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**FOSTERING HUMANISM IN MEDICINE: A MIXED METHODS STUDY ON
THE INFLUENCE OF HUMANISM IN MEDICINE WORKSHOPS ON
MEDICAL STUDENT EMPATHY**

by

Marion J. Lombardi

A Dissertation

Submitted to the
Department of Educational Leadership and Services
College of Education

In partial fulfillment of the requirement

For the degree of
Doctor of Education

at

Rowan University

June 1, 2016

Dissertation Chair: JoAnn B. Manning, Ed.D.

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Dedication

I would like to dedicate this manuscript to my mother, Elida Marion Lispi Lombardi (February 19, 1926-March 2, 1983), in memoriam. My mother believed an education afforded the opportunity of achieving one's fullest potential. Through her example, dedication to those she loved, work ethic, intellect, and curiosity, my mother inspired my passion for life-long learning and a commitment to those same values.

“Education then, beyond all other devices of human origin, is the great equalizer of the conditions of men, the balance-wheel of the social machinery.” - Horace Mann (1848)

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I owe special thanks to family and friends, especially my dad and step-mom, Bill and Camille Lombardi, for their love and encouragement. Dad, you have been my greatest champion throughout my life. Most especially, I am grateful to my children, Maria and Maura, for their endless love, support, and understanding during the last several years as I pursued a doctoral degree. You have been accepting of my commitment to achieving this goal, even when it meant I could not be with you as often as I wished. You are my shining stars.

Abstract

Marion J. Lombardi

FOSTERING HUMANISM IN MEDICINE: A MIXED METHODS STUDY ON THE INFLUENCE
OF HUMANISM IN MEDICINE WORKSHOPS ON MEDICAL STUDENT EMPATHY

2015-2016

JoAnn B. Manning, Ed.D.

Doctor of Education

Medicine has evolved to encompass an alliance between the doctor and patient, in which the doctor must understand the patient holistically (Kaba & Sooriakumaran, 2007). Research suggests that doctor-patient relationship focused training has a meaningful effect on measured health outcomes in patients with conditions such as obesity, diabetes, asthma, and osteoarthritis (Reiss & Reiner, 2014). Therefore, the humanistic qualities of medicine, encompassing honesty, integrity, caring, compassion, altruism, empathy, and respect for self, patients, and others are more important than ever in cultivating a strong doctor-patient relationship (Weissmann et al., 2006).

Existing research suggests an underlying capacity for emotional intelligence (EI) is necessary for a doctor to successfully manifest humanistic competence, specifically empathy, in the medical profession (Weng et al., 2008). Yet, there is sparse literature in the medical field that explores the association between EI and empathy in the doctor-patient relationship.

This sequential mixed methods explanatory study findings indicate educational training focusing on the theories and frameworks of EI, may positively influence medical students' empathy and underscores the need for educators to find innovative ways to teach, nurture, and preserve empathy in medical education.

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Chapter 1

Introduction

From infancy onward, relationships are vital. No human survives birth or develops normally without the physical and emotional engagement of a caregiver (Adler, 2002). Interpersonal relationships fundamentally and directly affect the quality of a person's living. To attend to those who suffer, a physician must possess not only scientific knowledge and technical abilities, but also an understanding of human nature. The patient is not just a group of symptoms, damaged organs and altered emotions. Each person throughout the health system, caregiver and patient alike, is first and foremost a human being, who is at the same time worried and hopeful, searching for relief, help, and trust.

Medicine at its core is a human service profession. Cultivating humanistic values in general and enhancing communication, interpersonal skills, and empathy in particular, are of paramount importance in any human service endeavor. Scientific advances have doubled the average patient's life span over the past 100 years. Diagnosing disease and selecting the optimal treatment plan certainly requires scientific knowledge, but this knowledge alone cannot suffice. Research suggests additional humane qualities become necessary, powerful healing tools in the doctor-patient relationship because they satisfy the patient's yearning for time, conversation, and physical contact with their doctor (Lewis, 2012). The humanistic qualities of medicine, which encompass honesty, integrity, caring, compassion, altruism, empathy, and respect for self, patients, peers, and other healthcare professionals, are more important than ever in cultivating a strong doctor-patient relationship (Weissmann et al., 2006). Recent research demonstrates that doctor-patient relationship focused training has a meaningful effect on measured health outcomes – factors such as weight loss, blood pressure,

blood sugar and lipid levels, and pain – in patients with conditions such as obesity, diabetes, asthma and osteoarthritis (Reiss & Reiner, 2014). The doctor–patient relationship has been and remains a keystone of care. It is the medium in which data are gathered, diagnoses and treatment plans are made, support is provided, and compliance is accomplished (Goold, 1999; Ha, Anat, & Longnecker, 2010).

The most successful emerging healthcare models actively respond to consumer and regulatory pressures to decrease costs and increase quality and value. Patient-Centered Medical Homes, Accountable Care Organizations, and many other care innovations will have significant impacts on the future of the US health care system (Mintz & Stoller, 2014). These new models require a high degree of collaboration among physicians, between physicians, other care givers and organizations, and between health care organizations. The patient-centered care model of medicine, which is characterized by providing care that is respectful of and responsive to individual patient needs, underscores the essential features of humanistic healthcare communication, which relies heavily on core communication skills, including open-ended inquiry, reflective listening, and empathy as a way to respond to the unique needs, values and preference of individual patients (Epstein & Street, 2011).

The Role of Empathy in the Doctor-Patient Relationship

Empathy is often regarded as the cornerstone of the doctor-patient relationship and is widely considered a crucial attribute for healthcare professionals (Chen, Lew, Hershmann, & Orlander, 2007; Hojat et al., 2011; Kaba & Sooriakumaran, 2007; Spiro, 2009). Research has shown the importance of empathy in general practice consultations in achieving higher patient satisfaction, enablement, and improvement in some health outcomes (Lundy et al., 2015). Empathy has been defined in the clinical context as involving an ability to understand

the patient's situation, perspective, and feelings (and their attached meanings); to communicate that understanding and check its accuracy; and to act on that understanding with the patient in a helpful (therapeutic) way (Hojat, 2009; Mercer & Reynolds, 2002; Neumann et al., 2009). Clinical empathy is thus closely related to the concept of patient-centered care, although it is only recently that the overlap between these concepts has become more explicit (Lundy et al., 2015).

The power of physician empathy has been demonstrated by Kim, Kaplatz, & Johnston (2004). By studying the care of several hundred patients, they concluded that patient-perceived physician empathy was correlated with a perception of physician expertise, trust, and information exchange, and that empathy was associated with improved levels of patient satisfaction and compliance. Treatment by empathic and communicative physicians has also been correlated with improved outcomes, such as better control of diabetes (Kim, Kaplatz, & Johnston, 2004). The detection of emotional cues and this type of response by practitioners may also be an important factor in empathic accuracy and may strengthen the therapeutic relationship between doctor and patient (Lundy et al., 2015). Strong links between physician empathy and boosted patient satisfaction suggest we must focus on training physicians to be more empathic.

However, several studies have found that medical training is often accompanied by a drop in empathy. Some have pinpointed the third year of medical school, when students spend most of their learning time in the patient care environment (Reiss, Kelley, Bailey, Dunn, & Phillips, 2012), as the timeframe during which the drop in empathy occurs. It is ironic that the erosion of empathy occurs during a time when the curriculum is shifting toward patient-care activities; this is when empathy is most essential (Hojat et al., 2009).

Possible contributors to the decline in empathy among medical trainees include self-protection against their own emotional distress and a desensitization that results from performing many potentially painful procedures. Students often believe they have to maintain a distance from patients to protect themselves (Reiss et al., 2012). It is time-consuming and physically draining to be involved in a very emotional situation (Chen et al., 2007). Another phenomenon called the ‘hidden curriculum’ may also be at work (Marcum, 2013). The “hidden curriculum” is that which is learned and retained from the day-to-day experiences of students observing and working in the clinical environment while watching, listening to, and emulating resident and physician behaviors (Byyny, Papadakis, & Paauw, 2015). In many cases, students observe self-interest, a focus on income, and other nonprofessional behaviors by their seniors in the profession. Unfortunately, this makes students grow progressively more cynical and less professional.

Senior physicians often emphasize that medicine is a business. They encourage students and residents to quickly discharge patients to maximize hospital profits and to practice defensive medicine to avoid malpractice claims by angry patients (Byyny, Papadakis, & Paauw, 2015). Thus, we cannot simply rely on the existence of positive role models to convey attitudes, values, and skills of empathy to medical students. Research suggests a lack of overt empathic behavior among senior residents and other role models, along with the escalating demands of training on residents' time and energy, could be additional contributors to empathy decline (Reiss et al., 2012). This lack of positive role models may lead students to believe that human connection is of little importance (Hojat, 2009).

Empathy is now believed by many to be crucial in human connectedness, caring, altruism, morality, the evolution of humans, and even epistemology (Reiss et al., 2012). If this is true, then empathy and its curricular inclusion should be an essential part of the education of our medical students, taught through a variety of interventions.

Background of the Problem

A central prerequisite for the development of the therapeutic, doctor-patient relationship is the physician's ability to empathize with the patient. According to the Farlex Medical Dictionary (2012), "physician empathy is the ability to sense intellectually and emotionally the emotions, feelings, and reactions that a patient is experiencing and to communicate that understanding to the patient effectively." The empathic relationship between physician and patient allows the patient to feel respected and validated, while it additionally promotes both patient and physician satisfaction (Hojat, Gonnella, Mangione, Nasca, & Vergare et al., 2002; Hojat, Mangione, & Nasca, 2004). Empathic communication skills are critical to providing high-quality care to patients in an attempt to holistically understand the patient's perspective. Physician-patient empathic communication has been shown to have a positive effect on psychosocial outcomes (e.g., quality of life, anxiety, and depression) and on objectively measurable outcome parameters (e.g., symptom reduction, lowering of blood pressure and blood glucose levels) (Mercer & Reynolds, 2002; Neumann et al., 2011).

Additionally, empathy is relevant to clinical performance for medical students and residents because empathy scores are positively associated with ratings of clinical competence in core clinical clerkships (Hojat et al., 2004). Accordingly, the Association of American Medical College's Medical School Objectives Project (MSOP) includes empathy

as among the educational objectives it promotes by emphasizing that medical schools should strive to educate altruistic physicians who are compassionate and empathic in caring for patients and who can understand a patient's perspective by demonstration of empathy (Association of American Medical Colleges, 1999).

However, challenges faced during clinical experiences, often occurring during the third year of medical school, can lead medical students to become less empathic and more detached from their patients (Hojat, 2007, 2009; Hojat et al., 2011, 2004). This is worrisome for medical educators and the future of medicine. The altruistic values of medical students and physicians, the desire to help patients, along with the stressors and burdens of everyday life, may add to the decline of empathy. Physicians deal daily with patients facing increasing stresses outside of illness, including job loss, financial ruin, drug and alcohol addiction, and family crisis. These patients put their trust in their physicians. Providers must provide not only a proper diagnosis, but emotional support and genuine human kindness as well. Medical students must be prepared to practice medicine in a world full of challenges and change.

In recent years, medical educators have begun to understand their social responsibility to assist prospective physicians to recognize the immense value of a marriage between humanism and medicine (Lewis, 2012). To continue this trend, additional, alternative approaches to cultivate the tenets of humanistic medicine, specifically empathy, need to be developed. Educators must find multiple ways to teach and nurture empathy in medical education, as empathy is an important cognitive ability for healthcare professionals for the purposes of patient communication and satisfaction, is integral to the patient-doctor relationship, and is considered as a key feature of emotional intelligence (Ioannidou & Konstantikaki, 2008).

Statement of the Problem

Emotional Intelligence (EI) describes a concept that involves the ability, capacity, skill or self-perceived ability to identify, assess, and manage the emotions of one's self, of others, and of groups (Mayer & Salovey, 1993). Research suggests that EI can support empathy and improved communication in the therapeutic doctor-patient relationship and promote shared decision-making, conflict management, and improved transitions between care settings (Reiss et al., 2012; Reiss & Reiner, 2014). Furthermore, physician leaders are working in rapidly evolving systems and must respond to increasing and changing demands. Emotional Intelligence and habits of mind can build resilience and altruism, support well-being, and nurture personal and professional relationships, considered to be core tenets of humanistic medicine (Boyatzis, Smith, Van Oosten, & Woolford, 2013). However, Humanism in Medicine (HiM) workshops, utilizing instructional methods and learning theories that focus on the use of emotional intelligence frameworks and their influence on empathy, have not been studied in an undergraduate medical education environment.

A key area to investigate is whether medical students' empathy is affected post-inclusion of HiM workshops delivered in the first semester of medical education. The purpose of the HiM workshops is to focus on emotional awareness, reasoning, regulation, and connection in an effort to enhance personal communication and relationship management skills; to develop, nurture and preserve empathy; and to forge successful, therapeutic doctor-patient relationships.

Studies of other interventions, particularly the use of communication skill workshops, indicate that the behavioral dimension of empathy can be influenced through curriculum interventions (Stepien & Baernstein, 2006). HiM workshops introduce students to the idea

that empathy is a skill that can be developed, nurtured, and preserved, as opposed to an inherent unchangeable personality trait. A review of the literature suggests additional research is needed to support and promote integrating the teaching and assessment of empathy in clinical education (Lim, 2013). Conducting this research is valuable in determining if these workshops impact medical student empathy.

Purpose of the Research

The purpose of this sequential mixed methods study was to determine if HiM workshops influence empathy. In the first phase, quantitative research questions compared pre- and post-HiM workshops empathy scores of Cooper Medical School of Rowan University (CMSRU) Class of 2019. Information from this first phase is explored further in a second, qualitative phase, during which one-to-one, semi-structured interviews were used to probe CMSRU M1 students' attitudes, beliefs, and perceptions regarding empathy.

In the quantitative phase of this study, the Jefferson Scale of Physician Empathy Medical Student Version (JSPE-MS) was used to measure empathy in CMSRU medical students enrolled in first year (M1) classes, pre- and post-HiM workshop experience, in order to determine if humanism in medicine training influences empathy. In the context of humanistic medicine, empathy is defined as “a cognitive attribute, which involves an understanding of the inner experiences and perspectives of the patient as a separate individual, combined with a capability to communicate this understanding to the patient” (Hojat, et al., 2002, p. 58).

Additionally, a HiM survey collected data regarding race, educational degree and previous career experience, and a definition/description of empathy, from research participants, pre- and post-HiM workshops.

In the qualitative phase, one-to-one, semi-structured interviews were used to explore significant findings that emerged from the quantitative phase following participation in HiM workshops and their relationship to empathy levels. I interviewed respective M1 medical students selected by quota sampling (Maxwell, 2005) that have participated in both HiM workshops and completed all surveys.

The rationale for this research approach is that the quantitative data and their subsequent analyses provide a general understanding of the research. The qualitative data and their analysis refine and explain statistical results by exploring participants' views in more depth (Creswell, 2009; Tashakkorie & Teddlie, 1998). With regard to the research presented, the mixed methods design addresses CMSRU HiM workshops for matriculating students, as it influences empathy.

Research Questions

- Does participation in the Humanism in Medicine (HiM) workshops influence M1 student empathy as measured by the Jefferson Empathy Scale of Physician Empathy (JSPE)?
- How do M1 students define or describe empathy pre-HiM workshops?
- How do M1 students define or describe empathy post-HiM workshops?

Theoretical Perspective

As Sandelowski (2000) noted, theory may enter a study at a variety of points. Aligning with the aforementioned statement, four learning theories served as the theoretical foundation for this study: EI theory of performance (Goleman, 1998, 2000), EI theory (Mayer, Salovey, & Caruso, 2004), the cognitivist theory (Piaget, 1952); and Bloom's taxonomy (Forehand, 2005). These learning theories provide a comprehensive theoretical

framework that underscore this mixed methods research, in support of implementation of additional, alternative educational approaches to empathy training, which are central to creating successful therapeutic, empathic physician-patient relationships (Batt-Rawden, Chisholm, Anton, & Flickinger, 2013; Bayne, 2011).

The EI theory of performance (Goleman, 2000) posits that each of the four domains of EI derives from distinct neurological mechanisms that distinguish each domain from the others and all four from purely cognitive domains of ability. Empathy, a sub-scale of the social awareness competency, gives people an astute awareness of others' emotions, concerns, and needs. The empathic individual can read emotional currents, picking up on nonverbal cues, such as tone of voice and facial expression. Empathy requires self-awareness; our understanding of others' feelings and concerns flows from awareness of our own feelings. The evidence that empathy and self-management are foundations for social effectiveness finds support at the neurological level. Applying the EI theory of performance (Goleman, 2000) to my research inquiry suggests physicians who are better at recognizing emotions in patients are more successful than their less sensitive colleagues at treating them.

