Empathy in Podiatric Medical Education

Challenges and Opportunities for Comprehensive Care

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Background: Many regard empathy as a critical component of comprehensive health care. Much interest has been generated in the field of medical empathy, in particular as it relates to education. Many desirable outcomes correlate with perceived empathy during the patient encounter, but paradoxically, empathy levels have been reported to decline during the years of medical education. Several new approaches have been described in the literature that intend to teach or develop empathy skills in health-care students.

Methods: PubMed, PsycINFO, and Google Scholar databases were searched for the terms *empathy education, medical education, medical student, podiatric medical education, medical empathy, compassion, emotional intelligence, biopsychosocial model,* and *bedside manner*. After implementing inclusion and exclusion criteria, articles were selected for preparation of a literature review. Analysis of the podiatric medical education on empathy was conducted by reviewing descriptions of all courses listed on each of the nine US podiatric medical schools' Web sites. The 2018 Curricular Guide for Podiatric Medical Education was analyzed.

Results: In this review, we examine the current state of empathy from a context of medical education in general, followed by a specific analysis in podiatric medicine. We define key terms, describe the measuring of empathy in medicine, explore outcomes of empathy in the health-care setting, review the reports of a decline in medical education, and highlight some of the current efforts to develop the skill in education. An overview of empathy in the podiatric medical curriculum is presented.

Conclusions: To improve the quality of care that physicians provide, a transformation in podiatric medical education is necessary. A variety of tools are available for education reform with the target of developing empathy skills in podiatric medical students. (J Am Podiatr Med Assoc 110(5): 1-12, 2020)

In health care, empathy contributes to providing complete and comprehensive care. Many positive outcomes, including increased physician sense of duty, reduced malpractice litigation, increased competence in taking histories and performing physical examinations, increased patient satisfaction, increased physician satisfaction, and improved quality of patient-physician relationships, result from the ability of health-care providers to be empathetic toward their patients.[1-4] Studies have also shown that individuals who lack empathy are more likely to cause medical errors, which supports the idea that training medical students to develop empathy could affect the quality of health care provided, as well as the outcomes.[5]

One objective of medical schools is to train physicians to be compassionate and empathetic.[6] Despite an emphasis on bedside manner as implied in this objective, empathy has been shown to decline in medical students during their educational training.[7,8] Although the curriculum of most medical schools emphasizes didactic scientific knowledge, several programs explore modalities that develop interpersonal skills, patient-provider communication, and bedside manner. Among these approaches, mindfulness-based interventions have been shown to increase empathy in students and physicians.[9,10]

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In this article, a review of the scientific literature is provided describing the benefits of empathy in health-care education. The topics of the report include the current decline of empathy in students and the emergence of the various approaches being implemented to counteract this decline. All of these elements are taken into account when describing the current state of empathy education in the podiatric medical curriculum.

Methods

Three journal databases were searched for articles in the field of empathy and medical education: PubMed, PsycINFO, and Google Scholar. Search terms included the following, either individually or in combination: *empathy education*, *medical education*, *medical student*, *podiatric medical education*, *medical empathy*, *compassion*, *emotional intelligence*, *biopsychosocial model*, and *bedside manner*. All of the abstracts obtained were compiled for ranking by the authors. Inclusion criteria included relevance to the primary goal of the article, peer-reviewed articles, and any study design. Exclusion criteria included written in a language other than English, studies on the psychology theory of empathy, studies on the neuroscience of empathy, and articles from non–peer-reviewed journals.

Analysis of the podiatric medical education on empathy was conducted by reviewing course descriptions for all courses listed in each of the nine podiatric medical schools' Web sites. In addition, the 2018 Curricular Guide for Podiatric Medical Education, on the American Association of Colleges of Podiatric Medicine (AACPM) Web site, was reviewed.

Definitions

Empathy

Empathy can be defined as the ability of one person to relate to and understand the situational circumstances of another human being.[11] In a medical setting, this definition extends to the psychological, emotional, and physical conditions communicated from the patient to the health-care provider.

