Enhancing Clinical Empathy in Medical Education: A Review of Current Strategies and Future Directions

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ABSTRACT
Empathy is crucial to healthcare as it improves patient outcomes, reduces malpractice errors and healthcare costs, and increases physician resilience while reducing burnout rates. Despite its importance, studies show that empathy declines as clinical training progresses, likely due to a lack of consensus on its definition, a focus on science-centered education rather than humanistic skills, and high-stress levels. To address this, medical schools and healthcare organizations must develop efficient tools for teaching empathy. Various methods have been employed, including creative arts, reflective essays, communication skills, and experiential learning. This review provides an overview of recent studies on clinical empathy and aims to enhance the understanding and guide future interventions to teach empathy in medical schools. A pilot study is also included, showing that community connectedness positively impacts empathy levels among medical students.

INTRODUCTION
Empathy is difficult to understand, assess and quantify, as there still needs to be a consensual definition for patient care. The Merriam-Webster dictionary defines empathy as “the action of understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts, and experience of another of either the past or present without having the feelings, thoughts, and experience fully communicated in an objectively explicit manner.”¹ Similarly, the American Psychological Association (APA) defines empathy as “understanding a person from his or her frame of reference rather than one’s own or vicariously experiencing that person’s feelings, perceptions, and thoughts.”² Empathy, in itself, does not motivate us to act. Empathy is critical for all healthcare professionals to provide high-quality care to patients with better health outcomes.³⁴ It can assist physicians in obtaining an accurate patient history, a practice linked to reduced malpractice errors, more accurate diagnoses, improved understanding of the patient’s condition and clinical progress, and reduced healthcare costs.⁵⁶ Physicians can build better rapport and strengthen their relationship with their patients, which improves patient satisfaction, openness, and compliance with medical care.⁷
Empathy is also beneficial for healthcare providers and medical students as it is associated with increased resilience, decreased rates of burnout, improved job satisfaction and personal welfare, and decreased rates of substance abuse and suicide.

Despite the well-documented importance of empathy in medical decision-making and healthcare outcomes, it has been shown that medical schools and healthcare organizations often need to incorporate adequate humanistic learning in their curricula and practice. Most previous studies have suggested that empathy declines among healthcare professionals, including medical students, as their medical training progresses. As such, empathy is negatively correlated with the number of clinical and educational years. It is, therefore, important for medical schools and healthcare organizations to develop tools to teach and evaluate empathy levels, providing a more comprehensive understanding of which activities can positively or negatively impact empathy and facilitating the development of new effective interventions. Though there is currently no standard assessment of empathy in medical schools and other healthcare programs in the United States, two recent studies by Hojat et al. (2015 and 2018) have started to establish normative data in medical schools using the Jefferson Scale of Empathy (JSE), a survey tool used to measure empathy in medical professionals.

In this review, we provide an overview of the most recent studies on the role of empathy in clinical care and its benefits for physicians, healthcare trainees, and patients. Our goal is to enhance the current understanding of empathy in the healthcare field and to provide new insights that will help nurture empathy in the new generation of medical students and future physicians.

BACKGROUND

One must consider the different components of empathy, primarily cognitive, affective, or a combination of both. In the clinical setting, cognitive empathy involves an individual’s ability to perceive a patient’s condition, experiences, perspective, and mental state and communicate this understanding to the patient to help them. The affective component involves recognizing patients’ emotions and passive emotional responses. Unfortunately, this component of empathy is often overlooked in the clinical setting due to the belief that personal feelings may lead to a loss of objectivity.

THE JEFFERSON SCALE OF EMPATHY (JSE)

Empathy is challenging to quantify in healthcare due to the medical community’s lack of a consensus definition, unlike in social psychology. The Jefferson Scale of Empathy (JSE), a psychometrically sound instrument designed to measure empathy in healthcare, has gained widespread acceptance in the medical community due to its reliability and validity.