Emotional Intelligence theory (Mayer, Salovey, & Caruso, 2004) posits the capacity to reason about emotions to enhance thinking. Mayer and Salovey's (1997) definition of EI as theory, includes the abilities to accurately perceive emotions, to access and generate emotions, which in turn, assists thought to understand emotions and emotional knowledge, effectively regulate emotions, thereby promoting emotional and intellectual growth. Delineating EI from this theoretical perspective refers specifically to the cooperative combination of intelligence and emotion and its use in affectively providing alternative approaches to regulating emotions, which are central to successful therapeutic, empathic

physician-patient relationships (Chiarocchi, Chan, & Caputi, 2000; Mayer & Salovey, 1997; Roberts, Zeidner, & Matthews, 2001).

Cognitivist education is demonstrated when learners develop a deep understanding of the content in such a way that they construct or change their mental models (Piaget, 1968). It is about developing understanding and making sense of situations. Cognitivist learning is a complex practice of problem solving, mental mapping and intuition. The various cognitive approaches can be divided into separate camps, Piaget's development stages or genetic epistemology, Bruner's discovery approach, Ausubel's expository approach and Bloom's taxonomy (Piaget 1952; Bruner 1966; Ausubel 1963; O'Connor, 1998). For the purposes of this cognitivist research, I will focus on Piaget's development stages and Bloom's taxonomy.

The cognitivist theory (Piaget, 1952) suggests that in order to nurture and preserve empathy, participants must understand the importance and relevance of empathy in both their professional and personal domains (Murray, 2006). Once individuals understand and internalize the concepts, they can assimilate the various benefits of nurturing and preserving empathy, and competency can be developed. Piaget's theory (Carrick, 2010) argues that cognitive structures or schemata change by a process of adaptation including assimilation and accommodation. Piaget considered schemata to be the basic building blocks of thinking. Delineating the cognitivist theory and integrating Piaget's ideas to my research suggests workshops focusing on empathy can ensure the transfer of learning into actions (Carrick, 2010).

Benjamin Bloom developed sequential cognitive learning stages known as Bloom's taxonomy (Forehand, 2005). The steps begin with knowledge, then comprehension, application, analysis, synthesis, and finally evaluation. The taxonomy was revised by

Krathwohl in 2005 and includes six stages: remembering, understanding, applying, analyzing, evaluating and creating. As with the original taxonomy, each stage has its own level of complexity or hierarchy of learning (Forehand, 2005). Applying Bloom's taxonomy to this research suggests humanism interventions can nurture and develop empathy utilizing this hierarchy of learning.

Conceptual Framework

Utilizing the application of the theoretical frameworks of EI and the aforesaid learning theories, facilitated by real-world applications of medical humanism in personal life and clinical practice as they relate to the core competencies of graduate medical education in HiM workshops, encourages medical students to understand and identify their emotional reactions and those of others. The six core competencies of graduate medical education include: patient care, professionalism, systems-based practice, interpersonal and communication skills, medical knowledge, and practice-based learning (ACGME, 2006). Students learn to recognize the cultural norms of the medical profession and develop the skills to cultivate emotions that support professional attitudes of altruism, empathy, service, and connection and how the patient can best be served through an aware, conscious understanding of the role of humanism in healthcare (Shapiro, 2013). The overarching goals of the student-centered workshops are a pathway to individual human development of humanism in medicine, with specific focus on nurturing and preserving empathy. Figure 1 represents the researcher's understanding of the conceptual framework of the study.

HiM Concept Map

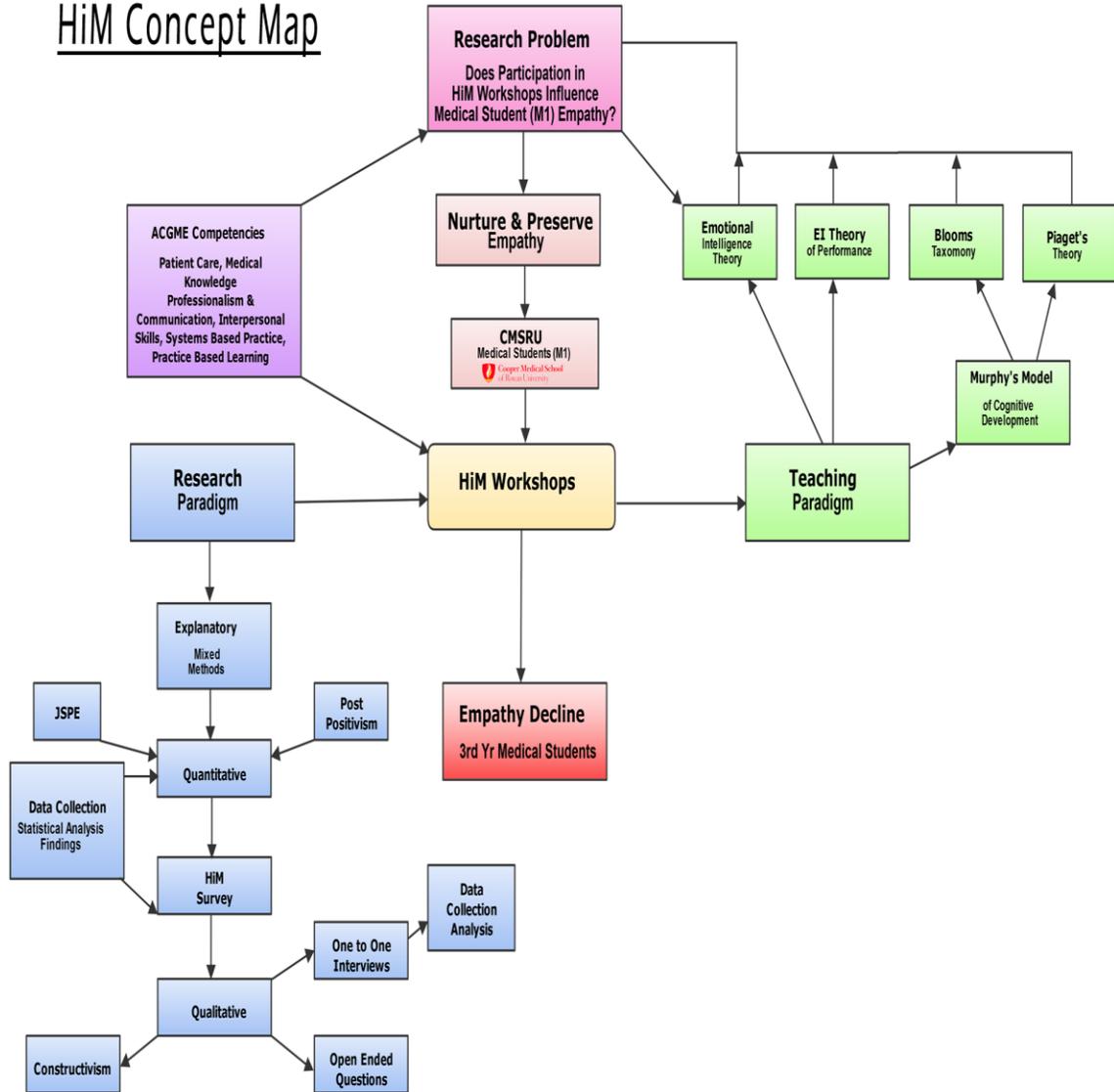


Figure 1. HiM Concept Map.

Assumptions and Limitations

As with all research studies there are assumptions and limitations to be acknowledged and addressed. This study is explanatory in nature in order to determine if HiM workshops

influence medical students' empathy scores. The findings for this study are limited to the M1 students of Cooper Medical School of Rowan University.

Firstly, CMSRU's holistic review in admissions process, curricular interventions, including clinical narrative or critical incident writing; medically themed creative writing, literature and art; journal writing; service learning; and use of standardized patients in the medical education curriculum may affect empathy.

Secondly, CMSRU's longitudinal integrated curriculum (CLIC) provides clinical exposure early in the curriculum, whereas most traditional medical schools do not offer clinical exposure until the third year of study. Clinical exposure and experience may also influence empathy.

Thirdly, my own personal bias may be a limitation to this study. I acknowledge that I believe HiM workshops influenced medical student empathy. I am aware of this bias and have made certain I did not permit my bias to be exhibited to my participants by explaining and distributing the same written instructions and script with the purpose and intent of the study to the research participants.

I chose specific measures to eliminate plausible alternatives to my study. To compensate for the limitations of this study I deliberately chose an explanatory sequential design so experimental mortality among participants was eliminated. The only plausible reasons in which experimental mortality could occur are if participants chose not to participate in the one-to-one interviews in phase two of the research. In order to temper experimental plausibility, I was the only individual who facilitated the research interviews. An identical script, printed instructions and questions, to provide comparability were prepared for each interview.

Furthermore, triangulation occurred by requesting colleagues to review my results and data. Triangulation was accomplished by analyzing the JSPE, HiM survey data, qualitative open-ended questions and one-to-one interviews (Bryman, 2007). One-to-one interviews were transcribed verbatim to identify themes and contribute to triangulation. A quota sampling of the research participants, for the purposes of interviewing during phase two of the research, occurred prior to the qualitative phase to reduce the potential for human bias in the selection of cases to be included in the sample (Fink, 2013; Maxwell, 2005).

During the qualitative phase of the research, interviews occurred at CMSRU, at a time and place convenient to the participants. A separate consent form asking for the participant to agree to the interview and the audio taping of the interview was obtained prior to proceeding with the interview. A script was read prior to the interview, detailing specific directions for the participants to follow. In addition, the participants also received a copy of the interview protocol.

The explanatory mixed methods design was the optimal methodology to answer my research question. There are inherent limitations to my study, including some barriers to generalization; however, I do believe I have made accommodations and plausible alternatives for those limitations that are inherent in this research study. As with all research, additional exploration is needed. Further research in the area of humanism in medicine training as it influences medical student empathy may be necessary for the continued purpose of examining alternative curricular measures which can be implemented in medical education.

Significance of the Study

Research. This completed research links to other research suggesting educational training and experiences positively influence medical students' empathy (Feighny et al.,

1998). Empathy in undergraduate medical education is often measured due to its decline by end of third year of study (Hojat, Mangione, & Nasca, 2004). However, an extensive literature review of instructional methods that focus on the theories and frameworks of emotional intelligence as they relate to the core competencies of graduate medical education (clinical application) and their influence on medical student empathy reveal a paucity of research. Therefore, the results of my research can potentially impact the existing body of knowledge. Additionally, my research is important to the existing body of knowledge because HiM training focuses on further developing the personal competencies of self-awareness and self-management and the social competencies of social awareness (for which empathy is a subscale) and relationship management/social skill. Neuroscience research confirms that awareness of a distinction between the experiences of self and others constitutes a crucial aspect of empathy (Shapiro, 2011). By paying attention to emotions, how to identify them, and how to make determinations about what emotional responses are most beneficial to the patient, students and clinicians alike are able to become more familiar and comfortable with the expression of empathy. The outcomes of my research can potentially aid medical educators in implementing alternate approaches, such as HiM workshops, which can better meet the curricular objectives of teaching medical students how best to forge satisfying empathic, therapeutic doctor-patient relationships. The research implications are for which HiM workshops become accepted as a novel approach to teaching empathy, while additionally developing physicians who are leaders in humanistic healthcare and who promote the social mission of medicine.

Furthermore, professionalism or professional competence, “the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and

reflection in daily practice for the benefit of the individual and community being served,” has come under scrutiny (Kirk, 2007, p.13). Medical educators have recognized professionalism as often lacking in medical students (Kirk, 2007). A lack of professionalism has also been linked to empathy decline (Brazeau, Schroeder, Rovi, & Boyd, 2010). In order to raise students’ awareness of the tenets of professionalism and provide them with the information to recognize and analyze conflicts between the values of professionalism and the daily pressures of medical school training, my research has the potential to heighten awareness and gain acceptance, in that HiM training offers an additional, novel approach which both addresses and nurtures empathy, by enhancing interpersonal communication skills and professional competence, positively affecting medical students’ ability to advocate effectively for the health and needs of the patient.

Practice/Education. Providing medical students with additional training applications that focus on the use of open-ended questions, techniques and phrases invites the patient to continue expressing her/his thoughts and feelings (Halpern, 2003; Spencer, 2004). HiM workshops have the potential to improve recognition of patients' verbal and nonverbal emotional cues and language for empathic responses. This could result in improved communication and understanding between patients and providers. Research suggests the use of narratives and stories, patient histories, role playing, and conversations are effective ways to teach empathy (Charon, 2001; Smorti & Fioretti, 2015). Physicians and medical students can preserve and nurture empathy by developing narrative competence, which is the ability to acknowledge, absorb, interpret, and respond to a patient's story and plight. Narrative competence allows physicians and medical students to join patients in their illnesses (Charon, 2001). Conducting Humanism in Medicine workshops adds to the research and literature in

this field and also provides an alternative approach to preserve and nurture empathy, by focusing on the personal and social competencies associated with emotional intelligence as they relate to the core competencies of graduate medical education.

Operational Definitions

Descriptive and operational definitions of important terms are provided to ensure uniformity and understanding of these terms throughout the study. Appendices H and I provide operational terms and empathy definitions.

Summary

Existing research suggests an underlying capacity for emotional intelligence is necessary for a doctor to successfully manifest humanistic competence, specifically empathy, in the medical profession (Weng et al., 2008). Stratton, Elam, Murphy-Spencer, and Quinlivan (2005) found that the medical students' emotional intelligence was positively correlated with communication skills. A review of the literature available regarding the incorporation of the tenets of humanistic training using EI theories and frameworks as an intervention within a medical school curriculum, specifically with undergraduate medical students, revealed a limited amount of research information. However, much of the existing literature indicates that medical students often experience declining empathy levels by third year of study, a major concern for educators and patients (Hojat et al., 2009).

Four learning theories serve as a theoretical foundation for this mixed methods research: EI theory of performance (Goleman, 1998, 2000), emotional intelligence theory (Mayer, Salovey, & Caruso, 2004), the cognitivist theory (Piaget, 1952), and Bloom's taxonomy (Forehand, 2005). This research links to other research, suggesting educational training and experiences positively influence medical students' empathy and underscores the

need for educators to find multiple ways to teach and nurture empathy in medical education (Feighny et al., 1998). Profound changes to enhance empathy in medical education, such as the early curricular implementation of HiM workshops should be considered by leaders in medical education as a mandate, not an option, if the public is to be served in the best possible manner (Hojat, 2009).

Chapter 2

Literature Review

Medicine is an art whose magic and creative ability have long been recognized as residing in the interpersonal aspects of the doctor-patient relationship (Hall, Roter, & Rand, 1981). Medicine has evolved to encompass an alliance between the doctor and patient, in which the doctor must understand the patient holistically, as a unique human being (Kaba & Sooriakumaran, 2007). In the last decade, medical education has increasingly focused on humanism, which comprises altruism, empathy, professionalism, ethics, and laws governing health care in its curriculum. Currently, several governing bodies, including the Association of American Medical Colleges (AAMC) and the Accreditation Council for Graduate Medical Education (ACGME) endorse curricular attention to the constructs of humanism, both in medical school and in subsequent graduate medical/residency training. It seems agreed upon that these topics are central to the development of effective, therapeutic doctor–patient relationships and that medicine has a responsibility to its students and to its practitioners to teach as such (LeBlanc, Papdakis, Teherani, & Banach, 2005).

The Doctor-Patient Relationship

The relationship between doctors and their patients has received a great deal of media attention for the last several decades. Plays, films, and books have featured the travails of patients who seek medical care, depicting physicians as emotionally distant, abrupt, pompous, insensitive and even incompetent (Kelner, Wellman, Pescosolido, & Saks, 2003). The notion that something was seriously lacking in many doctor-patient relationships in contemporary Western culture was first discussed by Pietroni (1987) more than twenty five years ago. Interviews, as well as supporting published literature related to the topic of

relationship problems between the patient and the treating doctor, indicate poor communication and a lack of empathy as the most important factors contributing to dissatisfaction and malpractice suits (Shattner, 2009).