Empathy can be classified into two basic categories: emotional and cognitive.[12-16] Emotional empathy is defined as the desire to react with an appropriate emotional response, including the ability to comfort and provide compassion. Second, empathy encompasses a cognitive aspect, seeking to identify with an individual's mental status. These two categories are distinct in that emotional empathy represents a visceral response to the emotional outcry and cognitive empathy is an emotionally intelligent ability to comprehend the situational circumstances of the patient. Empathy should not be confused with sympathy, which is characterized by one's ability to adopt the emotional status of another individual.[17] The National Library of Medicine makes this distinction clear and defines empathy as follows: "An individual's objective and insightful awareness of the feelings and behavior of another person. It should be distinguished from sympathy, which is usually nonobjective and noncritical. It includes caring, which is the demonstration of an awareness of and a concern for the good of others. (From Bioethics Thesaurus, 1992)."[18] Empathy requires an attenuated response coupling intuitive nature with an appropriate sense of emotional restraint and intelligence.

Hojat et al[19] define empathy within the context of medicine as "a cognitive attribute that involves an ability to understand the patient's inner experiences and perspective and a capability to communicate this understanding." In a health-care setting, such awareness does not require the provider to experience the same emotions as the patient because this could negatively affect the health-care provider's ability to render treatment appropriately. However, this awareness enables the health-care provider to be sensitive to all the needs of the patient and provide treatment humanely and effectively. Empathy allows the provider to reflect on the feelings of the patient and also allows the patient to feel understood.

Empathy in the context of medical education provides the means to improve patient-physician interactions beyond the academic knowledge obtained in basic preclinical and clinical courses. Steuber defines empathy as "... best understood as a dynamic, culturally situated, temporally extended, and dialogical process actively involving not only the interpreter but also his or her interpretee."[11] This definition is critical in understanding how empathy in medical education could improve the outcomes of the patient-physician interaction. Medicine is a constantly evolving and dynamic field. Physicians will encounter a multitude of diversity in their patient population. A provider-patient relationship is an ongoing process that can last years or even a lifetime and consists of a constant dialogue that involves perspective and insight.

Neurologic studies demonstrate that perspective defines whether an empathetic response is elicited. Experimentally, individuals asked to imagine the struggle of another individual experienced empathy; anxiety and personal distress were felt when asked to visualize the same circumstances happening to themselves. The range of behaviors driven by empathy, therefore, extends to many cognitive abilities, including executive functions, mentalizing, and language.[20] The education of successful physicians requires understanding empathy from biological, psychological, and social viewpoints.

Related Terms

Several terms relating to empathy should be defined to mediate productive medical outcomes successfully. Among these terms are *compassion*, *emotional intelligence*, *biopsychosocial model*, and *bedside manner*.

Compassion. It is crucial that compassion is considered a component of successful physician training. Compassion is defined as an ability to recognize and conceive an emotional identity with another person.[21] However, is compassion an aspect that can be cultured in budding physicians? It is at this junction that one must separate the two terms *empathy* and *compassion*. Whereas empathy allows one person to comprehend the suffering or success of another, compassion indicates an emotional joining of cognitive conditions on a more fundamental psychological level.[22] Although regarded as essential to providing complete and comprehensive care, compassion, unlike empathy, is more challenging to develop and presents a more significant challenge in assessing and creating tools to improve in medical education.[23]

Emotional Intelligence. Empathy is a significant component of emotional intelligence. Birks and Watt[24] define emotional intelligence as "a set of abilities (verbal and nonverbal) that enable a person to generate, recognize, express, understand and evaluate their own and others' emotions to guide thinking and action and successfully cope with environmental demands and pressures." This skill contributes to assisting physicians in providing a personalized and all-inclusive treatment of patients under a variety of circumstances. Emotional intelligence can be divided into a variety of models, all of which incorporate empathy as a modality for determining levels of emotional intelligence.[25-27] The development of an emotionally intelligent physician is affected by empathy levels.