The JSE has three versions, with the S-version specifically designed for medical students, consisting of 20 Likert-type items on a 7-point scale and a high score indicating greater empathy. This review will use the S-version of the JSE to evaluate empathy levels among medical students.

MEDICAL STUDENT PERSPECTIVE AND TRAJECTORY OF EMPATHY

There is a growing interest in the levels of empathy among medical students and the factors contributing to its development. A systematic review of 18 studies by Neumann et al. (2011) shows an inverse correlation between years of medical training and empathy levels. Similarly, a review of 30 studies across 20 countries found that empathy was lower in the second half of the studies as educational years increased. Possible explanations for this decline include the science-centered focus of medical education, high-stress levels, burnout rates, and the acculturation process to illness resulting in emotional detachment.

On a positive note, studies have shown that medical schools have recognized the importance of empathy in competent physicians, making it a well-established objective across all medical school curricula. Despite recognizing the importance of empathy, there still needs to be an established method to teach it in medical schools, highlighting the need for new standardized interventions.

PHYSICIAN PERCEPTION OF EMPATHY

To discover the most efficient method of teaching empathy to medical students, it is essential first to understand how clinicians perceive empathy and apply it in their practice. Schwartz et al. did a qualitative analysis by asking 94 physicians from four different specialties, including neurology, family medicine, internal medicine, and emergency medicine, to provide ten examples of empathic behaviors in clinical care. The behaviors described by the physicians fell evenly within three main themes: Clinical Performance and Professionalism, Interpersonal Communication, and Clinical Orientation.
These themes highlighted behaviors such as listening and showing interest in their stories, being compassionate to emotions, and having the ability to convey caring and concern toward the patients.\textsuperscript{34} Similarly, Derksen \textit{et al.} (2014) interviewed 30 general practitioners. They perceived clinical empathy as showing feelings of sympathy, paying attention to cues, imagining the thoughts and feelings of patients, and being receptive.\textsuperscript{35} A study by Robieux \textit{et al.} (2018) interviewed 25 cancer care physicians, and some of the common themes included “standing in another patient’s shoes,” “adjustment to the patient,” “communication skills,” and “interpersonal relationships-giving information.”\textsuperscript{36} Sanders \textit{et al.} (2021) interviewed 89 oncology patients, and once again, the identified empathic behaviors included listening, sensitivity to emotions, understanding, clinician accessibility, and caring communication.\textsuperscript{37}

### TABLE 1.
Summary of Studies on Perceived Empathic Behaviors in Healthcare Providers and Patients

<table>
<thead>
<tr>
<th>STUDY</th>
<th>PARTICIPANTS</th>
<th>THEMES/BEHAVIORS</th>
<th>BRIEF DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schwartz \textit{et al.}</td>
<td>94 physicians from 4 specialties</td>
<td>Clinical Performance and Professionalism, Interpersonal Communication, Clinical Orientation</td>
<td>Physicians described empathic behaviors that fell within three main themes, such as listening and showing interest in patients’ stories, being compassionate and sensitive to emotions, and conveying caring and concern toward them.</td>
</tr>
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<td>Derksen \textit{et al.}</td>
<td>30 general practitioners</td>
<td>Feeling sympathy, paying attention to cues, imagining thoughts and feelings of patients, being receptive</td>
<td>General practitioners perceived clinical empathy as showing feelings of sympathy, paying attention to cues, imagining the thoughts and feelings of patients, and being receptive.</td>
</tr>
<tr>
<td>Robieux \textit{et al.}</td>
<td>25 cancer care physicians</td>
<td>Standing in patient’s shoes, adjustment to patient, communication skills, interpersonal relationships-giving information</td>
<td>Cancer care physicians identified themes such as “standing in another patient’s shoes,” “adjustment to the patient,” “communication skills,” and “interpersonal relationships-giving information.”</td>
</tr>
<tr>
<td>Sanders \textit{et al.}</td>
<td>89 oncology patients</td>
<td>Listening, sensitivity to emotions, understanding, clinician accessibility, caring communication</td>
<td>Oncology patients viewed empathic behaviors as including listening, sensitivity to emotions, understanding, clinician accessibility, and caring communication.</td>
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**BENEFITS OF CLINICAL EMPATHY**