Why are poor communication and a lack of empathy suggested as the reasons for patient dissatisfaction and/or malpractice suits? Kim, Kaplatz, & Johnston (2004) cite a lack of humanism in medicine as contributing reasons for patient dissatisfaction and malpractice suits. Humanism in medicine is defined as healthcare training and practice which fosters a culture of altruism, empathy, open communication, respect, dignity, and compassion for patients and professionals, and is facilitated by building caring, trusting and collaborative relationships with patients (Gold Foundation, n.d.). It has been suggested that the reason for the lack of humanism in medicine is that physicians face a role conflict. Ideally, the physician values communication, listening, and empathy, all of which are qualities that patients desire from their physicians. However, doctors have not been historically been paid to use humanistic methods. Hospitals in previous decades received funding only for paying doctors for examinations and procedures (Lewis, 2012).

Medical professionals now recognize that some doctors are trained to be clinically competent, but have inadequate social skills for effective practice. Communication and empathy are regarded as key to any significant improvements in health care quality and the therapeutic doctor-patient relationship. The American medical system has begun to understand that it has a social responsibility to address physicians' role conflict by helping prospective physicians recognize the immense value in the marriage between humanism and medicine (Lewis, 2012). Physicians assuming roles as humanistic healers represent real progress in shifting the medical system away from an organization filled with clinician-

scientist technocrats (Konner, 1987). In effect, this recent progress may finally enable physicians to make use of the powerful healing tool of humanism (Lundy et al., 2015).

Therapeutic Success in the Doctor-Patient Relationship Requires Empathy

Rogers (1957) first proposed the “person centered approach” to the therapeutic relationship. In the person centered approach concept, the fundamental assumptions are that people are essentially trustworthy and they have great potential for resolving their own problems. There exists three major attributes of the person or patient centered approach as proposed by Rogers, (1957) which contribute to a positive therapeutic relationship. They include: congruence, unconditioned positive regard, and empathic understanding.

Congruence largely refers to the genuineness and sincerity of the physician helping the patient (Loh and Sivalingam, 2008). The apparent, intrinsic quality of the unique doctor-patient relationship allows two people, previously unknown to each other, to feel at ease with variable degree of intimacy (Kaba & Sooriakumaran, 2007). The generation and development of a therapeutic relationship permits and allows the patient to perceive and understand the illness better, thus enabling him to react to his illness in a more productive and positive manner (Loh & Silvalingam, 2008; Rogers, 1957). As the rapport between the patient and doctor builds up incrementally, it becomes easier for the patient to express and ventilate his feelings, share his/her sufferings, fears and disappointments. It is then conceivable that going through this process of sharing enables the sick person to achieve a sense of understanding of his illness and the objectives of therapy (Loh & Silvalingam, 2008). If both the caregiver and the patient are congruent, a successful treatment plan can be achieved (Rogers, 1957).

According to Rogers (1957), unconditional positive regard is facilitated by being non-judgmental and sustaining acceptance toward the patient and lends to the principles enshrined in the International Code of Medical Ethics in the Declaration of Geneva (1949), which reads “I will not permit considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing or any other factor to intervene between my duty and my patient.” Empathy as explained by Rogers (1957) requires a deep understanding of the meaning and feelings of the patient as a whole and not a superficial intellectual understanding of patient’s fears and hopes.

Empathic understanding in the therapeutic relationship is the ability of the care provider to not only sense and feel for the patient, but be able to reflect the experience of the patient (Halpern, 2007). This reflection of the patient’s feelings will further enhance the patient’s ability to self-reflect his illness or problems (Stewart & Gilbert, 2005). When the care provider has been able to incorporate all levels of communication in an empathic approach, he will be equipped with the essential tools to achieve the goals of an effective therapeutic process (Beach & Moore, 2006). Ultimately, positive changes are then evoked in the patient by expression of empathy via four modalities: valuing their own experience, looking at their sufferings and experience in a new perspective, modifying the perception towards illness, and improving their confidence in implementing the course of action for treatment by extending this model of effective therapeutic connectivity (Loh & Silvingham, 2008).

The Multidimensional Concept of Empathy

In layman’s terms, empathy is often described as the ability to put yourself into another’s shoes (Ioannidou & Konstantikaki, 2008). In essence, empathy is the ability to

understand the emotional makeup of other people and respond to them appropriately. Empathy, within the context of health care, is the ability to communicate an understanding of a patient's world and is a crucial aspect of all interactions between clinicians and patients (Reynolds, Scott & Jessiman, 1999). It is the clinicians' way of saying "I'm with you, I've been listening carefully to what you've been saying and expressing, and I'm checking if my understanding is accurate" (Egan, 1997, p. 99). Empathy was originally referred to as "bedside manner" and historically, because of the ambiguity of the concept, debate existed whether empathy could be taught to health care professionals and/or measured (Hojat et al., 2009; Kirk, 2007; Ward et al., 2009). More recently, however, authors and educators believe empathic communication to be a teachable, learnable skill that has tangible benefits for both clinician and patient (Feighny et al., 1998; Ioannidou & Konstantikaki, 2008).

Mercer and Reynolds (2002, p. 10) further explain and define empathy for physicians (PE) as both a multidimensional and skills-based construct, which includes four components: Emotive: described as the ability to subjectively experience and share in another's psychological state or intrinsic feelings; Moral: an internal altruistic force that motivates the practice of empathy; Cognitive: the helper's intellectual ability to identify and understand another person's feelings and perspective from an objective stance; and Behavioral: a communicative response to convey understanding of another's perspective. Mercer and Reynolds (2002) describe PE as a physician's understanding of the patient and verbal and non-verbal communication of the physician resulting in a helpful therapeutic action. Reiss (2010) further describes the aforementioned relationship in terms of the measurable neurobiological functions that take place between the physician and patient during an

empathic encounter and shares a plethora of empirical data supporting benefits of this healing encounter.

However, the concept of physician empathy historically is one which has been marked with misunderstanding, controversy, and confusion (Halpern, 2003). Research suggests the importance of empathy, human connection, and authentic relationship between a physician and a patient has been known since the days when Hippocrates drafted the oath and is intentionally being ignored due to other factors, such as a health care system which continues to rely on short episodic office visits (Reiss et al., 2010). The innovation of the Patient Centered Medical Home (PCMH), in creating a care team consisting of a physician and health care workers or “extenders”, is predominantly reimbursed based on production. This model does not position physicians, residents, and medical students to develop empathy, human connection, and an authentic relationship with their patients, and in many cases exacerbates the issue by trying to leverage rotating practitioners as a means to improve access, optimize reimbursement and lower overhead (Dalhborg, 2011). Reiss et al. (2012) states "a lack of empathy dehumanizes patients and shifts physicians' focus from the whole person to target organs and test results" (p. 1605).

A patient–physician encounter that is devoid of empathy not only deprives the patient of crucial support, and of his or her basic right to be treated humanely as well as competently, but may also lead to actual patient harm through the loss of a myriad of significant benefits (Shattner, 2012). Emotional problems such as depression, anxiety or stress are common in patients and following significant illness, their incidence considerably increases, profoundly affecting both patients' quality of life and patient survival, partly due to associated high-risk behavior and poor compliance with medical advice (Rozanski,

Blumenthal, & Kaplan, 1999; Shattner, 2012). Open-ended, empathic communication allows the physician to become cognizant of these problems, identify them correctly and react appropriately to alleviate the patient's distress (offering counsel, support, test, referral or drug (Shattner, 2012). Patient-centered and empathic interviewing is much more likely to elicit the full spectrum of the patient's symptoms and risk factors, including more sensitive “contents” enabling the physician to have all the essential information (Smith, 2002; Shattner, 2012). Patients cite “humaneness” as a very highly rated aspect of care expressing strong preferences for good communication, partnership and autonomy (Doyle, Lennox, & Bell, 2013; Little et al., 2001).

Barriers to Preserving Empathy for Medical Students

Most physicians and medical educators are well aware of the barriers to empathy in medicine and medical education (Shapiro, 2011). Students often work in high-stress environments that place significant pressure on them with heavy workloads, intense time pressures, and a diminished sense of autonomy in the U.S. healthcare system (Rowe, 2013). In many health systems productivity is valued and rewarded financially. Doctors who do not see as many patients as their peers are sometimes seen as slow and inefficient (Rowe, 2013). The stress of studying and working in the clinical environment may eventually take its toll on students and clinicians in terms of their time, and physical and emotional well-being, all of which make it difficult for them to be empathic (Dyrbye, Thomas, & Shanafelt, 2005). A focus on science and rationality during medical training tends to emphasize detachment and objective clinical neutrality, and prioritizes the technologic over the humanistic (Shapiro, 2008). These barriers have been called the “hidden curriculum” of medicine, and include: a lack of empathic role models, negative experiences on the wards, time pressures and

academic grade pressures, an over-reliance on scientific achievement, technology and testing, barriers related to deficiencies in medical education, barriers associated with the alienation between doctors and patients due to the emergence of opposing interests, and barriers related to the current culture of medicine (Hojat et al. 2009). Unfortunately, according to researchers, the aforesaid barriers to the feeling of empathy in clinical encounters seem to be increasing (Lim, 2013; Shattner, 2012).

In addition, the focus of medical education can be seen as devaluing the patient as a human being (Rowe, 2013). Medical educators often speak about the “case” rather than the person. The style of writing associated with the case is objective and impersonal, where that which can be seen is given more importance than that which can be heard (Lim, 2013). Often the patient is seen as a model, a body to be treated, or a good “teaching case” that illustrates a point (Shapiro, 1992, 2013). If we accept or agree that decreased empathy is a direct result of participation in the medical school curriculum, we need to ask how we can address the problem.

Empathy Decline in Medical Students

A review of the literature suggests a significant decline in empathy occurs during the third year of medical school (Hojat, 2007; Hojat et al., 2004, 2009, 2011). The third year in traditional medical education is a period when the curriculum is typically shifting from class instruction to patient-care activities. This is an important time in clinical training when empathy should not be at the risk of eroding; a time when empathy is essential (Hojat, 2007; Hojat, Gonnella, Mangione, Nasca, & Vergare, 2002, Hojat et al., 2007, 2009). Most students enter medical school with idealism, with a commitment to being good doctors, taking good care of patients, and being successful in the profession. However, they can begin to lose that

idealism early on. For some students, experiences during medical school seem to undermine some of the professionalism educators try to impart (Kirk, 2007). Identified reasons for medical student empathy decline may include: being overwhelmed by the nature of clinical medicine. Medical students are for the most part, still young adults who are confronted with death and dying, suffering and conflict, doctors-in-training may also hold traditional beliefs about the value of physician detachment, the aforementioned nature of the modern clinical encounter, and a lack of professionalism. A lack of professionalism has been under scrutiny in recent years, particularly with regard to medical students, and has been linked with empathy decline (Brazeau, Schroeder, Rovi, & Boyd, 2010). Professionalism is a core competency for medical students, residents and physicians, the tenants of which encompass specifically responding to patient needs, superseding self-interest (Karnieli-Miller, Vu, Holtman, Clyman, & Inui, 2010).

Professionalism and Wellness and Their Relationship to Empathy

Medical professionalism is an all-inclusive term for desirable physician's attitudes, behaviors and personality traits. These attributes have been variously identified as integrity, tolerance of uncertainty, empathy and responsiveness to societal needs, accountability, altruism, honor, respect, compassion, communication, and team collaboration (Swick, 2000; Wagner et al., 2007). During the last several decades, medical schools have begun to promote the development of professional values by including the behavioral and the social sciences into their curricula, while additionally attempting to select applicants, who are likely to relate with patients (Benbassat et al., 2003; Benbassat & Baumal, 2007). The implicit assumption of the aforementioned is that a combination of appropriate admission policies, teaching of the

behavioral sciences, and exposure to clinical role models will promote students' professional development.

Professionalism is an essential trait for physicians and has been recognized as a core competency for humanistic physicians in training (Accreditation Council for Graduate Medical Education, 2006). Although professionalism is a multifaceted quality, one of its central characteristics is empathy—the ability to listen to, understand, sympathize with, and provide support to another individual (Halpern, 2003; Thomas et al., 2007). Empathy has been found to correlate with medical students' clinical competency (Hojat et al., 2002) and the Association of American Medical Colleges has recognized the cultivation of empathy in medical students as a key goal in its consensus opinion on qualities students should possess by the time of graduation (AAMC, 1999). The learning environment is an essential ingredient of the academic experience and students' perceptions are shaped by interactions with peers, faculty, residents, nurses, and staff. Based on the decline in empathy occurring during the course of medical school in several single-institution studies, a number of investigators have hypothesized the training curriculum itself and clinical experiences may adversely influence the emotional development of emerging physicians, also contributing to empathy erosion. (Flowers, 2005; Hojat et al., 2004, 2009).

Medical Students Emotional Distress Leads to Empathy Decline

Studies of medical students' emotional distress have used self-administered validated measures of stress, anxiety, depression, and burnout. Burnout is a psychometric measure of professional distress that includes the dimensions which include: negative perceptions of self and of accomplishment, emotional exhaustion and depersonalization (i.e., treating patients as inanimate objects) (Maslach, 2003). These studies have indicated that students' distress is

independently related to endogenous factors (personality traits and life events) and to students' perceptions of their learning environment (Dyrbye et al., 2009); the emotional state of entering medical school students resembles that of the general population (Smith, Peterson, Degenhardt, & Johnson, 2007); and the prevalence of distress increases during undergraduate training.

Well-being and burnout are situational factors that may condition the empathy of students or residents. Some people may be innately more empathic than others. However, considering empathy as a multidimensional construct sensitive to constitutional and situational factors, such as innate empathy, may be positively or negatively influenced by individual experiences within or outside the educational environment. Both cross-sectional studies (Goebert et al. 2009; Santeen, Holt, Kemp, & Hemphill, 2010; Schwenk, Davis & Wimsatt, 2010) as well as longitudinal studies (Levine, Litwins, & Frye. 2006; Compton, Carrera, & Stress, 2008) have indicated an increasing prevalence of distress among medical students. The prevalence of moderate and severe depression was five to six percent at matriculation and 11–12 % in second year of medical school (Levine, Litwins, & Frye, 2006), 13 % in the first year, 22 % in the third year (at entry to the clinical wards), and nine percent in the fourth year (Schwenk, Davis, & Wimsatt, 2010). Third year students exhibited more stress and depressive feelings than first-year students, with fourth year students reporting intermediate stress levels (Compton, Carrera, & Stress, 2008). The prevalence of suicidal ideation during the previous 12 months increased from one to eight percent in the first year to 9–13 % in the fourth year (Compton et al., 2008; Dyrbye et al., 2009; Goebert et al., 2009; Schwenk, Davus, & Wimsatt, 2010). A moderate or high degree of burnout, defined as a psychometric measure of professional distress that includes the negative

perceptions of self and of accomplishment, emotional exhaustion, and depersonalization (Farlex Medical Dictionary, 2012), was seen in 21 % of first year students, 41 % in the second year, 43 % in the third year, and 31 % of fourth year students (Santen et al., 2010). Burnout or low perception of quality of life may “focus medical students” attention inward, making it difficult to establish a therapeutic presence for others (Davis, 1990; Rogers, 1951). In accordance, lower empathy scores have been observed among students with burnout or low perceptions of quality of life. Personal distress during residency appears to have a negative effect on the quality of care that residents provide and may parallel a decline in empathy (Bellini, Baime, & Shea, 2002; Shanafelt, Bradley, Wipf, & Back, 2002).

It is hypothesized that lower levels of empathy among medical students in the United States are associated with personal distress experienced during medical school (Thomas et al., 2007). Furthermore, students experiencing a high degree of personal well-being may possess higher levels of empathy, implying that both positive and negative aspects of quality of life (QOL) are related to student professionalism (Thomas et al., 2007). It is suggested that empathy may protect health providers from burnout. Halpern (2007) purports that empathy need be associated with providers’ work satisfaction to find meaning in professional activities. Halpern (2007) suggests instead of a complete detachment strategy, physicians need to “practice” an emotional attunement with clinical empathy. Being empathic supposes awareness of negative emotions, and requires the physician to practice self-reflection, allowing him/her to accept negative feedback; these skills are resources against stress and burnout (Halpern, 2007). Therefore, helping health providers to be more empathic will help to protect them from burnout. Emotionally engaged physicians have greater therapeutic

efficacy and tend to experience better work satisfaction and self-accomplishment (Halpern, 2007).