Biopsychosocial Model. The biopsychosocial model is a three-pronged combination of human biology, psychology, and social constructs describing a more comprehensive form of care in patient-physician interactions.[28] This model addresses several key issues worth exploring. A simple hypothetical example exploring the biopsychosocial aspects of type 2 diabetes demonstrates this argument. Although biologically a patient has developed this chronic illness, be it through genetic precursors or poor nutrition coupled with lack of physical activity, several psychological and social aspects require consideration. Psychologically, the patient may have emotional stressors that elicit poor eating or other poor nutritional habits that need to be addressed. Socially, a patient may be predisposed to poor nutrition based on the confines of their education and financial circumstances. For example, the World Health Organization estimates that 80% of diabetes-related deaths occur in low- to middle-income countries.[29] Thus, the ability of a physician to empathize with a patient beyond the biological aspect of their afflictions demonstrates a more comprehensive form of care. By understanding the psychological struggles of patients and comprehending their social circumstances, a physician can better mediate treatment beyond the didactic forms of education currently in place in medical training.

Bedside Manner. Another definition when considering the importance of empathy in medicine is bedside manner. This term has been described as synonymous with the phrase *patient-centered care*. Bedside manner involves explaining to a patient the gravity of his or her illness while being able to comfort them, leaving them feeling safe in the care of the physician.[30] It has been postulated that a physician with a higher degree of empathy, both emotionally and cognitively, will be more successful at fulfilling these tasks. Bedside manner is an extension of the physician's personality beyond their medical knowledge, and an aspect of medical practice not conventionally focused on during medical education. The implementation of protocols to increase empathy in physicians demonstrates an overall improvement in bedside manner and increasingly improved outcomes in patient-provider interactions.[31] The ability of a physician to identify with the issues the patient experiences not merely on a physical level but also on a psychological and social level demonstrates an increased level of emotional intelligence and improved bedside manner.[32,33]

Measuring Empathy

There are three basic approaches to measuring empathy using validated methods: first-, second-, and third-person perspectives. The first-person approach relies on self-report instruments in which the participant rates empathy-related statements obtaining an overall empathy score. In the second-person perspective, the patient rates the provider's empathy based on his or her experience during the patient-provider interaction (patient-perceived empathy). Finally, in the third-person perspective, an objective observer evaluates his or her interpretation of the encounter and rates the empathy of the provider (observer-perceived empathy).

Hemmerdinger and colleagues[34] conducted a systematic review of instruments used in evaluating empathy. Of 59 instruments evaluated, six proved to be most valid and reliable. Four of these were from a first-person perspective, one from a second-person perspective, and one from a third-person perspective. Only one instrument was developed specifically for health-care providers. The Jefferson Scale of Physician Empathy (JSPE) measures empathy in physicians from a first-person perspective. The JSPE has subsequently been used in studies involving nurses and medical students and has been shown to be a valid and reliable instrument for measuring empathy in these populations as well.[35] Reliability has been examined using test-retest correlation ($r = 0.65$ over 3–4 months in physicians and a test-retest change value of $P < .05$ over 12 months in medical students). The JSPE has an internal consistency total-item score between 0.30 and 0.60 and a Cronbach alpha between 0.81 and 0.89. Validity measures show an association between empathy scores and student competence, with extensive convergent and divergent validity assessments during test development.[7,36-38]

Positive Outcomes of Empathy

Several studies demonstrate that patient satisfaction and compliance increase when a physician exhibits higher levels of empathy. Garcia et al[1] showed that patient satisfaction seems to be particularly important regarding the initial visit to a practitioner. Their study correlated physicians who underwent empathy training and patient satisfaction demonstrating increased levels of compliance and overall contentment.[1] In the pediatric office setting, mothers who felt that a physician was empathetic exhibited higher levels of satisfaction.[2] In studies assessing patient satisfaction via verbal communication, physicians with higher levels of empathy experienced better outcomes.[3]

Increased levels of empathy have been shown to reduce health-care costs; part of this overall reduction related to lower litigation and malpractice fees of practitioners.[1,4] Patients view empathetic physicians as providers who emotionally invest in their overall health rather than perceiving the relationship as a business transaction.[39]

Essential to positive outcomes are effective forms of communication; patients want to feel that they are being heard in addition to being examined. The empathetic physician can communicate with the patient using the specific circumstances of each case to determine the best course of treatment uniquely tailored to the patient using tools from the biopsychosocial model. Thus, increased levels of empathy manifest positively in many aspects of patient care.