Numerous studies in the past have demonstrated the importance of empathy in patient care. The healthcare system is often criticized for excessively relying on scientific data, such as laboratory values and radiology reports, while taking away from the human aspect and subjective experience of the patients.\textsuperscript{40} Healthcare providers often rely almost exclusively on objective data and treat the patient as a cluster of scientific data rather than treat the patient “as a whole. The detachment of emotional concern and the progressive deviation from the human dimensions of illness has been associated with higher burnout rates among healthcare trainees and physicians and worse health outcomes.\textsuperscript{41,42}

Burnout is a multidimensional work-related syndrome associated with chronic job stress and mainly affects physicians disproportionately compared to other professions. According to the 2021 Medscape National Physician Burnout Report, 42% of physicians reported feeling burned out, while approximately four out of five physicians reported that their burnout started before the pandemic. Physician burnout has consequences for both physician and patient outcomes as it is associated with increased medical errors, missed diagnoses, and suboptimal health outcomes.\textsuperscript{43} However, in recent
studies, physician burnout has been defined as a “pathology of care relationship.” In other words, burnout results from the care relationship between the healthcare provider and the patient. Therefore, clinical empathy and burnout are tightly associated. First, empathy prevents depersonalization. This is important as depersonalization leads to cynical and impersonal attitudes when interacting with patients or colleagues while being indifferent and unable to grieve about patients. Empathy enables physicians to have a distinct consciousness of their patients with their personal feelings while understanding their patients. Similarly; empathy protects against emotional exhaustion as physicians can perceive the patients’ emotions without attributing them to themselves. This concept of simulating someone else’s emotions as one’s own is known as sympathy, and it has been linked with increased personal distress. Lastly, empathy is protective against reduced personal accomplishment as it generates greater professional satisfaction, competency, and well-being.

**BENEFITS FOR PATIENT OUTCOMES**

Contrary to popular belief, patient-centered care is relatively inexpensive despite its effectiveness. A study by Langewitz et al. 2002, showed that allowing 90 seconds for patients to talk about what they are experiencing can significantly improve patient satisfaction and compliance to care. It has been shown that a general practitioner who understands a patient’s experiences can establish a stronger patient-physician relationship, making patients feel safer and more supported. Patients are far more likely to trust and listen to empathic providers while being more open in discussing their concerns and symptoms with them. This, in turn, enables health providers to obtain a more accurate history from their patients, which will help guide their treatment and plan, leading to more specific and faster diagnostics and improved medical outcomes. In a study by Hojat et al. (2011), patients seen by physicians with high empathy scores based on JSPE had significantly lower A1C values than those who received care from physicians with low empathy scores. Similarly, patients’ LDL-C control was significantly higher for physicians with high empathy scores than those with low scores. In another study in Italy by Del Canale et al. (2012), 20,961 patients with type 1 or type 2 diabetes mellitus received care from one of 242 primary care physicians in 2009. It was shown that patients of physicians with high empathy scores (based on JSPE) had significantly lower rates of acute metabolic complications, including DKA and hyperosmolar states, compared to patients of low empathy score physicians.

**INTERVENTIONS AND HOW TO TEACH EMPATHY**

Teaching empathy to medical students and physicians and promoting patient-centered care should be essential to training competent physicians. However, there is still insufficient evidence to determine the best and most efficient interventions for developing empathetic clinicians. There is a plethora of methods that have been used so far to teach empathy. Some examples include creative arts such as drama, blogging, and poetry, writing interventions like reflective essays, communication skills, and experiential learning by having students personally experience some of the challenges certain patient groups experience daily. Zhou et al. did a systematic scoping review (SSR) using the Systematic Evidence-Based Approach (SEBA) to evaluate the current approaches employed in nurturing and assessing empathy in medical schools. The researchers used eight databases and reviewed 1188 articles, of which 136 were used for data analysis. One of the main findings of this review was that nurturing empathy is a process that occurs in four sequential main stages.