Efforts to reduce medical students' emotional distress should aim at creating a nurturing learning environment (Dyrbye et al., 2005), which would reduce, rather than increase, students' concerns of personal inadequacy. In addition to interventions that have been shown to improve students' wellbeing, medical faculty should aim at creating a learning environment, where students are trusted, rather than judged, supported, rather than belittled, and mainly, encouraged rather than led to doubt their adequacy for the medical profession. According to Neumann et al. (2011), encountering morbidity and mortality heightens trainees' feelings of vulnerability. As a result, "students and residents may over-identify with patients, causing them to suffer more from distress themselves; students can become unable to provide rational health care or protect themselves by dehumanizing patients" (p. 999). Neumann et al. (2011) graphic (Figure 2) represents the decline of empathy in medical education and training.

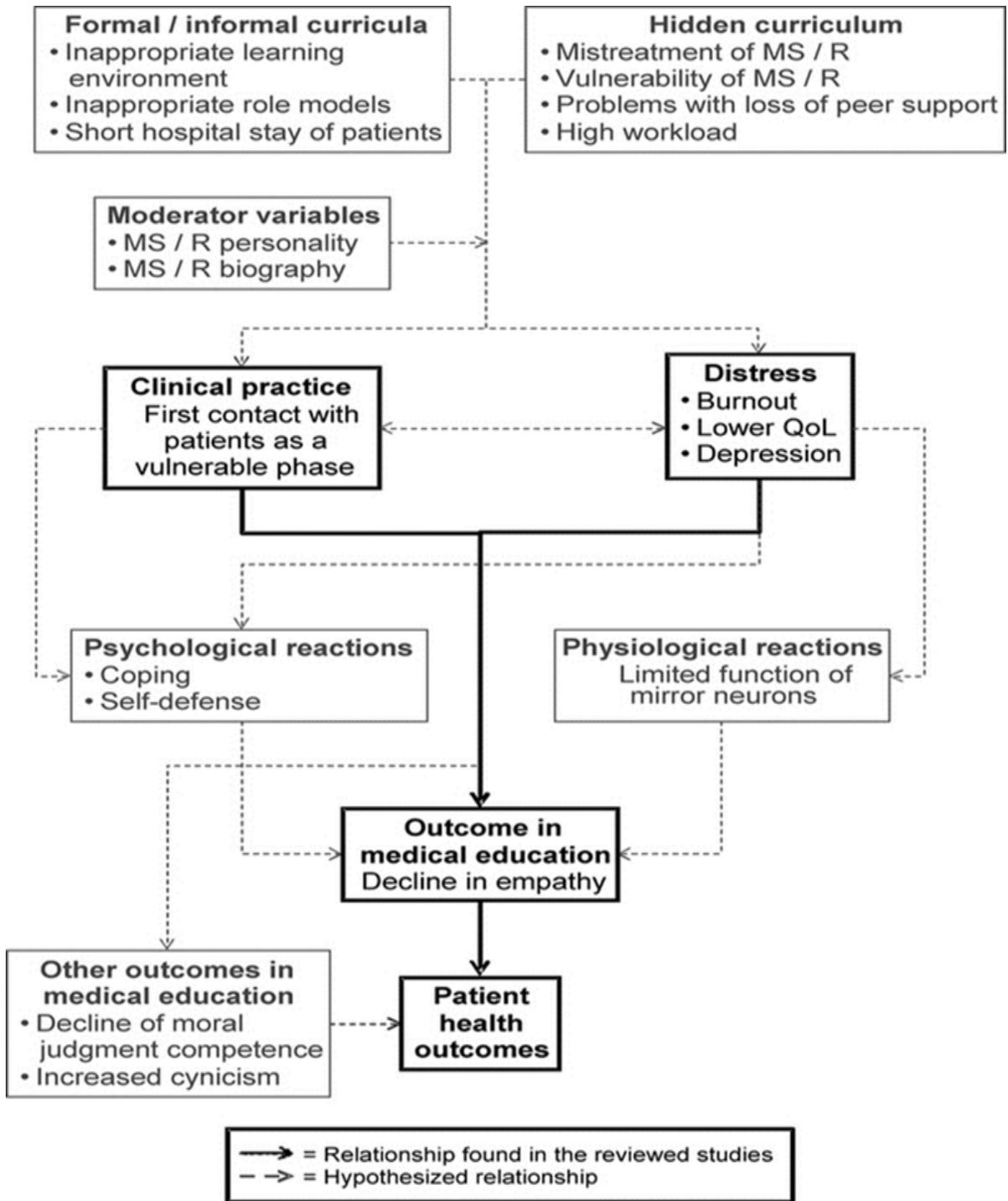


Figure 2. Decline of Medical Student Empathy

Empathy Requires Reinforcement

Physician empathy requires reinforcement through regular use at all stages of physicians' training and careers or it will disappear from physicians' professional identities and skill sets (Hojat et al., 2002). Physician empathy is considered a “use it or lose it skill”, therefore it is important for physicians to use and not lose the ability to be empathic toward patients because empathy contributes to the restoration of emotional, spiritual, and physical health of patients (Hojat, 2007). Medical educators have a responsibility to provide training for students to develop the ability to better manage their emotional responses to stressors and to prevent the attrition of empathy skills. However, there is also evidence to suggest that the process of clinical and medical education may actually lead to a decrease in empathy as a direct result of the way that clinical training is structured (Hojat, et. al, 2009). Training for empathy is considered as one of the major challenges facing medical education today.

Research in the neurosciences has established that empathy involves both the capacity to emotionally respond to the suffering of another as well as the capacity to regulate and modulate this experience (Shapiro, 2011). Medical educators often make the assumption that it is easier to work with cognitions than to change emotions (Hojat, 2009). This formulation suggests that what is needed is not the ignoring or suppressing of emotion, but its regulation, so that it is present, but modulated. Therefore, we should not accept the emotional component of empathy as dangerous and one which should be exiled from the doctor-patient encounter. Empathy is most often described as an objective, rational, accurate, and intellectual process that is always good for both patient and practitioner, at the expense of sympathy, which has been historically viewed by some clinicians, as an emotional, self-indulgent, and codependent practice that will lead to burnout and compassion fatigue

(Shapiro, 2011). These and similar efforts to separate out the active elements of empathy (Crandall & Marion, 2009) have the effect of making the construct easier to recognize and identify—but not necessarily of making it more empathic in its clinical manifestations. Balint (2000) states without the proper dose of emotion, empathy runs the risk of being excessively operationalized, codified, and measured in ways that will become pointless and meaningless.

Expressing an honest, personal, sensitive, and caring attitude in every patient-physician encounter, despite objective difficulties, such as time constraints, is an essential part of medical care and healing. As a result, both patients and physicians gain immensely and the quality of care and “hard” health outcomes improve. Thus, empathic medical practice adds an absolutely essential domain to the current sophisticated, technological, and scientific medicine, therefore existing deficiencies in the empathic aspects of care need urgent attention (Shattner, 2012).

Diverse, potent, and prevalent as the barriers to empathy are, many believe empathy can still be acquired and this remains true not only for medical students but also for residents, primary physicians and faculty alike (Yedidia et al., 2003; Branch et al., 2009). Three essential principles to teach empathy have been identified. First, to be effective, interventions must be multifactorial (Shattner, 2012). Several types of interventions are more likely to be helpful than one. Supplementing training programs by organizational efforts can facilitate change. A second suggestion is to begin interventions at an early stage in medical education. It is suggested that the best interventions lose efficacy over time unless strengthened by reminder activities (Shattner, 2012). Thirdly, interventions must be based on foundations of solid research data. With these strategies in mind, can empathy be promoted from its current often-low position? A review of the literature analyzed 13 studies of teaching empathy to

medical students (Stepien & Baernstein, 2006). The literature reviewed suggests that empathy can be enhanced and identify several effective strategies, including interpersonal skills workshops, communication skills workshops, literature and medicine courses, reflective writing seminars, and student hospitalization experiences.

Additionally, attitudes of 1170 medical students studied recently show three types of experiences that had the greatest effect on their development of humanism: experiences of great intensity (e.g. being involved in a case where the patient dies), participatory learning experiences (e.g. volunteer work, international clinic rotations), and participatory positive role models (Hojat et al., 2009). In contrast, stressful conditions, such as massive workloads or being tired, inhibited their humanism (Moyer et al., 2010). These findings suggest it necessary to enhance specific areas in the curriculum to promote humanism, reversing the current “hardening of the heart” developing in many third-year medical students (Hojat et al., 2009).

Emotional Intelligence as it Relates to Clinical Empathy

Emotional intelligence is defined as having awareness of the existence of emotions, comprehending the nature of the emotions and being able to discriminate different emotional states, being able to appropriately manage emotions, and being able to experience, acknowledge, and integrate emotions in ways that promote positive, rather than negative, patient outcomes (Todres, Tsimtsiou, Stephenson, & Jones, 2010). The development of emotional intelligence, it is asserted, may help physicians to decode emotions expressed by others, recognize and convey their own emotions and be sensitive to the interaction of one’s emotions and motivations with cognitive processes (Duffy, 2006; Shapiro, 2008, 2011). An important component of emotional intelligence is emotional regulation or the ability to

modulate one's emotional experiences and responses in response to changing environmental and interpersonal contingencies (Gross, 2002). Emotional regulation allows individuals to choose more thoughtfully which emotions and thoughts will best advance their personal and professional values as well as their therapeutic commitment to their patients. Emotional regulation has been identified as essential in promoting empathy and altruism (Burks & Kobus, 2012; Shapiro, 2008, 2011).

Why Offer Humanism in Medicine Workshops?

Humanistic values encompass honesty, integrity, caring, compassion, altruism, empathy, and respect for self, patients, peers, and other health care professionals. If we accept decreasing empathy as undesirable, in part as a direct result of participation in the medical curriculum, we need to ask how we can address the problem. This means in the context of cultivating empathy, perhaps the most important change needed, is an attitudinal one appreciating the importance of skillfully recognizing and dealing with emotions in the doctor-patient relationship (Coulehan, 1995; Shapiro, 2011).

The cognitive-behavioral methods of teaching empathy often used in the preclinical years run the risk of becoming mere intellectual exercises for medical students (Shapiro, 2008, 2011). In this construction, empathy may become a means to ends benefiting students (positive evaluation of performance) and sometimes as promoting positive patient outcomes (increased compliance and increased continuity) (Shapiro, 2011). Of course these are not undesirable ends. However, they remain squarely situated in the ethical position of "getting" and "acquiring." In such formulations empathy becomes a tool to obtain an objective (albeit an appropriate one) rather than a quality that one human being owes another (Levinas, 2005). From a pedagogical perspective, incorporating empathy into the curriculum may be more of a

“restoration project” than one of inculcation (Spiro, 2009). In other words, medical education need build on students’ existing empathic strengths, their natural human impulses toward identifying with others; impulses that currently are all too often stifled and repressed in the existing medical culture (Shapiro, 2011). A purely cognitive empathy risks lack of emotional engagement and meaningful understanding of the other. Pence (1983) pointed out that true compassion must be rooted in deeper internal attitudes and behaviors and must recognize that the suffering of the other really matters and this insight is true for empathy as well. When empathy is viewed more as a performance than as a deeply held commitment to a way of being in the world, it can easily result in “selective” empathy, that is, performance that is generated in response to certain evaluative situations, or something that naturally arises toward certain likeable patients or patients similar to the student, not as something that needs to be cultivated toward all patients, especially stigmatized, marginalized, or otherwise unappealing patient populations (Shapiro, 2011).

Curricular approaches to teaching empathy need aspire to what Halpern (2001, 2007) describes as clinical empathy. Clinical empathy derives from a detailed experiential as well as cognitive understanding of what the patient is feeling. It is neither detachment nor immersion but, rather, an ongoing double movement of emotional resonance and compassionate curiosity about the meaning of the clinical situation to the patient (Shapiro, 2008). Clinical empathy also involves the capacity to participate deeply in the patient’s experience while not losing sight of the fact that this imaginative projection is not, in fact, one’s own experience, but that of another. In a similar formulation, the clinician must possess the negative capability not to be emotionally overwhelmed by the patient’s plight while simultaneously being moved by his/her suffering (Coulehan, 1995, 2009).

Neuroscience research confirms that awareness of a distinction between the experiences of self and others constitutes a crucial aspect of empathy (Goleman, 2000). For empathy to be effective, individuals must be able to separate their own feelings from the feelings shared with others. Therefore, physicians must have self-awareness as well as other-awareness (Decety and Lamm, 2006). Without self-awareness, physicians lose perspective and they experience empathy as a liability. Self-aware physicians, on the other hand, experience empathy as a mutually healing connection with patients (Kearney et al., 2009).

Shapiro (2011) suggests by making room for emotions and a practice of empathy that honors its emotion based dimension, may change other aspects of the culture of medicine (Shapiro, 2011). For example, instead of the emotional detachment routinely encouraged in clinical interactions, we might see physicians and students alike willing to develop “compassionate solidarity” with the patient’s suffering, an attitude which Coulehan (2009) describes as one comprised of presence, listening, affirmation, and witnessing. Rather than defending against their patients’ distress, from a position of empathy, physicians could learn to recognize their own vulnerability to suffering and therefore be willing to connect with others, including most radically, their patients.

Educational Philosophy/Practice Applied to HiM Workshops

Constructivism is an educational philosophy that has two major principles according to Duffy and Cunningham (1996). First, learning is an active process of constructing rather than acquiring knowledge. Second, instruction is a process of supporting that construction rather than communicating knowledge. Constructivists also believe that the learner interprets the learning experience and constructs their own mental models (Bednar, Cunningham, Duffy, & Perry, 1991). In a classroom setting, constructivism is similar to a learner-centered

model. It is the instructor's job to guide the learners to develop new patterns of thinking and provide scaffolding or support to ensure that learning occurs (O'Connor, 1998). The scaffold is the environment in which the teacher/facilitator creates the instructional support and the processes and language used to develop the learning (Wilhelm, Baker, & Dube, 2001). The facilitators of this learning practice provide the scaffold to support the concepts of emotional intelligence. In thinking more broadly about student-centered and pathway learning, there is a continuum of learning styles from didactic (traditional) to participatory (student centered). In the learner-centered approach, the learners have full responsibility for their own learning (Carrick, 2010). The teacher acts as a facilitator and resource person. The learning starts with what the learner brings to the context of learning (Carrick, 2010).

Humanists regard learning from the perspective that individuals have unlimited potential for growth and development (Rogers, 1957). These concepts of self-actualization and self-directed learning compliment Knowles' (2005) concept of andragogy, which is an attempt to develop a theory specifically for adult-learning and is important to this research. Andragogy focuses on learner-directed instruction and posits the following assumptions: adults need to know why they need to learn something; adults need to learn experientially; adults approach learning as problem-solving; and adults learn best when the topic is of immediate value (Knowles, Holton, & Swanson, 2005). Teachers drawing upon andragogy often choose strategies which include: case studies, role-playing, simulations, and self-evaluations, such as those used in the HiM workshops. Instructors adopt a role of facilitator or resource rather than lecturer or grader (Carrick, 2010). Knowles (2005) states learners create their own unique education because learning is based on prior knowledge. This concept is important to the learning practice that is being analyzed. All participants create

their own education from the workshops because it is based on prior knowledge, experiences, schemata, and mental representations of the theory (Dirkx, Swanson, Watkins, & Cseh, 2002).

Learning Theories Applied to HiM Workshops. Piaget's (1952) theory of cognitive development purports that cognitive structures change by a process of adaptation including assimilation and accommodation. Piaget (1952) defined schemata as the mental set of perceptions, ideas, and/or actions and considered them to be the basic building blocks of thinking. Applying the cognitivist theory and integrating Piaget's ideas to my research, suggests HiM workshops ensure the transfer of learning into actions (Carrick, 2010). As noted in the HiM design, I have incorporated Bloom's sequential cognitive learning stages or steps known as Bloom's taxonomy. Bloom's taxonomy, revised in 2001, consists of six stages which include remembering, understanding, applying, analyzing, evaluating and creating. Each stage has its own hierarchy of learning (Forehand, 2005). Applying Bloom's taxonomy to this research suggests HiM workshops can nurture and preserve empathy.