Empathy Decline in Medical Education

The decline of empathy during medical education has been documented by many studies.[8,40-43] Although these studies measured different demographics of students, either cross sectionally or longitudinally, each showed a statistically significant decline in empathy. In addition, Newton et al[41,42] showed that medical education plays a role in determining specialty choice and concluded that lower values of empathy were apparent in students with noncore specialties. Hojat et al[40] also correlated levels of cynicism with a decrease of empathy in medical students. Comparing constructs of widely used measures has also been described in medical students.[44] Some of these studies were not exclusive to medical students but also measured levels of empathy in interns and residents, demonstrating similar results.[42,45]

Some studies measured empathy using sex as a demographic of interest. Men in core specialties initially had higher levels of empathy, which fell below national averages after completion of the third year of residency. Men in noncore specialties exhibited levels of empathy on par with national levels, with no decline during residency. Women choosing a core specialty had measured empathy levels comparable with national averages, with no drop during residency. However, women in noncore specialties showed decreased empathy after a few years.[41] Thus, regardless of the areas of medicine in which empathy decreases according to sex, there is an overall decline during residency, just as has been shown for the years in medical school.

For practicing physicians, regarding specific specialty choice, different concentrations show different levels of empathy. Psychiatrists were observed to have higher levels of empathy than surgeons overall.[37] Thus, the source of decline potentially points to training in specific subfields of medicine. However, due to decreased empathy levels seen throughout the nearly decade-long process of medical training, it is possible to conclude that much of the decline takes place during graduate medical education.

Efforts to Improve Empathy

The Association of American Medical Colleges stated in a series of reports on the Medical School Objectives Project that one objective of medical schools is to train physicians who "must be compassionate and empathetic in caring for patients."[6] This objective is reflected in some medical schools implementing various programs to foster empathy in students. The diversity of the programs being explored includes a wide range of approaches.

Scheffer et al[46] examined the effect of active student participation on quality of care in an integrative inpatient setting as an approach to enhance "patient-centeredness." Physician empathy was assessed with the Consultation and Relational Empathy measure, and they observed improved scores with their intervention.[46] Participation in medical missions has also been explored as a tool to teach empathy in a medical education setting and seems to have a positive effect on students.[47] Other reports stress patient education as being a fundamental part of caring for patients and detail strategies to improve this element of the patient-provider interaction.[48,49] The importance of improved communication skills and development of specific curricula for medical students to develop empathy and compassion are well documented.[50,51]

Other groups have explored using the arts and humanities as a tool for fostering empathy in medicine. Bleakley and Marshall[51] argue for the inclusion of medical humanities in the curriculum of medical schools as a tool for improving communication skills and empathy. Wolters and Wijnen-Meijer[52] agree with the same concept, explicitly focusing on the use of poetry and prose as a tool for developing empathy in medical students. A perspective published in *The New England Journal of Medicine* supports the same principle by describing a call for reform of medical education starting as early as the premedical undergraduate curriculum. Muller[53] details a program established in 1987 at Mount Sinai's Icahn School of Medicine, including an alternative to the traditional premedical track: the Humanities and Medicine Program. The program indirectly supports the idea that students with a diverse background in humanities will become more empathetic clinicians.