**TABLE 2.**

<table>
<thead>
<tr>
<th>OUTCOME</th>
<th>PATIENTS SEEN BY HIGH EM emPATHY SCORE PHYSICIANS</th>
<th>PATIENTS SEEN BY LOW EMPATHY SCORE PHYSICIANS</th>
<th>STUDY SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1C values</td>
<td>Significantly lower</td>
<td>Higher</td>
<td>Hojat et al. (2011)</td>
</tr>
<tr>
<td>LDL-C control</td>
<td>Significantly higher</td>
<td>Lower</td>
<td>Hojat et al. (2011)</td>
</tr>
<tr>
<td>Rates of acute metabolic complications</td>
<td>Significantly lower</td>
<td>Higher</td>
<td>Del Canale et al. (2012)</td>
</tr>
</tbody>
</table>
The first stage is teaching empathy as a concept which can happen through didactic lectures or discussions. The second stage uses different learning modalities to teach empathy. Role-playing, simulated patients, real and virtual patients, art, and humanities all seem to positively impact the development of empathy in medical students. The third stage is holistic feedback to promote empathy and communication skills. This stage can be achieved through debriefs, reflective exercises, and group discussions. Feedback should be given promptly, and it should be individualized to each person. For example, students may be given feedback at the end of standardized encounters. That will help them identify their mistakes and things they could have done differently, ultimately enabling them to adjust in future meetings as needed. This model's last stage applies to the previous stage when communicating with patients. For this stage to be achieved, one needs to have developed their empathetic and interpersonal communication skills from the earlier stages, along with their professional identity, before they can perceive someone else's experiences. However, there are shortfalls at this stage as training cannot be identical to actual clinical setting conditions.

Most medical schools implement mandatory academic programs to nurture empathy and promote diversity, mindfulness, emotional sensitivity, and interprofessional and communication skills. For example, Columbia University has implemented a program known as Narrative Medicine. This mandatory course equips healthcare trainees with the skills to comprehend their patients’ stories and develop the best-individualized healthcare plan. Ultimately, the course is designed to provide respectful, culturally appropriate, efficient, and patient-centered holistic care. It engages professionals from other fields, including social workers, academics, activists, and chaplains. Another program is at Stanford University, which has implemented a Standardized Patient Program where students are exposed to simulated clinical scenarios in a safe, supervised environment. The program's goal is to aid students in developing their communication and clinical skills while preparing them for uncomfortable talks and situations that they will face as clinicians, such as talks about sexuality, how to deal with aggressive patients, delivering bad news, and more.

**TECHNOLOGY AND EMPATHY**

History has repeatedly demonstrated that innovations can be a gift and a curse. In the medical field, technology has had a similar connotation to it. Dr. John Preece, a British physician, was the first to bring a computer into the exam room. This was 1970. Since then, technology has invaded every aspect of patient care. For the more significant part, it has resulted in positive outcomes such as the computerization of notes, laboratory and imaging results, video consultation, and smartphone applications, to name a few.

More recently, with the advent of artificially intelligent robot doctors (Alemi et al.), technology has gone beyond expectations. Claims have been made that these robots can handle patients’ stress and depression and express empathy (Alemi et al. and Crain). Though much of the administrative burdens on physicians may have been reduced due to technology, we have yet to understand its impact on empathic patient interactions. Telemedicine is booming, and van Gurp and colleagues evaluated its effect on empathy. They found that telemedicine enabled more frequent interactions between patients and their physicians. Despite the lack of physical presence, the increased frequency deepened their relationships, and patients could talk more freely with their doctors. Another technological advantage is that it provides a resource to teach empathy to medical students during training. Riess et al. showed that video recordings of consultations using real-time physiologic response monitoring elicited greater empathy in medical students than in standard communication training programs.

