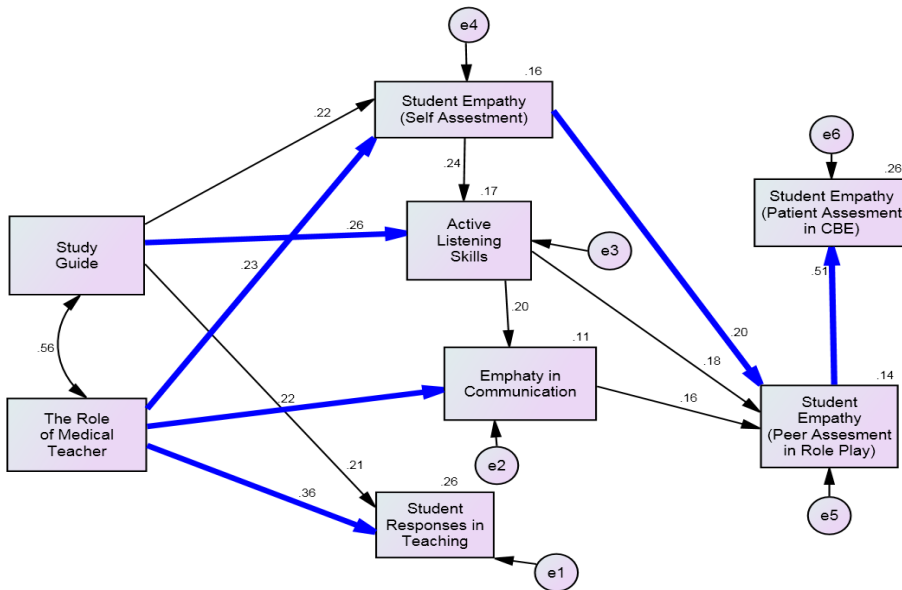


Figure 1. CBE Models to support empathy competence

Figure 1 is a model which contains significant pathways y ($p < 0.05$). Path coefficient is displayed in each line of the relationship, while the value in of endogenous variable is the coefficient of determination (R^2). The blue lines indicate the location of the track with a larger coefficient, so the relationship is not directly influenced by the module in the context of empathy. Figure 1 shows: (1) the role of the lecturer is more powerful in creating a positive response to the student than a module; (2) This increases student empathy; (3) the role of module is more powerful in increasing audibility of empathy; (4) the role of the lecturer is more powerful in increasing empathy when communicating with students than by just active listening; (5) a student’s empathy will be even stronger based on empathy assessment by a friend than from active listening skills or empathy

in communication; and (6) empathy to the client would be better if the student is able to create a strong empathy when practising with a partner.

Communication is a process of transfer of information or information delivery process is governed by a specific agreement. Communication between people using the language and symbols are strongly influenced by the culture of communication. Communication between people is dynamic and not static because it involves feelings and attitudes. Communication is important for the development of the human personality. One goal is behavioural change. In learning, the communication aims to produce a corresponding change in the behavior of students with learning objectives. Changes in student behavior is assessed as a result of their learning.

Empathy can be decreased during medical education. Medical education and medical practice can create stress, as well as personal stress can be a barrier to empathy. The survey of 1181 premedical students (before entering Faculty of Medicine), medical students during their clinical, educational specialist doctors (resident / post graduates), the clinicians' faculty, and alumnis found that empathy is the highest in the first-year premedical and medical students, decreases in the second and fourth year students, and the lowest in education specialist doctor (resident/post graduates). Alumni score lower than the first-year medical students but higher than education specialist doctor (resident/post graduates). Similarly, Kramer's research on communication skills training showed the lecturers scored lower on behavioural interviewing emphatic than medical students. Students in the control group of this study, which did not receive empathy training, showed a decrease in empathic behaviour after 6 weeks of clinical training in paediatrics, with 6 and 12 months follow-up (as cited in Ward et al., 2009).

This study on educational interventions to improve medical students' empathy have many limitations such as a lack of conceptual clarity, small sample size, lack of a comparison group, brief interventions, heterogeneous sample, scarcity of long-term assessment of the effects of endurance and reliance on self-assessment on objective that measures empathy. Regardless of these limitations, this study indicate that intensive educational interventions may be

successful to foster empathy among medical students. Empathy will enable educators to understand whether they should focus on the emotional, motivational, cognitive, or behavioural dimension of empathy when teaching. In addition, further studies are needed to demonstrate that efforts to teach empathy should be targeted to a particular student or a particular clinical situation. For example, the difference in age or socioeconomic status between the doctor and the patient may require special attention to empathy (Ward et al., 2009)