Interestingly, studies have shown that clinicians who try to convey empathy may downplay their competence. Patients may perceive clinicians' efforts to be empathetic as compensating for lack of proficiency. To prevent this misconception, studies have suggested incorporating empathic nonverbal training into the medical school curriculum. Nonverbal communication provides a more subtle way for clinicians to express empathy without appearing less competent. Some examples of nonverbal communication that have been correlated with increased ratings of empathy and competence are open body posture (uncrossed arms), eye contact, touch, and smiling.[54]

In the early 2000s, a model patient, Stan, was introduced to help students understand how the body reacts in different situations. Stan is a mannequin that is capable of mimicking human physiology; however, he cannot mimic human emotions. As a result, more recently, various medical schools have been using virtual patients as an experimental method that allows students to reinforce their empathetic communication skills. The purpose of the virtual patient is to provide a low-pressure environment that allows prospective physicians to reflect on their interactions to prevent repercussions in the future. Although not yet ubiquitous, this method may prove to be an important tool to avoid the empathy decline that is often experienced throughout medical school education.[55]

Mindfulness-Based Interventions

Many of the commonly used approaches being explored to develop empathy skills use mindfulness-based interventions. One of these programs, Mindfulness-Based Stress Reduction (MBSR), is a course based on the practice and cultivation of mindfulness, a particular quality of attention and awareness described in both Eastern and Western philosophical traditions. Operationally defined, "mindfulness is a non-judgmental, moment-to-moment paying attention on purpose in the present moment that is always nested within a larger conceptual and practice-based ethical framework oriented towards non-harming (an orientation it

shares with the Hippocratic tradition of Western medicine)."[56] The MBSR program was founded by Jon Kabat-Zinn, PhD, in 1979 at the University of Massachusetts Medical School to help patients reduce stress and manage emotions through mindfulness meditation.[56-58] It is an 8-week behavioral program and education course that offers first-hand experience of meditation techniques, including mindful awareness of daily activities and communication. The MBSR curriculum, facilitated by certified instructors, has become a life-affirming mind/body practice for comprehensive health care in education and mental health.

The impact of MBSR has been examined in medical education. In 1998, Shapiro et al[59] investigated the effects of MBSR on medical and premedical students. Their findings indicated that participation in the course not only reduced anxiety and depression but also increased empathy levels in participants. In 2009, Krasner et al[60] reported the outcomes of a mindfulness-based educational program among 70 primary-care physicians. Although this study was not conducted with medical students, the methods included a course that was part of continuing medical education. Participation in the course was associated with lower levels of burnout and higher empathy.[60] The implications of this study and similar studies are promising and can be extrapolated to the potential impact of mindfulness-based interventions in medical education. However, one study found that students who were "forced" to participate in mindfulness education felt that they could not fully commit to it. They felt that being forced prevented them from being "open" to the experience, which is imperative to seeing positive results. This finding suggests that the students' willingness to participate must be taken into consideration to achieve maximum benefits with MBSR.[57]

The potential and prospective of mindfulness-based interventions having an impact in improving empathy and patient-centered care are also reflected by the number of medical schools that are now teaching mindfulness. Some of the medical schools that offer alternatives in mindfulness-based training for students and/or residents include the University of Massachusetts Medical School, Stanford University School of Medicine, Columbia University College of Physicians and Surgeons, University of California San Francisco School of Medicine, and Icahn School of Medicine at Mount Sinai. Dobkin and Hutchinson[61] recently published an article titled "Teaching Mindfulness in Medical School: Where Are We Now and Where Are We Going?" that details the state of mindfulness-based interventions in medical schools.

Teaching mindfulness as part of the medical curriculum has potential implications for other critical elements in medicine outside of empathy. Sibinga and Wu[62] wrote an insightful commentary in the *Journal of the American Medical Association* not only describing the potential benefits of clinician mindfulness as they relate to empathy but also about the potential implications to patient safety and reduction of medical errors.