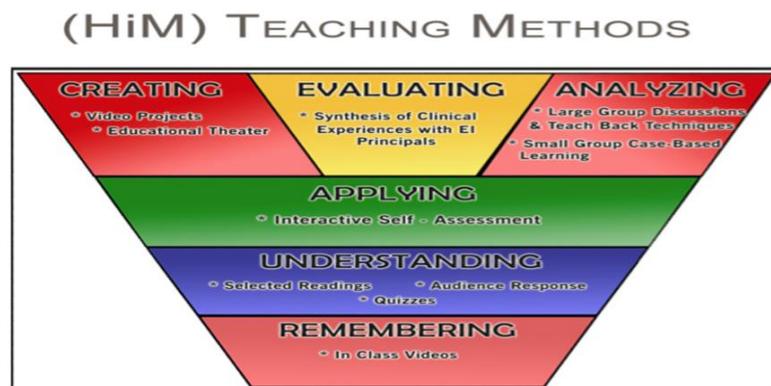


Figure 3. Bloom's Taxonomy as it Relates to HiM Workshops

Two other theories serve as a foundation for my research. They include: EI theory (Mayer, Salovey, & Caruso, 2004) and the EI theory of performance (Goleman, 2000). Mayer, Salovey, and Caruso (2000, 2004) describe emotional intelligence (EI) as a type of social intelligence that involves the ability to monitor one's own and others emotions to discriminate among them and to use the information to guide one's thinking and actions. Mayer and Salovey (1993) were the original researchers of emotional intelligence theory as part of social intelligence. This ability model of EI identifies the four interrelated abilities of perception, use, understanding, and managing of emotions (Mayer, Salovey, & Caruso, 2000, 2004). This model conceptualizes that EI is a set of mental skills.

The EI Framework as defined by Goleman (2000) reflects how an individual's potential for mastering the skills of self-awareness, self-management, social awareness, and relationship management/social skill translates into both personal and clinical success. Focusing on EI as a theory of performance (Goleman, 2000) suggests that each of the four domains of EI derives from distinct neurological mechanisms that distinguish each domain from the others and all four form cognitive domains of ability. In turn, at a higher level of articulation, the EI competencies nest within these four EI domains. An understanding of these neurological substrates has critical implications for how people can best learn to develop strengths in the EI range of competencies.

Applying Goleman's (2000) Framework of EI (four quadrants of self-awareness, self-management, social awareness, and relationship management) analyzed as a wide array of competencies and skills that drive and affect medical student and physician performance and patient care to my research, supports the premise of utilizing instructional methods focusing on emotional intelligence in Humanism in Medicine (HiM) workshops.

Self-awareness pertains to self-aware students as able to accurately assess their emotions and their skills. Self-awareness is crucial for academic and clinical success. An important finding of research suggests there is a significant association between academic achievement as measured by cumulative GPA and EI (Brackett, Mayer, & Warner, 2003). Research suggests those students with high EI may be more reflective, which is integral to empathic communication (Shapiro, 2011). Also, students with high EI have shown strong organizational and time management skills (Naeem et al., 2014).

Self-management, as defined in relation to the EI Framework (Goleman, 2000), suggests that students who successfully self-manage are able to recognize and use their emotions, both positively and negatively, to control their environments and outcomes. Research suggests self-aware physicians experience empathy as a mutually healing connection with patients (Kearney et al., 2009). Additionally, impulse control and judgment protect against burnout and stress (Kearney et al., 2009). Scores indicative of higher medical student burnout were associated with lower student empathy scores. These findings have implications for the design of curriculum interventions to promote student well-being and professionalism, a core tenet of humanistic medicine (Brazeau et al., 2010).

The social awareness domain includes the key skill of empathy, whereby the empathic individual is able to read emotional currents, picking up on nonverbal cues such as tone of voice or facial expression. Empathy requires self-awareness. Our understanding of others' feelings and concerns flows from awareness of our own feelings. This sensitivity to others is critical whenever the focus is on interactions with people, suggesting physicians who are better at recognizing emotions in patients are more successful than their less sensitive colleagues at treating them (Friedman & DiMatteo, 1982).

The relationship management/social skill domain of EI includes: leadership, conflict resolution, and teamwork skills and are considered essential to medical student and physician professionalism and patient satisfaction. Physician EI is also found to be positively correlated with less burnout and higher levels of job satisfaction (Weng et al., 2011). In a fundamental sense, the effectiveness of relationship skills hinge on our ability to attune ourselves to or influence the emotions of another person. The ability to understand and/or to influence the emotions of others, builds on other domains of EI, particularly self-management and social awareness. If we cannot control our emotional outbursts or impulses and lack empathy, there is less chance of achieving effectiveness in the therapeutic doctor-patient relationship.



Figure 4. EI Framework (Goleman, 1998).

ACGME Core Clinical Competencies Integral to HiM Workshops

The Accreditation Council for Graduate Medical Education (ACGME, 2006) has defined six core competencies that constitute the hallmarks of graduate medical education which include: patient care, professionalism, systems-based practice, interpersonal and communication skills, medical knowledge, and practice-based learning and improvement. Each competency can be measured and mapped to clinical indicators of outcome and performance. Research has shown that higher EI is positively associated with more compassionate and empathic patient care (patient care), higher-scoring assessments of knowledge (medical knowledge), and effective coping with organizational pressures and leadership (practice-based learning and improvement and systems based practice) mapped to clinical indicators of outcome and performance. Furthermore, research suggests that emotional intelligence also contributes to improved teamwork and doctor–patient communication (interpersonal and communication skills and professionalism) (Stewart, 2005). Figure 5 illustrates HiM workshops as they align with the ACGME competencies.

HiM Workshops Aligning with ACGME Competencies

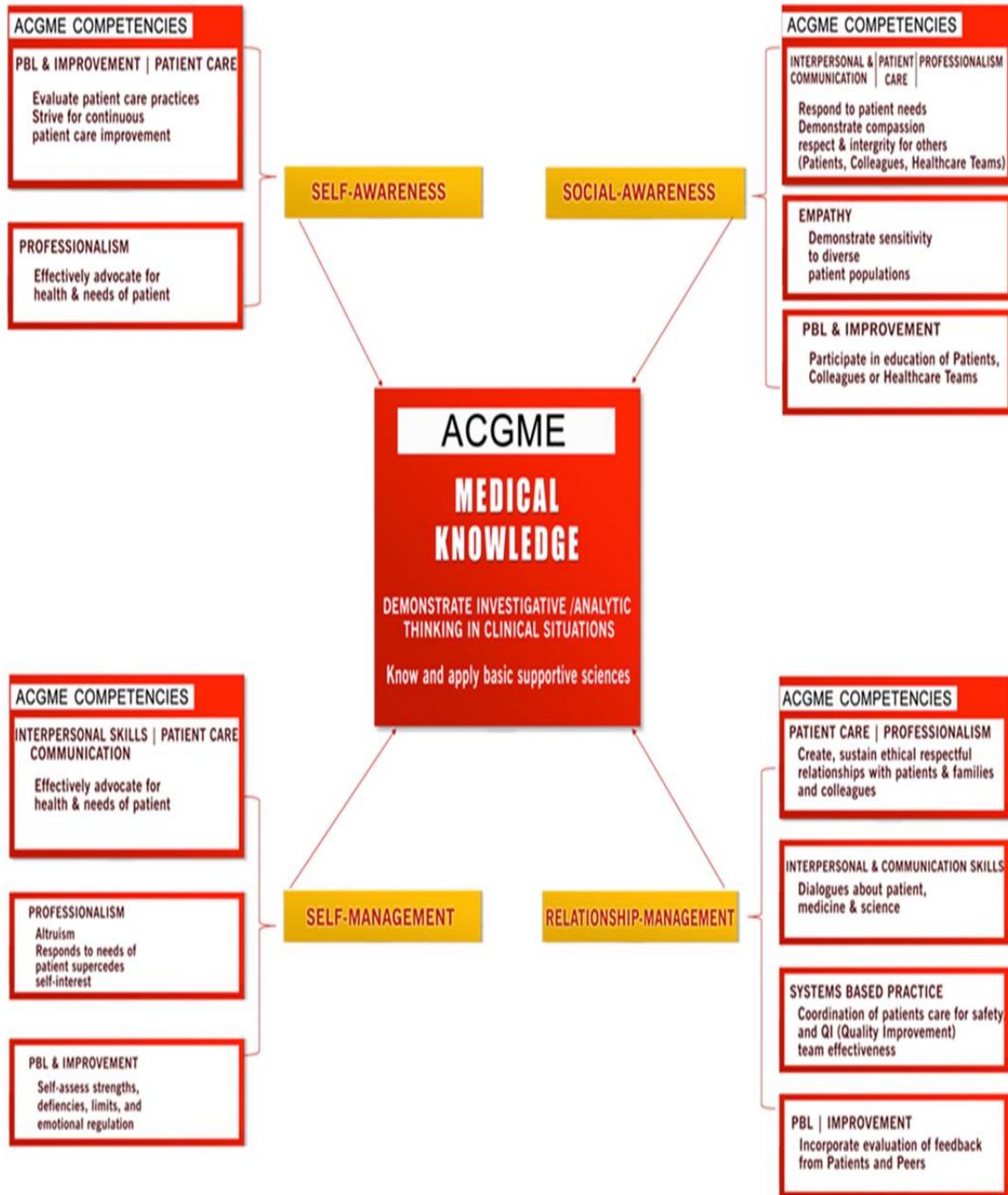


Figure 5. ACGME Medical Knowledge (ACGME, 2006).

HiM Workshops Design

The HiM workshops provided real-world applications of humanistic medicine aligning with the CMSRU social mission of medicine. Although the HiM workshops were pre-structured, the activities were designed to be flexible to the student and employed a variety of instructional methods which encourage interactive participation, such as role-playing, educational theater, and video analysis.

The HiM workshops have been designed as student-focused learning model with practical activities (small group, large group, and pairs). The facilitators' roles in the workshops are to provide data, facts and insights to assist in the student's understanding and learning (Carrick, 2010). The concepts of EI as they relate to humanism, specifically empathy, are normally new to the participants in the workshops. In a safe and confidential environment, the facilitator hoped to inspire learners to ask questions, apply the respective theories and frameworks, and focus on improvement goals in areas that are important to their personal lives and medical careers. The facilitators reinforced the information provided by defining and sharing real-world applications of medical humanism in clinical scenarios, debriefing the small group activities and discussions on application to personal life and clinical practice. Learners must first become aware of and identify their emotional reactions; learners may then realize that cultural norms in the profession variously encourage or stifle the expression of emotions; and, finally, learners must develop the skills to cultivate emotions that support professional attitudes of altruism, empathy, service, and connection and how the patient can best be served through an aware, conscious understanding of the role of humanism in healthcare (Shapiro, 2013).

Curricular experiences that focus on a non-judgmental consideration of students' and

patients' emotional reactions, with an aim toward exploring the ramifications of different forms of emotional expression, fulfill several functions. Firstly, they normalize problematic emotions that students may feel uncomfortable with and therefore tend to ignore, suppress, or express in unconscious ways. By discussing emotions in small groups, students learn that other students experience similar emotions under similar experiences, which further validate their own feelings. Secondly, with practice guided by facilitators, students potentially become more skillful at recognizing the emotions of patients and family members in high stress medical situations (Shapiro, 2008). Students then consider which emotions and behaviors best support their professional obligation to promote the well-being and health of their patients (Browning, Meyer, Truog, & Solomon, 2007). For example, focusing on empathy as taught through a variety of teaching methods and workshop activities, allowed students to "tune in" to what, how and why people feel the way they do. Through the role modeling of peers and faculty, students can build upon, react against, and be inspired by the emotional dimensions represented and practice the differential expression of a range of emotions that they can then extend to clinical interactions. The overarching goals of the student-centered workshops are considered a pathway to individual human development in the areas of humanism in medicine.

Murphy's (2006) model of cognitive development served as the basis for the respective skills based workshops, effective for the purpose of training and development interventions. This cognitive-based approach to training is similar to the HiM workshops analyzed for this study, including respective definitions of the constructs, relationships, principles, and guidelines. Once the participants understand the concepts, practical application can be applied to the clinical environment. The skills based training included

behavior modeling with a series of practice activities. This cognitive based training program “had the goal of changing attitudes, beliefs and predispositions” (Murphy, 2006, p. 228).

Murphy (2006) states the interpersonal training has been shown to be successful in organizations. This explanatory study utilized the principles of an affective based training model into two 90 minute workshops to research their influence on empathy.

Researcher’s Paradigm/World View

The Research Paradigm used in my research consists of a post-positivist and a constructivist worldview. The research paradigm was intentionally chosen to include both a quantitative and a qualitative component. The positivist paradigm quantitatively examined medical students’ empathy by their completion of the Jefferson Scale of Physician Empathy (JSPE) the most widely accepted self-report measure of empathy, which has established validity and reliability. HiM workshop descriptive data and a definition/description of empathy were also collected from research participants, both pre- and post-HiM workshops.

The constructivist paradigm was explored by interviewing CMSRU M1 medical students. Students were asked to respond to questions related to empathy in their personal and clinical interactions, which allowed the researcher to understand the world in which the participants live and work (Creswell, 2009). Use of the aforesaid surveys, demographic data, open-ended questions, and interviews provided the integration of the qualitative and quantitative data (Creswell, 2009). The one-to-one interviewing also provided students participating in phase two a voice to answer specific questions related to their personal and clinical environments.

Chapter 3

Methodology

The purpose of this mixed methods sequential explanatory research was to determine if HiM workshops influence medical student (M1) empathy. Mixed methods research occurs when the researcher combines the quantitative and the qualitative aspects of research by analyzing, collecting, integrating the findings, and providing triangulation (Creswell, 2009; Hanson, Creswell, Plano Clark, Petska, & Creswell, 2009; Tashakkori & Teddlie, 2003). Mixed methods designs add to the breadth and depth of the research by not only looking at the quantitative findings, but also by giving the participants a voice. Mixed Method designs have the advantages of providing deep descriptions and offer entrée to subjects' lived realities explored by qualitative methods; they also have the potential to contribute the generalizability and statistical reliability that is the strength of quantitative research (Creswell et al., 2009).

The rationale for using the aforementioned research design and “mixing” the data is that neither quantitative nor qualitative methods are independently sufficient to capture the trends and details of the situation, such as a complex issue of empathy decline in medical education. When used in combination, quantitative and qualitative methods complement each other and allow for more complete analysis. Mixed Methods research is more than simply collecting both quantitative and qualitative data, rather, it indicates that data will be integrated, related, or mixed at some stage of the research process (Green, Caracelli, & Graham, 1997, Tashakkori & Teddlie, 2003).

While designing a mixed methods study, three issues need consideration: priority; implementation; and integration (Creswell, Plano Clark, Guttman, & Hanson, 2003). Priority

refers to which method, either quantitative or qualitative, is given more emphasis in the study; implementation refers to whether the quantitative and qualitative data collection and analysis comes in sequence or in chronological stages, one following another, in parallel or concurrently; and integration refers to the phase in the research process where the mixing or connecting of quantitative and qualitative data occurs. Figure 6 depicts the phases of research in the Mixed Methods sequential explanatory design.

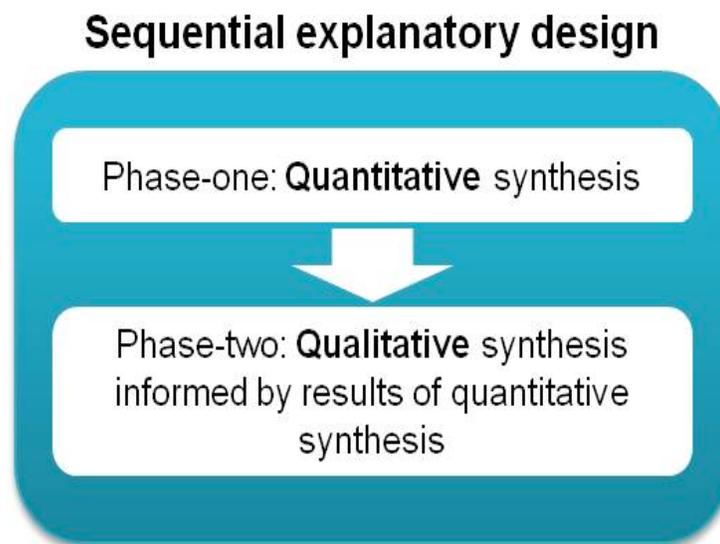


Figure 6. Sequential explanatory design

Research Questions

- Does participation in the Humanism in Medicine (HiM) workshops influence M1 student empathy as measured by the Jefferson Empathy Scale of Physician Empathy (JSPE)?
- How do M1 students define or describe empathy pre-HiM workshops?
- How do M1 students define or describe empathy post-HiM workshops?

Research Design

The study used a sequential explanatory design consisting of two distinct phases (Creswell, 2009), labeled as phase one and phase two. Phase one used quantitative instrumentation, while phase two was purely qualitative in nature.