Conversely, Young et al. and others have demonstrated the negative aspects of technology in medicine. Doctors have less eye-to-eye contact time with patients, delayed responses to patients, and slow empathic responses. These studies have shown that technology has a significant role in patient care, but perhaps outside the clinic, where patient-physician interaction is vital. Technology can therefore be a gift and a curse.

**GOVERNING AGENCIES**

It is not by chance that physicians and medical trainees can demonstrate compassion and care toward their patients. In 2011, the Association of American Medical Colleges (AAMC) published its second Foundations monograph, Behavioral and Social Science Foundations for
Future Physicians, establishing the humanistic aspect of patient care as a critical component of medical education in all schools nationwide. Medical schools value humanism, as admissions will evaluate students not only by their grades but also by their personal experiences and background since these can provide insights into whether medical trainees are empathetic and compassionate. The value of empathy is also reinforced as the AAMC Group on Student Affairs Committee on Admissions has developed 15 core competencies for trainees, including service orientation, cultural competence, social skills, and oral communication. The above competencies focus on listening and communication skills, adjustability, sensitivity, and awareness of others’ needs, feelings, and backgrounds. Similarly, the American Osteopathic Association (AOA) also believes in the importance of empathy in patient care. The AOA has stated that empathic care is a hallmark of osteopathic medicine as it focuses on holistic care rather than treating symptoms. For that reason, osteopathic medical schools have also integrated with their curriculum humanistic training starting from day one of school.

**EMPATHY DURING COVID-19**

Given all the information we have about empathy and its positive impact on physicians’ well-being and patient health outcomes, one needs to consider how it has been affected during a healthcare crisis, such as the recent COVID-19 pandemic. Empathy can protect against burnout, generating a distinct consciousness and engaging physicians in helping their patients. However, during periods of prolonged crisis, it becomes more of a duty for the clinicians to serve others, while it takes away from the connectedness and patient-physician relationship. A study was conducted in Ecuador to analyze the levels of empathy during the COVID-19 pandemic. The sample population consisted of 170 healthcare trainees and 117 healthcare professionals, and the levels of empathy were analyzed using the Interpersonal Reactivity Index (IRI). Participants were separated into three groups: Physical, emotional, and rehabilitation. The physical group included fields such as medicine, nursing, or nursing assistants; the emotional group included social workers and psychologists; and the rehabilitation included physical and occupational therapists. It was found that the physical group experienced the highest levels of distress as they were the ones that were the most exposed to severe illness and death. Similarly, students scored higher levels of personal distress, while age was inversely correlated with distress levels. A possible explanation is that during a crisis, such as the COVID-19 pandemic, there is diminished mental space for healthcare providers to connect with their patients. This eliminates the opportunity to develop clinical empathy, increasing the risk of distress and burnout. Therefore, these findings during the pandemic further highlight the need to teach clinical empathy to healthcare trainees so that they can take care of themselves and others even during periods of crisis.

**PILOT PROJECT ON EMPATHY AND COMMUNITY CONNECTEDNESS**

In 2019, Dr. Prasad, an author of this article, conducted a study to evaluate the impact of community connectedness on medical students’ empathy. The study aimed to understand the effects of volunteering in a local free clinic in a disadvantaged area, catering to over 500 patients in one day. Dr. Prasad hypothesized that engaging in community medical services would enhance empathy in medical students. The students’ duties at the clinic included obtaining patients’ medical history, taking vital signs, triaging patients to receive appropriate services, and providing exit patient education. The students completed a pre and post-volunteering survey using the Jefferson Scale of Empathy medical student version (JSE-S-version).