Virtual and Live Standardized Patient-Based Interventions

During the past several decades the use of standardized patients to provide medical students with simulations of patient interactions has become a common practice of medical education.[63,64] One of the newer approaches being explored to develop empathy skills in medical students is the use of virtual patients in addition to standardized patients. A virtual patient is a character that represents a patient regarding reaction and response. Medical students can ask health-related questions, conduct examinations, observe, and document findings akin to a standardized patient.[65,66] Virtual patients respond similarly with speech, gestures, and text. Although some may argue that virtual patient interactions are too artificial, the low-stress environment they provide for inexperienced medical students has been shown to benefit them by increasing their confidence and empathetic communication skills as they further their education.[55] Both standardized patients and virtual patients have been shown to be promising tools for medical education to teach and develop empathy in medical education, including podiatric medical education.[64,67-72]

Standardized patients have also been used as part of the assessment in observed structured clinical examinations after drama training in medical students. The intervention included training in "how to act-in-role" to improve empathy communication, which proved to increase self-reported empathy and competence significantly.[73] The use of drama has been among the practices used to enhance empathy in medical students.[74,75]

Analysis of the Current State of Podiatric Medical Education

The instruction of empathy in podiatric medical education is a priority in the field.[76,77] It is a common belief that empathy is an important aspect

of podiatric medical care, as it is in all health-care fields. However, the teaching of empathy in podiatric medical education is not uniform and standardized, similar to the state of allopathic and osteopathic medical schools. Analysis of course descriptions for all nine DPM schools in the United States reveals the lack of uniformity on the teaching of empathy in podiatric medical education. To evaluate the teaching of empathy in DPM programs, the course descriptions for all courses at each of the nine colleges of podiatric medicine in the United States were assessed as detailed on each of their Web sites. Each course description was scanned for terms related to empathy, as listed previously herein. Courses that had explicit or implicit teaching of empathy were selected. Table 1 lists each course in this category for each of the nine colleges, and specific key words in the course description are also included.

A more comprehensive understanding of the teaching of empathy in podiatric medicine can be ascertained by examining guidelines established by the AACPM.[78] In February 2013, under the direction of the Council of Faculties of the AACPM, the first comprehensive Curricular Guide for Podiatric Medical Education was released. The term *empathy*, or its related terms as described in this article, did not appear in any of the previous editions of the guide. The most recent version, released in 2018, includes a new section on Community Health in which a few objectives with the Public Health subsection I could potentially relate to empathy. However, the word *empathy* and its related terms are still absent from the objectives in this most recent edition.[78]

Discussion

Empathy as a component of a competent physician represents a quality that has been demonstrated to be significant in providing a patient with complete and comprehensive care. We define empathy as the ability to comprehend the emotional, social, biological, and overall psychological well-being of a patient in the context of treatment. However, empathy is easily confused with sympathy or compassion, two emotional expressions that we have disregarded as either inappropriate in the medical setting or too visceral to be incorporated into medical training. Thus, empathy provides a process of emotional navigation for the physician, establishing effective communication between patient and provider. Empathy is part of the broader framework of emotional intelligence, essential to providing patients with comprehensive care. Concerning patient satisfaction, return visits, and follow-up, a physician can achieve more favorable outcomes with an increased level of empathy. Classically, patient-centered care, which can be shown to increase levels of patient satisfaction and, thus, better overall treatment, is known as *bedside manner*. The ability of a practitioner to comfort a patient and communicate a diagnosis significantly affects the outcome of the patient. Inherently, the provider must consider the additional social and psychological circumstances of the patient beyond the didactic knowledge that one obtains during basic medical education (biopsychosocial model). Positive outcomes from physicians with increased levels of empathy show that increased patient satisfaction, as well as reduced malpractice and litigation fees, are attainable.

Although there is a multitude of benefits from training physicians to improve levels of empathy, multiple studies have shown a decline of empathy during medical training. This decrease is not localized to medical school but has also been seen in postgraduate training. In addition, studies of sex differences showed no significant variation between men and women regardless of the field of concentration. The difference in empathy levels in specific specialty choice did not determine chronologically where the decline occurred. It is important to note that because the decrease in empathy was seen at all levels of medical training, the stem of the problem could begin as early as the preclinical science level. Thus, regarding implementation of empathy training, undergraduate medical education seems most feasible.

Several efforts have been made to improve empathy in medical students and, thus, physicians, including incorporation of humanities into the medical school curriculum, participation in medical missions, drama training, and mindfulness-based interventions, such as the MBSR course. Of the solutions attempted to improve empathy, mindfulness-based interventions provide the most feasible and effective methods for enhancing empathy in medical students. Significant increases in empathy were measured by both contemporary scales and functional magnetic resonance imaging. The 8-week course is shorter than a typical medical school semester and has been used at some well-accredited institutions to improve levels of empathy.