Understanding the patient requires active effort and objectivity. The process of understanding is an important attribute of empathy and is an important component of empathic engagement. Communicating by showing understanding and empathy behavioural dimension, make it easy to understand the patient's perception. This in turn creates a therapeutic bond with health workers because it serves to build a sense of attachment and support. Definition of empathy as the ability to understand or appreciate how others feel, has been expanded in the clinical context to insert emotive, moral, cognitive, and behavioural dimensions. These aspects are described as follows: (1) the emotive, the ability to imagine patients' emotions and perspectives; (2) a moral, a doctor of internal motivation for empathy; (3) cognitive, intellectual ability to identify and understand the patients' emotional and perspective; and (4) the behavior, the ability to convey emotion understanding and perspective back into the patient. All four dimensions of empathy

can work together to benefit the patient. For example, physicians may feel anxiety cognitively and communicate this to the patient by saying ‘‘I see you are anxious,’’ which is a flat statement. But if the doctor has empathy and becomes emotionally involved with the patients to imagine his anxiety, facial expressions and tone of voice are more likely to make patients feel understood. In turn, patients who truly feel they are understood will be motivated to disclose further to create a trust between the patient and the doctor. In other words, all the dimensions of empathy may be required for physicians to effectively empathise with the patient. This is done because empathy can improve patient satisfaction, adhere to therapy, and a willingness to divulge sensitive information that may help diagnosis. Cognitive aspects demonstrate the intellectual ability to identify and understand the views of others and predict their minds, the emotional dimension describes the ability to experience and share the psychological state of another person or feelings of intrinsic, moral aspects and dimensions referring to altruistic behavior demonstrate the ability to communicate that shows empathy and concern (Yu & Kirk, 2009).

Sympathy overload can interfere with objectivity in the diagnosis and treatment so physicians while empathising with patient needs must stay within reasonable limits to maintain emotional balance. ‘‘Limitation affective’’ is necessary to avoid the surge of emotion that might interfere with the neutrality of clinical outcome and ensure

personal resilience. In contrast, empathy has no restrictions because it is assumed that empathy / understanding is always beneficial in the treatment of patients. Excess of empathy does not impede patient care. According to Bolognini, empathy can support healing. On the basis of this conceptualisation, we define empathy in patient care situations as a cognitive attribute that involves the ability to understand the patient experience in depth and the ability to communicate this understanding to the patient. Both concepts (empathy and sympathy) involves sharing, but the doctor who empathise share their understanding, while doctors who are sympathetic share their emotions with their patients. Doctors who sympathise with patients and share their suffering, can lead to a lack of their objectivity and emotional exhaustion, while empathy has a positive impact on the doctor-patient interaction. However, the two concepts do not function independently. For example, one study found a correlation coefficient of 0.45 between the two (Hojat et al., 2009).

The term ‘empathy’ refers to aspects of personality that has an important role in interpersonal relationships and in facilitating competence in communication. Empathy is a personality trait that enables one to identify with other situations, thoughts, or condition by putting yourself in that situation. Empathy is an attribute that is related to the understanding and communication of emotions in a way that patients value. Therefore, measuring devices must be able to measure empathy attributes that patients

will value. Empathy can be measured from three different perspectives (Hemmerdinger, Stoddart, & Lilford, 2007):

- Self-RATING / Assessment by yourself (the first vote) - empathy assessment using standardised questionnaires filled out by those who are being assessed
- Assessment by Patients (judgment of both) - the use of questionnaires given to patients to assess empathy of doctor / medical personnel
- Rate Observer (ratings third person) - the use of standardised assessment by analysts to assess empathy in the interaction between health professionals and patients, including the use of standard or simulated patients.

Educators use various strategies to increase empathy among medical students. Empathy can be taught as communication techniques. Patients appreciate the interviewer who show empathy. Empathy means putting yourself in the other person's place. Sir William Osler advises: "*Understand far as you can about the mental state of patients, enter into his feelings, his thoughts scans carefully. Use words that are friendly, cheerful greeting, sympathetic way of looking at, which can make the patient understand that you understand it*". Doctors can show empathy through: empathetic way of looking at and using the proper posture; Show that you understand what is happening to them. Empathy is delivered in two different ways. Attentively listen to the patient and try to understand the difficulties they are fully is one description

of empathy. You also be empathetic by not providing new information too quickly, and do not impose their views and do not make assumptions (Hojat et al., 2009).

Future studies on educational interventions to foster empathy can look at the topic of decline in empathy, namely its causes, prevalence, mitigating factors, and others. Further research on empathy will enable educators to understand whether they should focus on the emotional, motivational, cognitive, or behavioural dimension of empathy when teaching. In addition, further studies need to demonstrate that the effort to teach empathy should be targeted to a particular student or against a particular clinical situation. For example, the difference in age or socioeconomic status between the doctor and the patient may be situations that require special attention in relation to empathy.

CONCLUSION

Learning methods in CBE involve lectures, discussions, role play and field practice. The empathy competence is influenced by study guide, the role of medical teacher, student responses in teaching learning, empathy in communication, active listening skills, and student empathy. Student empathy in communication increases with field practice, compared with role play. It thus can be concluded that CBE supports the achievement of empathy competence (empathy in communication) in the academic stage especially during first year of medical school. Therefore, community-based education should be implemented

from the beginning of medical education in order to enhance the ability of medical students to interact with the public as early as possible and help in achievement of competencies, in particular empathy.

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