In the first phase, the quantitative data was collected using a web-based, cross-sectional survey, known as the Jefferson Scale of Physician Empathy-Medical Student version (JSPE-MS). The JSPE was developed by researchers at the Center for Research in Medical Education and Health Care at Sidney Kimmel Medical College to measure empathy in physicians and other health professionals, including medical students. It is considered the most widely accepted self-report measurement of medical student empathy. Additionally, HiM workshop surveys focused on gathering data regarding age, race, educational attainment, and previous career experience and included an open ended question regarding empathy, pre- and post-HiM workshops, were used.

The priority of this research is given to the quantitative method, because the quantitative research represents the major aspect of this study. The goal of the quantitative phase is to examine whether HiM workshops influence empathy as measured by the JSPE, while additionally allowing for quota sampling of workshop participants for the second phase of the research.

In the second phase, a qualitative approach was used to explore students' understanding of empathy through the use of one to one, semi-structured interviews. The integration of quantitative and qualitative methods occurred at the beginning of the qualitative phase, as interview questions were developed based on the JSPE. The rationale for this approach is that the quantitative data and results provide a general picture of the

research problem, (i.e. student’s perceptions, attitudes, beliefs, and experiences regarding empathy), while the qualitative data and its analysis refine and explain those statistical results by exploring participants’ views in more depth (Creswell & Plano Clark, 2011). Table 1 describes the design of the research presented.

Table 1

Study Instruments

	Quantitative	Qualitative
Phase One	Jefferson Scale of Physician Empathy Medical Student Version (JSPE-MS) HiM Survey	Open-Ended Questions
Phase Two		One-to-One Interviews

Context of the Study

Rowan University and the Cooper Health System partnered in June 2009 to establish Cooper Medical School of Rowan University (CMSRU), the 135th MD degree granting school in the country and the first new medical school in New Jersey in 40 years (CMSRU, n.d.). CMSRU is committed to providing humanistic education in the art and science of medicine within a scientific and scholarly community in which inclusivity, excellence in patient care, innovative teaching, research, and service to our community are valued (CMSRU, n.d.).

The HiM workshops for the Class of 2019 students, were facilitated by me and co-facilitator, Susan Cavanaugh. Ms. Cavanaugh, Assistant Director of CMSRU Medical Library and Associate Professor of Biomedical Sciences, shares my interest in the tenets of humanism in medicine and EI. The HiM workshops were conducted in the multipurpose room of the CMSRU Medical Education Building (MEB), Camden, New Jersey.

Participants. The target population in this study included 80 CMSRU medical students who are classified as matriculating first year (M1) students. Criteria for selecting the participants: matriculating M1 students at CMSRU. Medical educators have become increasingly aware that early integration of empathy focused medical curricula, offered through a variety of humanities interventions need occur, to develop, nurture, and preserve empathy (Halpern, 2007; Shapiro, 2008, 2011). The HiM workshops were scheduled during the CMSRU Lunch and Learn program, a series of weekly sessions focused on health, well-being, and curricular/career-focused programming offered for the benefit of first year (M1) medical students. Attendance for first year medical students is mandatory for CMSRU Lunch and Learn first semester weekly sessions, however as previously stated, participation in this research was voluntary. Prior to HiM Workshop I, an email request was sent to all M1 students interested in participating in the research to bring their laptops to both HiM workshops to participate in several interactive activities and completion of assessments.

During Humanism in Medicine (HiM) Workshop I, emotional intelligence constructs, humanistic values, and a review of the six core competencies of graduate medical education were presented to the M1 students (Appendix A). As co-facilitators, Ms. Cavanaugh and I provided background on the theories for and definitions of cognitive and emotional

intelligence and also identified humanism in medicine values and the core competencies of graduate medical education.

As pre-workshop preparation, students were asked to read *What Makes a Leader?* (Goleman, 1998) By reading Goleman's (1998) article, participants were presented the empirical evidence that underlies the concepts of EI, providing a framework for the session. Following a review of the article, students, using their laptops, participated in an interactive audience response quiz.

The first large group activity asked students to describe and chart their emotions. This activity immediately warranted the attention of the class, placing the workshop into perspective, and challenged the mental models of the individuals. By expanding on these concepts in both large group and small group exercises, using case based applications and scenarios as they relate to humanism in medicine, (i.e. demonstrating respect, enhancing personal connections, and communication) provided opportunities for students to gain perspective regarding patients, families, and the learning environment (Weissmann et al., 2006).

Research suggests self-aware physicians experience empathy as a mutually healing connection with patients (Kearney et al., 2009). Humanism in Medicine Workshop I session included viewing two videos created by CMSRU faculty and staff, portraying both a medical student and physician as acting with and without emotional intelligence. Class review and discussion of the video also included a review of self-awareness and self-management frameworks of EI (Goleman, 1998, 2000) as they relate to the core competencies of graduate medical education. Research suggests with practice guided by facilitators, students are able to

become more skillful at recognizing and managing the emotions of patients and family members in stressful medical situations (Shapiro, 2008).

Humanism in Medicine (HiM) Workshop II pre-work preparation included reading “What Happens When You Run Out of Empathy”? (Scheuler, 2015). By reading Scheuler’s (2015) article, participants were introduced to the concept of clinical empathy. HiM Workshop II focused on the social competencies of social awareness and relationship management/social skill (Goleman, 2000) and was facilitated by utilizing activities focused on developing a set of active listening skills for use in patient-physician interaction and inter-professional healthcare communication. Exercises included how to speak to and address the needs of others, along with strategies to overcome negative responses to the emotions of others.

Humanism in Medicine (HiM) Workshop II also included discussion of Scheuler’s (2015) article for the purpose of developing a working knowledge of clinical empathy. The objective of the discussion was for each student to understand and reflect on the importance of preserving empathy in the doctor-patient relationship (Appendix B). Additional workshop content focused on perceiving emotion, using emotion, understanding emotion and managing emotion in oneself and with others (Mayer, Salovey, & Caruso, 2004). Individuals who can regulate their emotional state are better able to avoid being overwhelmed by their own emotions and therefore can focus on the needs of the other (Eisenberg et al., 1994; Decety & Meyer, 2008). By paying attention to emotions, specifically how to identify them and make determinations about what emotional responses are most beneficial to the patient, students and clinicians alike become familiar and comfortable with the expression of empathy. Medical students are particularly vulnerable to emotional detachment because they are still

learning how to modulate their own emotional states in the often stressful and emotionally demanding environment of clinical medicine (Jennings, 2009). Since medical students may not know how to cope with the often intense feelings they experience on a daily basis, they can end up denying or ignoring them. The willingness “to feel” supports attitudes of compassionate solidarity, affiliation, and alliance toward patients (Shapiro, 2011). HiM workshop didactics included: emotions are data, the importance of matching emotions to tasks, using emotions to build relationships, and understanding emotions to motivate people as it relates to the core competencies of graduate medical education (ACGME, 2006). HiM workshop activities also included identifying emotional blends and building up emotional reserves (Mayer, Salovey, & Caruso, 2004).

Recruitment. Recruitment is an integral part of the research process. The Institutional Review Board (IRB) application was submitted following the submission of this dissertation proposal. IRB approval was received from Rowan University and the schedule of the Humanism in Medicine (HiM) workshops was confirmed. However, M1 research participants and CMSRU administration requested HiM Workshop II be rescheduled due an end of semester exam and the holiday break commencing the following day. I complied with this postponement request and rescheduled HiM Workshop II the following month according to session availability in the Lunch and Learn schedule.

Prior to HiM Workshop I commencing, all CMSRU M1 student received an email to inform them of the purpose of the study (Appendix C). First year CMSRU medical students were informed that participation in this doctoral research was voluntary and at any time during the process they were able to choose to discontinue participation. The informed consent process was reviewed with medical students prior to HiM Workshop I commencing.

The HiM workshops informed consent included a question asking students if they were interested in participating in one-to-one interviews during phase two of the research, for the purposes of obtaining additional data. Signed informed consents were collected and placed in a sealed locked box. As stated by Krathwohl & Smith (2005), those that volunteer are generally more interested in the pursuit of research (Appendix D).

Sampling. Phase one. As per the tenets of the recruitment process, in the quantitative portion of the study, the 80 M1 students of the CMSRU Class of 2019 were requested to participate in the HiM workshops. The HiM workshops were scheduled during the CMSRU Lunch and Learn sessions which are mandatory for M1 students. However, as per the tenets of informed consent, participation in this research was voluntary.

Sampling. Phase two. In the qualitative portion of this study, quota sampling was used to choose subsets of respondents from the 26 CMSRU Class of 2019 M1 participants students who successfully completed both HiM workshops and respective assessments/surveys and consented to participate in phase two of the study. Quota sampling is considered a type of non-probability purposive sampling which requires that representative individuals are chosen out of a specific subgroup (Fink, 2013). Quota sampling allowed the researcher to choose a subgroup of research participants representing the major characteristics of the corresponding proportions in the CMSRU M1 student population studied. The criteria of the subgroups for the qualitative phase included gender, race, and prior patient contact (if any), allowing for the sampling of the research participants most likely to have insights into the research topic (Fink, 2013; Maxwell, 2005).

Data Collection

Phase one. In quantitative research, the researcher generally attempts to quantify variables of interest; questions must be measurable (Creswell, 2009). The quantitative paradigm is given emphasis in this research design. The quantitative data was retrieved from the JSPE and HiM workshop surveys, administered pre- and post-HiM workshops which included an open-ended question.

Instruments. The quantitative component of the research used the JSPE-MS which has established validity and reliability to answer the research question. Prior to the HiM workshops, all M1 CMSRU medical students completed a cross-sectional survey instrument via computer, known as the JSPE-MS. The JSPE-MS was made available through CMSRU's One45 system, a secure curriculum management system by which students are able to complete assessments, with a unique identifier, for the purposes of collecting and linking identifying information (e.g., subjects' names) to subjects' responses (e.g., questionnaire answers), to provide the utmost confidentiality of subject data. There is restricted access to assessments allowing only for the CMSRU Director of Assessment. Immediately following completion of both HiM workshops and collection of the informed consent forms, access to the JSPE-MS was made available through CMSRU's One45 system to all M1 research participants.

The JSPE-MS (MS=Medical Student version) was developed to measure the orientation of medical students toward physician empathy in patient-care situations (Hojat, et al., 2002). The JSPE instrument includes 20 Likert-type items answered on a seven-point scale (1 = "strongly disagree," 7 = "strongly agree"). To control for the "acquiescence" response style (a tendency to passively and consistently endorse "agree" [or "disagree"]

responses to the test questions), 17 items are positively worded (directly scored). In the medical student (MS) version, only three negatively worded items appear (reverse scored). (Appendix E).

The JSPE-MS focuses on the effect of selected internal and external variables, known as Hojat's three factor model, a multidimensional model comprising three related constructs: perspective taking, compassionate care, and the ability to stand in the patient's shoes (Hojat et al., 2001). Mixed Method designs have the advantages of providing deep descriptions and entrée to subjects' lived realities explored by qualitative methods; mixed method designs also have the potential to contribute the generalizability and statistical reliability that is the strength of quantitative research (Creswell et al., 2005). It can also be used to examine the variation and correlation of empathy in different years of medical education and between genders (Hojat et al., 2002). Evidence has been reported in support of the internal consistency, reliability and predictive validity of the JSPE when used with physicians, medical students, and nurses (Hojat et al., 2001, 2002; Hojat, Mangione, Nasca, & Gonnella, 2005; Ward et al., 2009). Psychometric data in support of the construct validity and criterion-related validity (convergent and discriminate) of the MS-Version of the scale have been reported (Hojat et al., 2001, 2002; JSPE, n.d). Research participants were sent an email request/reminder to access CMSRU's secure One45 system to complete the JSPE pre- and post-HiM workshops. Empathy scores obtained from the JSPE, administered pre- and post-HiM workshops, were analyzed using SPSS.

HiM workshop surveys. Data was collected via two HiM created surveys, pre- and post-HiM workshops, made available via survey monkey, for the purpose of determining the characteristics of the participants in the study, such as race, educational degree attained, and

prior career experience. No names were included on any surveys. A designated CUH statistician was the only individual able to access the password protected SurveyMonkey account. The CUH statistician had no previous interaction with CMSRU M1 students. All information was kept offsite.

One open-ended question regarding empathy was included in both of the HiM surveys, administered pre- and post-HiM workshops, for the purpose of providing rich data from the perceptions of the participants to answer the research question. Patton (2002) states researchers should ask open-ended questions that elicit stories and other descriptive data from research participants (Appendices F & G).

Phase two. In the qualitative phase of my study, the approach I followed was one of basic qualitative research using a descriptive design (Patton, 2002; Sandelowski, 2000). The intent of basic qualitative research is to understand the meaning individuals have attached to certain phenomena they have experienced. Lincoln and Guba (1985) were among the first to introduce the term “human instrument” which “uniquely qualify the human being as the instrument of choice for naturalistic inquiry” (p. 193). First, human beings are able to sense subtle cues in the environment to which they naturally know how to respond. Merriam (2009) states researchers conducting basic qualitative research would be primarily interested in “how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences” (p. 23). Qualitative descriptive studies have as their goal a comprehensive summary of events in the everyday terms of those events (Sandalowski, 2000). The purpose of the qualitative phase was to better contextualize and interpret the quantitative results in order to determine if medical students’ empathy is influenced by participating in HiM workshops (Creswell & Plano-Clark, 2009).

Interviews. This study used one-to-one semi-structured, open-ended interviews focusing on empathy, in order to gain a more comprehensive understanding of empathy (Rubin & Rubin, 2012). With regard to qualitative design, Creswell (2009) recommends interview numbers for research participants to include approximately four to ten participants, suggesting saturation, however, as a guiding principle for number of interviews necessary during data collection. The rich data was obtained from the semi-structured, one-to-one interviews provided yet another means to provide research participants with a voice. The scheduled interviews were conducted in a secure conference room located in the CMSRU medical education building. The interview data was kept locked in the interviewer's office prior to the analysis of data. The interview protocol included approximately five questions, intended to further explain the research participants' attitudes, beliefs, perceptions, and experiences regarding empathy, building on the findings of a quantitative phase of the study.

Those HiM workshop participants who were selected and agreed to participate in the one-to-one interviews were sent a copy of both the interview protocol and consent form for the interview and audio taping prior to the interviews. Interviews occurred at CMSRU at a time which was convenient to the student and the researcher. The duration of each interview was approximately 45 minutes (Appendix J).

Data Analysis

Phase One: Jefferson Scale of Physician Empathy (JSPE). Following compilation of JSPE scores post-HiM workshops, the de-identified data was released to a designated CUH statistician for analysis. Descriptive analysis was used to report the mean (standard deviation) medians (interquartile range) and percentages. The CUH statistician analyzed the data using a Paired T Test to provide an overall comparison of the JSPE scores pre and post-

HiM workshops. The Paired T-Test is commonly used when the data is normally distributed to compare a sample group's scores before and after an intervention (Creswell, 2009; Creswell & Plano Clark, 2011).

In order to assess the relationship between age and JSPE, the Pearson's Correlation was used for the purpose of determining if there was a linear relationship between the variables (Creswell, 2009; Creswell & Plano Clark, 2011). The Mann-Whitney U test was also used to compare differences between two independent groups when the dependent variable is either ordinal or continuous, but not normally distributed, while the Chi Square test was used to determine the likelihood that an observed distribution was due to chance (Creswell, 2009). The Mann Whitney U Test was used to compare numerical changes in JSPE scores between male and female research participants, both pre- and post-HiM workshops, while the Chi Square test was used to compare the distribution of score decreases between the male and female subjects (Creswell, 2009). Lastly, the Independent T-Test was used to compare JSPE scores between male and female students to determine whether there was a statistically significant difference between the means in two unrelated groups (Creswell, 2009).

HiM workshop surveys. There are a number of features of the social world characterized through categorical variables, such as religion and political preference. The Chi-square test is used to determine whether there is a significant association between the variables obtained (Creswell, 2009; Creswell & Plano Clark, 2011). Chi Square Tests in this study were used to compare race, educational degree, and previous career experience through information obtained from the HiM research participants.

Open ended questions. There was one qualitative open-ended question, included as a survey monkey web link, which asked research participants to define and/or describe empathy, both pre- and post-HiM workshops. The data was coded and compared for themes and analyzed through descriptive analyses, in accordance with qualitative research collection and analysis. The data (themes) were also compared with the data collected from the same questions as repeated in the interview protocol, following the completion of the HiM workshops (Merriam, 2009; Patton, 2002).