Concerning the current state of empathy teaching and training in podiatric medical education in the United States, lack of consistency is the most evident feature, as shown in Table 1. Note that clinical rotation courses, such as clerkships and

Table 1. Courses Teaching Empathy or Empathy-Related Concepts in the US Curricula of Podiatric Medical Education

Course	Key Words Related to Empathy
Barry University School of Podiatric Medicine	
Introduction to Podiatric Medicine	art of doctoring
Physical Diagnosis	techniques of interviewing and history taking; care of the patient in all fields of medicine
Clinical Orientation and Skills Workshop	diverse aspects of clinical care; patient interactions
Podiatrist Rotating Clinical Clerkship II	attitude, skills, and motivation and will be required to maintain a patient log
Biomedical Ethics	valid consent, confidentiality and privacy, issues in death and dying, and the podiatric code of ethics
Risk Management	patient/physician relationships
Community and Minority Medicine	specific medical problems affecting particular minority groups
Communication Skills[a]	communication skills necessary for physicians to interrelate with their patients on an understanding and *empathetic level*; interaction with community members and other physicians
California School of Podiatric Medicine at Samuel Merritt University	
2nd-Year Simulation Center Rotation	interdisciplinary collaboration
2nd-Year Clinical Skills Rotation	medical ethics, medical errors, and communication with patients of different ethnicities and cultural backgrounds
2nd-Year Homeless Clinic Rotation	evaluate patients and render podiatric medical services to individuals who do not have access to foot care
Des Moines University College of Podiatric Medicine and Surgery	
Clinical Medicine	interviewing; history-taking; examination of pediatric, pregnant, and elderly patients
Geriatrics	unique health-care needs of their older patient; overview of end-of-life issues
Cultural Competency in Medicine	existence of health disparities, discussions about diverse populations, stronger patient relationships, care for patients from diverse groups
Kent State University College of Podiatric Medicine	
Introduction to Patient Care	understands the patient's concerns, complaints, psychosocial status; develop good patient communication skills; professional and ethical podiatric physician
Standardized Patients Rotation	function competently in a doctor/patient encounter
Community Medicine/Medical Imaging Rotation	understanding and appreciation of community-based health problems
Women's Health	areas unique to women
Medical Ethics	foundation in ethical analysis, augment knowledge of contemporary bioethics issues, and offer experience applying ethical reasoning to clinical cases
Midwestern University Arizona School of Podiatric Medicine	
Interprofessional Health Care	interprofessional health-care team; interprofessional approach to patient care
Public Health, Medical Ethics, and Jurisprudence[a]	community medicine; provision of *compassionate and humane patient care* in accordance with law; legal and ethical aspects of life and death; professionalism; patient privacy
Physical Diagnosis	the art and technique of physical assessment
Podiatric Basic Skills Practicum	fundamental clinical skills, hands-on patient care at a variety of different clinical settings
Behavioral Medicine	developing the skills to both understand the patient and facilitate effective treatment
Practice Management	relationship with quality patient care and a gratifying professional and personal life
Research and Evidence-Based Medicine	bioethical issues related to human subject research; the role of the institutional review board