<p>| TABLE 3. Demographic Factors and Changes in Empathy Scores Before and After Volunteering in a Local Free Clinic |</p>
<table>
<thead>
<tr>
<th>DEMOGRAPHIC</th>
<th>EMPATHY SCORES BEFORE CLINIC</th>
<th>EMPATHY SCORES AFTER CLINIC</th>
<th>CHANGE IN EMPATHY SCORES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 24 and under</td>
<td>Mean = 105.08, SD = 9.01</td>
<td>Mean = 120.00, SD = 8.17</td>
<td>Mean increase = 14.92</td>
</tr>
<tr>
<td>Age 25 and above</td>
<td>Mean = 113.33, SD = 7.29</td>
<td>Mean = 123.89, SD = 8.14</td>
<td>Mean increase = 10.56</td>
</tr>
<tr>
<td>Male</td>
<td>Mean = 109.57, SD = 6.77</td>
<td>Mean = 121.04, SD = 7.67</td>
<td>Mean increase = 11.47</td>
</tr>
<tr>
<td>Female</td>
<td>Mean = 111.63, SD = 7.44</td>
<td>Mean = 123.26, SD = 9.67</td>
<td>Mean increase = 11.63</td>
</tr>
</tbody>
</table>
A seven-point Likert scale was used for all 20 question items. Paired t-test analysis was performed to ascertain the differences in empathy scores pre and post the free clinic experience. Repeated measures and ANOVA were conducted to investigate changes in empathy scores based on demographic information.

The results showed a significant increase in empathy scores from pre-clinic (mean=111.59, SD=6.94) to post-clinic (mean=122.24, SD=8.64) (p value=0.001). Questions with the most significant increases involved the importance of patients’ emotions in history taking, acknowledging the difficulty of seeing through patients’ perspectives, and the effect of a physician’s emotional ties to patients on treatment.

Interestingly, medical students ages 24 and younger had significantly lower empathy than the 25 and above group before the clinic (p-value = 0.018). Also, males showed more significant increases in empathy scores after the workshop. However, this was not statistically significant. There were no important findings for gender, ethnicity, and medical school year comparing the pre-surveys and post-surveys.

The positive increase in empathy seen in the post-clinic surveys highlighted two critical issues. First, empathy is often seen as an innate characteristic; however, the data suggests it can be developed through inspirational experiences. This indicates that it may be essential to integrate community connectedness in medical education to reverse the decline of empathy in the medical profession, which can impact clinical outcomes. Although this was a small pilot study, the results were encouraging, and future studies should be conducted to understand this vital topic more clearly. The author is currently evaluating larger numbers of student participation. Other activities that impact empathy in medical students should also be evaluated. For example, exposure to role models, shadowing patients, being hospitalized, and analyzing standardized patient encounters. Other objective assessments of empathy should also be considered.

CONCLUSION

In this systematic review, we have shown an overview of the findings of numerous studies regarding the benefits of clinical empathy for physicians and patients. Specifically, we demonstrate that clinical empathy is protective against physician burnout, depersonalization, emotional exhaustion, and reduced personal accomplishment, thereby improving physicians’ mental health and medical decision-making. Multiple studies have also shown patient benefits, including increased satisfaction and compliance to treatment, more appropriate medical decision-making, decreased malpractice errors, reduced healthcare costs, and better health outcomes.

For these reasons, medical schools and governing agencies, such as the AAMC and the AOA, have recognized empathy as a core competency for equipping future physicians with the necessary skill set to practice in the 21st century. The current understanding of teaching empathy is that it can be nurtured in a stage-wise framework, as noted by Zhou et al. in their systematic scoping review (2021).58 Nurturing empathy is a process with multiple challenges, requiring medical schools to consider it seriously and incorporate it into their curricula. We recommend employing a combination of teaching tools, as empathy is a multifaceted, complex concept that requires diverse skills. This review has cited some notable examples of effective interventions, including using standardized patients by Stanford University and other medical schools and implementing mandatory humanistic courses such as Narrative Medicine at Columbia University. As Dr. Prasad’s pilot study demonstrated, community connectedness is also crucial.

Technology is another tool to consider in future research studies, as there are still contradictory data on its impact on empathy, despite the successful emergence of telemedicine. Lastly, we recommend that when teaching clinical empathy, students are also prepared for periods of crisis, such as the COVID-19 pandemic.

AUTHOR DISCLOSURES:
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A REVIEW OF CURRENT STRATEGIES AND FUTURE DIRECTIONS


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