Phase Two. Interviews. In order to establish credibility, Patton (2002, p. 544) describes the “objectivity of the inquirer, validity of the data, and the systematic rigor of fieldwork procedure as traditional scientific research criteria in qualitative research.” In qualitative analysis, data collection, and analysis proceed simultaneously (Merriam, 2009). In the second, qualitative phase of the study, the data obtained through the interviews, were coded and analyzed for themes through constant comparison, with the assistance of an experienced CUH qualitative researcher. The steps in qualitative analysis include: preliminary exploration of the data by reading through the transcripts and writing memos with the assistance of an experienced qualitative researcher; coding the data by segmenting and labeling the text; using codes to develop themes by aggregating similar codes together; connecting and interrelating themes; and constructing a narrative (Creswell, 2009).

All interviews in this study were audiotaped with permission of the participants and transcribed verbatim (Rubin & Rubin, 2005). These transcripts took place in two cycles. The First Cycle strategy of coding used both in-vivo coding and descriptive coding completed manually. In-vivo coding uses the actual words of participants allowing for the participants’ voices to be honored, an important component of understanding their experiences (Saldaña,

2009). Following in-vivo and descriptive coding, pattern coding was performed manually. The Second Cycle coding “further manages, filters, highlights, and focuses the salient features of the qualitative data record for generating categories, themes, and concepts, grasping meaning, and/or building theory” (Saldaña 2009, p. 8). The purpose of pattern coding was to locate “repetitive patterns of action and consistencies in human affairs as documented in the data” (Saldaña, 2009, p. 5). Coding is an on-going process. First Cycle codes were subsumed by other codes, relabeled, or dropped and later were used to determine categories and sub-categories (Saldaña, 2009). Themes were deduced by recognizing repetitions, similarities, and differences within the data. A theme “is an outcome of coding, categorization, and analytic reflection, not something that is, in itself, coded” (Saldaña, 2009, p. 13).

Following conclusion of the interview process, member checking occurred to allow participants to review data and findings during the research process to ensure accuracy (Lincoln and Guba, 1985). Member-checks are frequently considered the most important credibility check because participants can speak to inferences made, ensuring that they are indeed credible (Teddlie & Tashakkori, 2009). Member checks were used to increase trustworthiness through building credibility (Fink, 2012). To augment the further discussion, a visual data display/graphic elicitation has been created (Figure 7) to show the conceptual framework of the factors and relationships in the data (Miles & Huberman, 1994).

Ethical Considerations

Ethical considerations were addressed at each phase in the study. In compliance with the regulations of the IRB (IRB, n.d.), the Request for Review Application for research permission from Rowan University contained the description of the project and its

significance, methods and procedures, participants, and research status. Prior to conducting the research, a letter of introduction was emailed to all Class of 2019 students explaining the purpose of my research. An informed consent form had been developed and was emailed to the prospective research participants in order to gain permission from each participating student (Creswell & Plano Clark, 2011). The informed consent form stated that the participants are guaranteed certain rights, including anonymity and confidentiality, acknowledging their rights are protected (Appendix D).

All interviews in this study were audiotaped with permission of the participants and transcribed verbatim. The transcriptions, along with the audio tapes, were kept in a locked file cabinet at my office, prior to being hand carried to the qualitative study staff for further review and interpretation. All participants were assigned a unique identifier to protect their confidentiality and all identifying information was masked in the interview transcriptions (Rubin & Rubin, 2012). Participants were told the summary data will be disseminated to the professional community, but in no way will it be possible to trace responses to individuals. Word for word transcripts of the audio taped interviews were hand carried to the qualitative research consultant. The HiM workshop data, data analysis, and primary researcher's field notes were stored in a locked cabinet in a private locked office.

In alignment with Patton's (2002) recommendations for the researcher taking an active role in the collection and interpretation of others' meaning making, when interviewing, I employed open ended questions which were neutral, sensitive, clear, and unbiased, in order to illicit student perceptions regarding HiM workshops and empathy.

The Role of the Researcher

The researcher's involvement with data collection occurred in the second phase of the study. In the first, quantitative phase, the CUH statistician administered the HiM workshop survey via SurveyMonkey and the JSPE assessments were administered by the CMSRU Director of Assessment through CMSRU's One45 system, a secure curriculum management system by which students are able to complete assessments, for the purposes of collecting and linking identifying information (e.g., subjects' names) to subjects' responses (e.g., questionnaire answers), to provide the utmost confidentiality of subject data. There is restricted access to the data allowing only for CMSRU Director of Assessment. The CMSRU Director of Assessment released the de-identified data to a designated Cooper University Hospital (CUH) statistician for data analysis. The data were analyzed through rigorous statistical analysis techniques and the results were interpreted based on the established values for the statistical significance of the functions. Data from the HiM workshop surveys were also collected by the CUH statistician to avoid researcher bias. Following the collection of the data, the CUH statistician used quota sampling to provide a sample that is highly representative of the HiM participants being studied.

In the second, qualitative phase, the researcher's role may be considered more participatory due to conducting interviews with the research participants and with regard to my professional role as CMSRU Chief Student Affairs Officer and co-facilitator of the HiM workshops (Creswell, 2009). The aforementioned description of the researcher's role gave cause to not neglect the warning associated with conducting qualitative research in "one's own backyard" (Creswell, 2009). Following the completion of the interviews, word for word transcripts of the audio taped interviews were hand carried to a CUH qualitative research

consultant. Verification procedures, including triangulation of data sources, member checking, bracketing, and thick and rich descriptions of the cases were used to establish the accuracy of the findings and to control some of the “backyard” research issues (Bryman, 2007; Patton, 2002; Sandelowski, 2000).

Chapter 4

Results

This chapter explains the findings of the explanatory mixed methods research study presented. Sixty six CMSRU M1 students participated in HiM Workshop I, twenty six of the original M1 students completed both HiM Workshops I and II, pre-and post-JSPE assessments, and pre-and post-HiM workshops surveys. HiM Workshop and Survey I was facilitated in December 2015 and HiM Workshop and Survey II was facilitated in January 2016. The JSPE I was administered to students in August 2015 and the JSPE II was administered following HiM Workshop II in January 2016. The interval between JSPE pre-post assessments was five months. The semi-structured, one to one interviews of four M1 students who participated in HiM workshops I and II, completed HiM pre- and post-workshop surveys, and JSPE assessments I and II, were selected by quota sampling. The interviews occurred in January and February 2016 during the qualitative phase of the research.

The demographics of the students who participated in both workshops are the same. The de-identified quantitative data were analyzed using SPSS 22 to evaluate the research questions. Themes emerged from the qualitative data by using an iterative process of constant companion. Each research question was individually considered while evaluating the findings. Figure 7 represents the data analysis process used in this study.

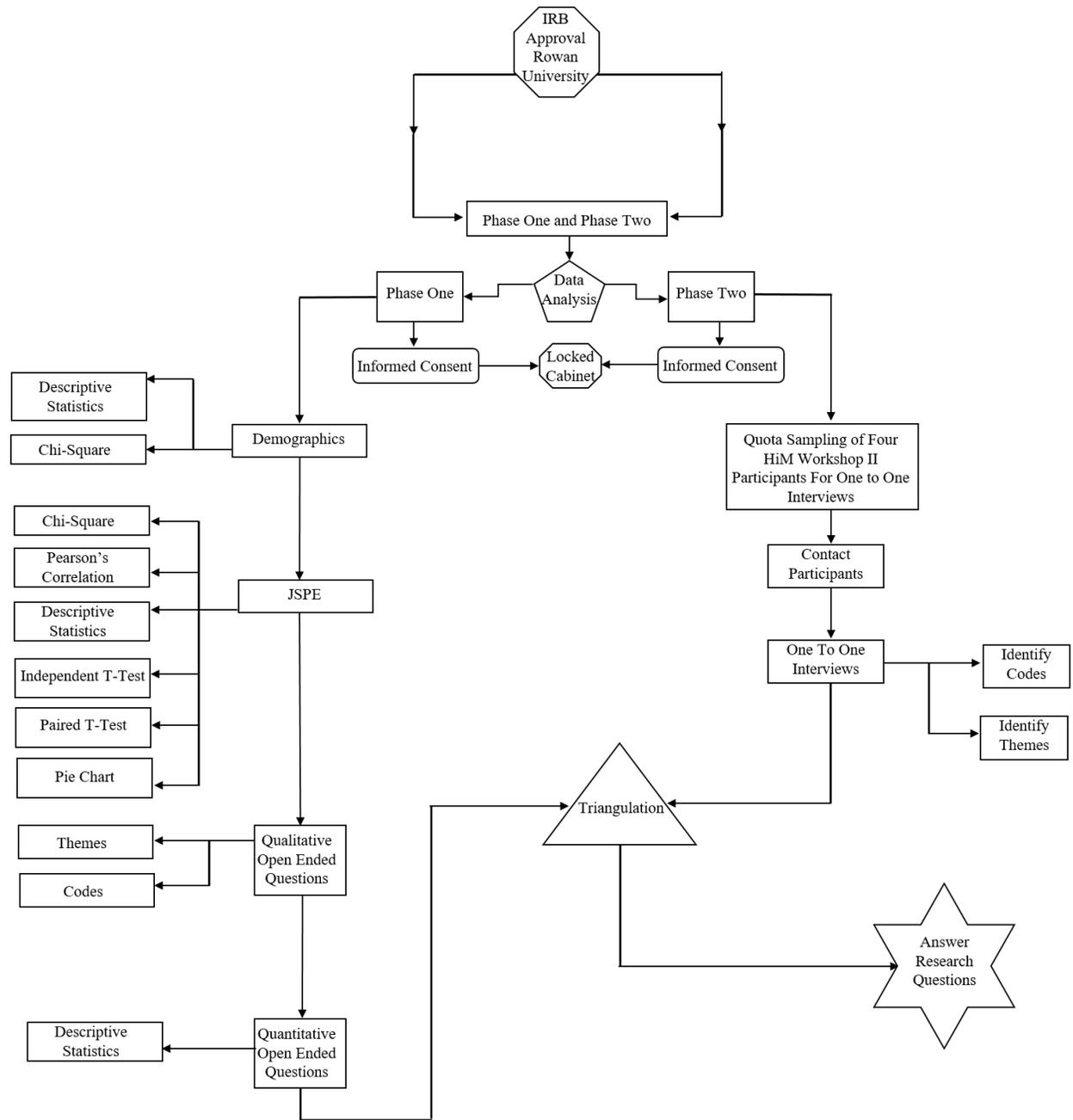


Figure 7. HiM Data Analysis Process

This mixed methods explanatory study as described in Chapter Three was conducted and designed to assess and analyze the impact of two 90 minute learning interventions focusing on emotional intelligence theories and frameworks as they relate to CMSRU M1 student empathy. The data was triangulated using both pre-and post-Jefferson JSPE assessments, pre-and post-HiM workshop participant surveys, post-HiM workshops, qualitative interviews, and post member checking notes by the researcher and qualitative expert/study staff. The pre-and post-JSPE quantitative data, the post intervention qualitative data, the HiM workshop participant surveys and the researcher's notes have identified findings for the following research questions in this explanatory study.

- Does participation in the Humanism in Medicine (HiM) workshops influence M1 student empathy as measured by the Jefferson Empathy Scale (JSPE) of Physician Empathy?
- How do M1 students define or describe empathy pre-HiM workshops?
- How do M1 students define or describe empathy post-HiM workshops?

Table 2

HiM Workshop Surveys I & II Profile of Participants

Variable	HiM Workshop I		HiM Workshop II	
	<i>f</i> (n=66)	%	<i>f</i> (n=26)	%
White	41	62.1	17	65.4
African-American	3	4.5	1	3.8
Asian	13	19.7	6	23.1
Other	6	9.1	2	7.7
Married	2	3.0	0	0
Not Married	64	97.0	26	100
College degree	55	83.3	26	100
Graduate degree	5	7.6	3	11.6
Post Baccalaureate	6	9.1	1	3.8
Undergraduate				
Science major	45	68.2	22	84.6
Previous career				
Medically related	35	53.0	12	46.2

The majority of research participants attending both HiM workshops (>62%) described themselves as Caucasian and unmarried. HiM Workshop II participants who identified as Asian in workshop represented 23% of those participating. Those participants who considered themselves as a member of other races indicated they were multi-racial. Those identified as undergraduate science major represented more than 68% participation in

both HiM workshops. More than 41% of the research participants identified as having a medically related career. Non-medically related careers included: engineering, military, creative arts, marketing/advertising, research and education. There were no statistical differences in the characteristics of research participants in HiM Workshop I and II. No significant associations were found between empathy scores and the variables.

Research Question One

Does participation in the Humanism in Medicine (HiM) workshops influence student empathy (M1) as measured by the Jefferson Empathy Scale of Physician Empathy (JSPE)?

The JSPE-MS (MS=Student version) was developed to measure the orientation of medical students toward physician empathy in patient-care situations (Hojat, et al., 2002). The JSPE instrument 20 Likert-type items are answered on a seven-point scale (1 = “strongly disagree,” 7 = “strongly agree”). To control for the "acquiescence" response style (a tendency to passively and consistently endorse "agree" [or "disagree"] responses to the test questions), 17 items are positively worded (directly scored) In the Medical Student- S-Version, only three negatively worded items appear (reverse scored). (Appendix E). The JSPE-MS focuses on the effect of selected internal and external variables of empathy, known as Hojat’s three factor model, a multidimensional model comprising three related constructs: perspective taking, compassionate care, and the ability to stand in the patient's shoes (Hojat et al., 2001). The JSPE-MS scored range of empathy is 20-140.

Data analysis was done using several tests. Descriptive analysis was used to report the mean (standard deviation), medians (interquartile range) and percentages. Overall comparison between pre- and post-intervention JSPE was completed by using a Paired T Test. The Independent T Test was used to compare the JSPE scores between the males and

female students. The Mann Whitney U Test and Chi Square tests were used to compare numerical changes in JSPE pre- and post- scores between males and females. Additionally, correlations were used to assess any relationship between age and JSPE scores.

In order to answer the research questions, 26 CMSRU M1 students participated in two 90 minute Humanism in Medicine (HiM) workshops. The study was conducted during the months of December 2015 and January 2016 after receiving IRB approval from Rowan University. The JSPE scores of M1 HiM research participants was compared at two intervals, pre-HiM workshops, which occurred immediately following CMSRU Orientation, in August 2015 and post-HiM Workshop II, during January 2016. The quantitative data provided the numerical information, while the qualitative data provided the perceptions of the CMSRU M1 students studied. The integration and triangulation of the data provided more in-depth information to answer the research questions.

Table 3

Distributions, Percentiles, and Descriptive Analysis on the Jefferson Scale of Physician Empathy (JSPE) of 26 CMSRU HiM Research Participants

Score Variable	Interval	Frequency	Percentile	Cumulative Frequency	Cumulative Percentile
Pre-HiM Workshops	<95	0	0	0	0
	95-104	4	15.4%	4	15.4%
	105-114	15	57.7%	19	73.1%
	>115	7	26.9%	26	100.0%
Post-HiM Workshops	<95	3	11.5%	3	11.5%
	95-104	7	26.9%	10	38.5%
	105-114	8	30.8%	18	69.2%
	>115	8	30.8%	26	100.0%
Pre-HiM - Mean	110.96				
Pre-HiM SD	7.523				
Post-HiM - Mean	108.04				
Post-HiM (w) SD	10.02				
Pre-HiM (w) (25 th %)	106				
Median (50%)	111				
75 th percentile	115.5				
Range	95-126				
Post-HiM (w) (25 th %)	102.75				
Median (50%)	108				
75 th percentile	116				
Range	82-125				
Possible Range	20-140				
Actual Range	82-126				

The JSPE scores pre-HiM workshops for 15% of CMSRU M1 workshop participants, ranged from 95-104, while 58% of subjects scored 105-114. Twenty seven percent of the participants scored greater than or equal to 115, placing this group at or above the 75th percentile of the sample.

Post-HiM workshops, 12% of research participants scored below 95, while 27% scored from 95-104, while 31% scored within the 105-114 interval and 31% also scored greater than or equal to 115.

The mean score pre-HiM workshops was 110.96, while the mean score post-HiM workshops was 108.04. Overall, the range of JSPE scores were 95-126 pre-HiM workshops and 82-125 post-HiM workshops. Pre-HiM workshop, no participant had a score below 95. Post-HiM workshop, three research participants had scores which decreased below 95. The decrease in JSPE scores was not considered statistically significant.