Table 1. continued

Course	Key Words Related to Empathy
New York College of Podiatric Medicine	
Medical Ethics and the Art of Doctoring	the art of healing in an ethical manner, philosophical and social values, ethical dilemmas, ethical principles, excellence in medical communication
Internal Medicine	Men and Women's Health, Geriatric Medicine, demographics, and statistics that closely relate to our community
Podopediatrics Clerkship	well-health status of a child
Topics in Health Care Delivery and Community Medicine	overview of the health-care system, public health resources, informed consent, confidentiality
Capstone Clinical Experience and Comprehensive Assessment	communication/interview skills
Geriatrics[a]	competent, *compassionate care* to the older patient, attitudes, special issues affecting the elderly
Dr. William M. Scholl College of Podiatric Medicine at the Rosalind Franklin University of Medicine and Science	
Foundations for Interprofessional Practice[a]	interact in interprofessional health-care teams, provide effective *patient-centered health*, communication, service learning, diversity in society, the impact of culture, ethnicity and religion on communication and the provision of services, disparities in the health-care delivery system, and awareness of the impact of a provider's own wellness and illness beliefs on the decisions he or she makes for patients, community-based service learning projects
Essentials of Clinical Reasoning	history-taking skills and the approach to the patient
Podiatric Clinical Skills and Reasoning II – Workshop	proficiency in obtaining a podiatric history
Temple University School of Podiatric Medicine	
Fundamentals of Podiatric Practice I	fundamentals of interviewing the patient
Fundamentals of Podiatric Practice II	elements of behavioral science necessary to understand and enhance the complex human interaction that creates the therapeutic alliance in patients with and without mental illness
Gerontology	health and social needs of the older patient; special needs as they relate to the aging process
Community Health	problems of community health, comprehensive health care, and the podiatrist's responsibilities as a health professional in the community, including a full description of the health organizational system as it is presented today, health education, social welfare, mental retardation, comprehensive patient management, to begin to think of himself or herself and his or her patients in relation to the community and the environment
Professional Administration and Development	setting of goals and having the ability to relate to patients
Western University of Health Sciences College of Podiatric Medicine	
Introduction to the Podiatric Physician I	core foundation in professionalism
Essentials of Clinical Medicine I, II, and III	early patient contact with both model and simulated patients, doctor-patient communication skills, professionalism, cultural awareness, medical errors, and patient safety
Patient-Centered Cases I and II	patient-centered collaborative care through a team approach, interprofessional teams, conditions across the human life span
Introduction to the Podiatric Physician II	ethical and professional responsibilities of the podiatric physician
Behavioral Medicine and Psychiatry[a]	treatment of substance abuse, the physician-patient relationship, emotion and personality, etiology of gender identity and sexual orientation, human sexuality, evolutionary origins of behavior, how a patient's behaviors contribute to their health and/or disease, physician's role in the education for behavioral change is also discussed, *biopsychosocial foundation* presented during behavioral science
Podiatric Medicine Principles and Practice	problem-solving and quality patient care and management
Geriatrics	challenges of an aging population

[a]Courses that list *empathy* or empathy-related terms as part of the formal course description, with the associated terms italicized.

externships, were not included in the analysis. Although it is assumed that empathy is included as part of the training during clinical teaching, this is not uniform or standardized for all students. This article focuses on instructional and didactic empathy education.

Five courses should be highlighted in the US curricula: 1) Barry's "Communication Skills," 2) Midwestern's "Public Health, Medical Ethics, and Jurisprudence," 3) New York's "Geriatrics," 4) Scholl's "Foundations for Interprofessional Practice," and 5) Western's "Behavioral Medicine and Psychiatry." Although it is possible and likely that some of the other courses listed in Table 1 include empathy education, the fact that these five courses list *empathy* or empathy-related terms as part of the formal course description is indicative of the intentionality of the course design.

At the national level, the AACPM is regarded as one of the most important voices for podiatric medical education. The Curricular Guide for Podiatric Medical Education is considered the highest standard of the DPM curriculum in the United States. The fact that the word *empathy* and empathy-related terms are entirely absent in the objectives listed in this guide reflects the need for a dialogue at the national level about this topic. Should there be a reform in podiatric medical education to intentionally incorporate empathy teachings into the curricula? Could a uniform approach be established in all nine of the DPM-granting institutions in the United States? These are some of the questions that should guide a national reform dialogue.

In this article, we suggest that to improve the quality of care that physicians provide, a transformation in medical education is necessary to include the teaching of empathy-related topics in the curriculum. A possible route for conducting this reorganization could include the incorporation of mindfulness-based interventions with a focus on improving empathy. As we move further from personal interaction, the time spent in the examination room becomes increasingly essential to positive outcomes in patient care.

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