Table 4

Overall Test Score Comparison

Factor	N	Mean	SD	P value
JSPE Pre-HiM Workshop I	26	110.96	7.523	0.055
JSPE Post-HiM Workshop II	26	108.04	10.018	

The Paired T-Test was used to determine the mean JSPE scores pre-HiM workshops and post-HiM workshops. The 26 research participants had a median difference of -1.92 points from pre-HiM workshops to post-HiM workshops indicating there is not a significant

difference in scores ($t(25) = 2.015, p = .055$). Given the small sample size, a post hoc analysis was completed indicating that 78 pairs of participants are necessary to have an 80% chance that a negative finding is not a false negative finding.

Table 5

Overall Percentage Differences in JSPE Scores post- HiM Workshops by Gender

	N=26	Percentage Change
Overall JSPE Change	26	-2.6%
Male JSPE Change	10	-5.1%
Female JSPE Change	16	-1.5%

The overall percentage of JSPE scores decreased by nearly 3%, post-HiM workshops. JSPE scores of male participants (n=10) post-HiM workshops decreased by 5% overall, while JSPE scores decreased by nearly 2% in female participants (n=16).

Table 6

Difference between CMSRU MI HiM Workshops Participants pre- and post-HiM Workshops

	Male	Female	
N	10	16	
Median	-2	-0.5	
Minimum	-26	-10	
Maximum	3	10	
25th Percentile	-12.25	7	
75th Percentile	- 0.75	3.5	<i>p value = .182</i>

The Mann Whitney U test was used to rank test scores for HiM workshop participants. There were not statistically significant median point differences between males (M= -2 IQR= 12.25, -.75) and females (M= -5 IQR= 73.5).

Table 7

JSPE and Gender Compared pre- and post-HiM Workshops

	Gender	N	Mean	St.D	P Value
JSPE Pre-HiM Workshop I	Male	10	110.70	6.617	.892
	Female	16	111.13	8.245	
JSPE Post-HiM Workshop II	Male	10	105	11.47	.229
	Female	16	109.94	8.85	

The JSPE mean scores of male and females who completed both JSPE I and II, were compared using an Independent T Test. Pre-HiM workshop (equation) and post-HiM workshops (equation) indicate there is not a statistically significant difference between the males and females in our sample for the pre intervention ($t(24) = -.137, p = .892$) and post intervention ($t(24) = -1.235, p = .229$). The standard deviations indicate that there was very little dispersion of JSPE scores.

Table 8

JSPE Distribution Following HiM Workshop II

Variable	Male	Female	Total	Total
	<i>f</i>	<i>f</i>	<i>f</i>	%
	(n=10)	(n=16)	(n=26)	(n=26)
Decreased score	8	8	16	61
No change in score	1	1	2	7.7
Increased score	1	7	8	30.8
Total	10	16	26	100

Post-HiM Workshop II, 16 of the 26 research participants (61%) had a decrease in score indicating that the majority of these students had a reduction of empathy as measured by the JSPE. Thirty one percent of study participants increased their score, while 8% of the subjects had the same pre and post intervention scores. The decrease in JSPE scores is not statistically significant.

Table 9

Age and JSPE Changes pre- and post-HiM Workshops

Age	JSPE	JSPE Post-HiM workshops
Correlation	0.311	-0.008
Sig. (2-tailed)	0.122	0.968
N	26	26

The Pearson's Correlation was used to determine that there is no relationship between age and JSPE scores pre-HiM Workshop I – ($r(24) = .31, p = .122$). Post-HiM Workshop II – ($r(24) = -.008, p = .968$).

Research Question Two

How do (M1) students define or describe empathy pre-HiM workshops?

Question number two was answered by collecting responses from an open ended question included on the HiM workshop Survey I. The anonymous SurveyMonkey questionnaire included demographic questions (Table 2) and an open-ended question asking research participants to define and describe empathy (Appendix F.). Students completed HiM SurveyMonkey I immediately following the conclusion of HiM Workshop I. The themes from the open ended questions and those from subsequent interviews in the qualitative component of the research provided a voice for the participants. Patton (2002) suggests open ended responses permit the researcher to understand the world as seen by the respondents. This enables the researcher to capture the points of view of other people without pre-determining those points of view.

As represented in the tables below, themes for the open ended questions the research participants answered from the CMSRU M1 research participants are discussed in the next section. The overview question is listed with the identified themes and occurrences. The frequency of each unit was counted and ranked in order of occurrences. Common themes for both open ended questions and interview questions were identified by the researcher and the qualitative research expert.

Table 10

Themes from Open-Ended Question pre-HiM Workshop I: How do you define or describe empathy?

Themes	Total
Ability to understand another individual	35
Stand in the patient's shoes	8

The majority of M1 research participant descriptions of empathy, pre-HiM workshops, stated empathy as an ability to understand and relate to another's feelings. Additionally, several students included showing compassion and respect within their definition of empathy. Lastly, a number of the students described empathy as the ability to stand in the patient's shoes. Students, described empathy as an ability to understand, according to Hojat (2007), rather than feeling, is a keyword to consider in the context of patient care. One of the research participants expressed the following,

Empathy [to me] is something more along the lines of understanding another person or patient. Being able to think about who [patients] they are, placing myself into what they've been experiencing, and why they might explain a symptom a certain way, is important to understand.

Another HiM Workshop I participant stated, "[I would describe empathy as] being emotionally present with someone and being able to engage with them in the moment they're in."

Research Question Three

How do (M1) students define or describe empathy post-HiM workshops?

This research question was answered by responses obtained from both the open-ended post-HiM workshop Survey II question and again during post-HiM workshop interviews. (Appendix G.)

Table 11

Themes from Open Ended Question post-HiM Workshop II: Please define or describe empathy?

Themes	Total
Standing in the Patient's Shoes	20
Connecting Emotionally	6

HiM workshop Survey II had a total of 26 participants. Many of the themes derived from HiM workshop Survey I remained the same. However, some Survey II respondents provided a more complex definition of empathy. Twenty three percent of research participants described empathy in terms of the emotional connection between the provider and patient. Seventy seven percent of subjects defined empathy as both the reflective and collaborative process involved in an empathic physician-patient exchange. Clinical empathy is defined as the ability of the physician to stand in the patient's shoes (Hojat, 2007).

Themes from HiM workshop Survey II, further described the empathic exchange in the doctor-patient relationship as reciprocal. This reciprocal exchange depends on the provider's ability to empathize, by his being able to convey an understanding of the patient's

situation. By the physician conveying an understanding of the patient's situation, establishing an emotional connection is imperative for the patient's empathic response to occur.

Responses following HiM Workshop II include,

Most relationships are based on some sort of emotional connection, beyond understanding. Empathy is offering compassion and respect... and treating somebody how you want to be treated. If bad news (diagnosis) is on the horizon [positive empathic communication] is the way you would want your mom to hear bad news.

[Following the workshops], I probably will think more often about the importance of an emotional connection because it puts you in a position of whether you can relate to the patient or not or whether you can step in their shoes and see how they're perceiving what for you is just day-to-day activities.

The graphic (Figure 8) representing a CMSRU M1 medical student, conceptualizes the overarching themes from HiM workshop Surveys I and II and the HiM interviews, suggesting empathy can be described as the ability to understand another's circumstances. In the doctor-patient relationship, a physician's self-awareness allows for a better understanding of the patient's circumstances. Proper self-care provides the internal emotional resources physicians need in order to understand and treat their patients. Additionally, interviewees agreed with the HiM Workshop II concept that emotions can be considered as data (Mayer, Salovey, & Caruso, 2004). The "emotional" data impact the interaction of both patient and physician. The socially aware physician is able use these meaningful data to connect emotionally with the patient. The emotional bond forged between physician and patient, allows the physician to stand in the patient's shoes. Empathic communication is at the heart or integral to the doctor-patient relationship and is the result of the doctor's skill and choice.

Profile of One-on-One Interviews

Interviews were held with four CMSRU M1 students (Appendix J.). During phase one of the study, participants were asked if they would like to participate in one to one interviews in phase two of the research, during the informed consent process. For the twenty six students who completed both workshops and both pre- and post-JSPE and HiM workshop surveys, quota sampling was used to identify potential interviewees for phase two of this research. Six candidates were originally selected to participate in the interview phase. One student declined to be interviewed and one did not respond to the interview request. The remaining four M1 research participants, when contacted, were asked to provide a convenient time and place for the purpose of interview scheduling.

Prior to meeting with the participants, an electronic copy of the informed consent, an additional interview and audiotaping consent form, and a list of the questions were supplied to each participant. The interviews with participants were conducted in an available CMSRU conference room. The participants were asked to sign the consent form for audio taping and the interviewing prior to beginning the scheduled interview. The participants were informed that they could stop the interview process at any time and that the interview was voluntary. The one-to-one interviews represented (16 %) of the total 26 participants who participated to be involved in the qualitative phase of the research. The one-on-one interviews consisted of 50% females and 50% males. Each interview lasted for approximately 45 minutes and consisted of approximately 15-20 pages of double spaced verbatim transcription. The transcriptions were verified with the audio tapes to ensure transcription accuracy by the researcher and qualitative expert.

An iterative process of thematic analysis was facilitated by the ongoing immersion of codes and themes from the data. The themes were then validated and reread to verify the identified codes and themes from the interviews. The credibility, transferability, dependability and confirmability of the research occurred as a result of the qualitative expert and the researcher conducting an ongoing dialogue and discourse (Lincoln & Guba, 1985). The researcher and the qualitative research expert met two hours weekly, over an eight week period, to conduct member checking and to analyze and triangulate the data, for the purpose of shared understanding.

The one to one interviews were analyzed using the same process. Phrases and clauses were the basis of analysis, with verbiage not considered as essential eliminated, and the verb noun syntax corrected where appropriate. Clarifications were added to understand the context when appropriate. The priority when analyzing the data was to not only organize the data, but to immerse ourselves in the data in order to become most familiar with the data. Themes emerged from this process. The data from the participants were read and reread multiple times, classified and then reduced and collapsed into categories. Verbatim quotes were also provided to explore and understand the voices of the participants from the one-on-one interviews. Member checking and data triangulation by the researcher and qualitative research expert was used to confirm the findings from the HiM interview participants (Creswell & Plano Clark, 2011).

Table 12

Themes from One-to-One Interviews Regarding Empathy: Provide an example of an experience that you have had or have observed that best exemplifies empathy to you?

Themes	Total
Student Experience	2
Observed in Others	2

Four CMSRU M1 students who participated in the HiM workshop interviews provided a rich discourse in describing acts of empathy they experienced and/or observed in both daily and doctor-patient encounters. One interviewee described empathy by providing her recollection of engaging in a positive empathic teacher-student encounter by stating,

[As a former teacher] it was really easy for me to get mad at my students. I had several students who didn't have food at home. They acted out. They came late. Things like that, when I think about empathy are important, because then I can change my actions accordingly to fit the situation.

Another interviewee experienced a lack of empathy when her physician diagnosed her with Grave's disease, an endocrine condition, as follows,

When I was diagnosed with Graves' disease, my physician did not seem to really understand what that meant for me in giving me the diagnosis. She wasn't putting herself in my shoes as a young, twenty something year old, when most of her patients are older, dealing with endocrine conditions.

Another interviewee observed a profound lack of empathy in the delivery of diagnostic results,

When I was working at a local [Camden] clinic prior to med school, I accompanied a patient to the clinic that had already lost one leg. During the visit, the doctor told him the other leg was going to be amputated. He was not taking care of his diabetes and the doctor, said, well, that sucks... and there was just no engagement [with the patient]. The patient was pretty shocked. The patient had a seizure disorder and ended up having a seizure that night from the shock of the news.

The remaining HiM interviewee observed and experienced compassionate empathy, also known as empathic concern (Goleman, 2007), often described as understanding a person’s predicament, feeling with them, but spontaneously moved to help. He experienced compassionate empathy by feeding those who are hungry and homeless by stating, “[In urban areas like Camden], I’ve seen it and I’ve done it myself. Seeing people go out of their way to just get those [homeless and hungry] a full meal and hand it over to them.”

Table 13

Themes from One-to-One Interviews Regarding Empathy and Patient Care: Has your understanding of empathy following participation in the HiM workshops influenced the care of your patients? If so, how?

Themes	Total
Self-Awareness	2
Social-Awareness	2

Students expressed a belief that empathy is more than just addressing a patient’s symptoms. Rather, empathy was described as necessary to forge strong, trusting relationships for the purpose of assisting patients through a difficult time. An overarching sentiment expressed by several research participants was the need for patients to feel like they are listened to, feel like they have a voice, or feel like they have more to live for than just receiving treatment. The study participants expressed the belief that patients want to believe their doctor understands and relates to them in order to provide a diagnosis, but also to treat them [the patient] holistically. An interviewee stated,

I think it's important to recognize that this patient is vulnerable and that you need to be on their level with them in whatever way that means, whether that means just understanding what their goals are or understanding what they need and just meeting them where they're at [emotionally].

Table 14

Themes from One-to-One Interviews Regarding Emotion Regulation: Has participation in HiM workshops influenced or changed your understanding of emotion regulation?

Themes	Total
Emotions are Data	2
Self-Care	2

Following participation in HiM workshops activities, which included attending to the verbal and non-verbal cues of the patient and staying attuned to their own personal emotions, interviewees better understood the concept that emotions be considered as data. Included below, research interviewees described emotional regulation as a necessary skill, for the purpose of understanding both their own emotions and those of their patient. These abilities are crucial to the capacity to empathize skillfully.

The insight I gained was just being aware of your current emotions. [Understanding] that “tool” of being able to say this is how I feel and then being able to modulate that accordingly, because if you don’t stop to think how am I feeling, where am I at, then you’re not going to be able to accurately engage the patient – and you may just react-negatively or positively.

The physician identity of past generations which often encouraged attaining human perfection for the sake of the patient, was recognized by two research participants as

unrealistic. One HiM interviewee believed the ideal of perfection will not engage the patient or build a trusting relationship. The interviewee stated,

I come from a family of physicians and we have this idea that you have to be on your “A” game all the time. You have to be there for your patient and – even if that results in sacrificing yourself, which is a bit extreme. So, from the workshops I learned, to be conscious of that fact that I am human, rather than pushing through and burning out, not addressing my own care. I think that helps us with our patients too, because your patient's going to want to open up to you if you can talk to them and be empathetic and not just put this robotic front on.

Table 15

Themes from One-to-One Interviews Regarding Empathy as Innate or Learned.

Themes	Total
Empathy Innate and Learned	4

HiM interviewees stated some people seem to be naturally more empathetic than others. A lack of empathy can lead to serious consequences for physicians, not only for their patients, but for medical students and residents who may regard a lack of empathic behavior as acceptable and emulate the inappropriate physician exemplar behavior. However, following participation in both HiM workshops, two interviewees agreed empathy can be described as both innate and learned. In this context, research interviewees recognize empathy as a developable skill, as is suggested by medical educators and EI thought leaders (Feighny et al., 1998; Goleman 1998, 2000).

A HiM Interviewee expressed,

I did not come in [to the workshops] with the framework of that this [empathy] was something that could be a skill, at all. So, that was definitely something enlightening to me. And then, that we were provided ways [tools] to improve and work on [empathy] too, was really important, even if you consider yourself to be an empathetic person.

Another HiM Interviewee stated,

I think empathy is innate to an extent, but it is also learned. Because when you're shadowing physicians in the hospital and you sometimes see the way they [negatively] talk to patients and you're just like, geez, what is that? So, you also learn from them being bad at it, and you say to yourself, I don't want to be like that and you kind of develop your own style.....what you think is the most empathetic way.

Table 16

Themes from One-to-One Interviews Regarding Participants Understanding of Empathy: Has participating in the HiM workshops changed your understanding empathy? If so, please explain.

Themes	Total
Choosing Empathy	4

All research interviewees agreed with the concept that empathy is a choice. However, empathy often requires a choice to engage with others' emotions. This choice, in turn, depends on one's desire to connect with others, even when doing so may not be a welcome interaction due to a multitude of circumstances. One research interviewee expressed,

[There is] the pressure to always have the most amazing relationship with your patient, and always be empathetic and say the right thing and understand completely what they're going through and ask the right question. That's a lot of pressure and not a sustainable practice. So, when empathy becomes a choice, you can be there and not be perfect, but you're choosing to be there with your patient and – regardless of what your day has been and what their day has been, you personally are making the decision to be there and do your best in that moment. And that doesn't mean that you feel great to be there and you want to.... that you're going to remember everything about their family, but you're going to give the best patient care you can.

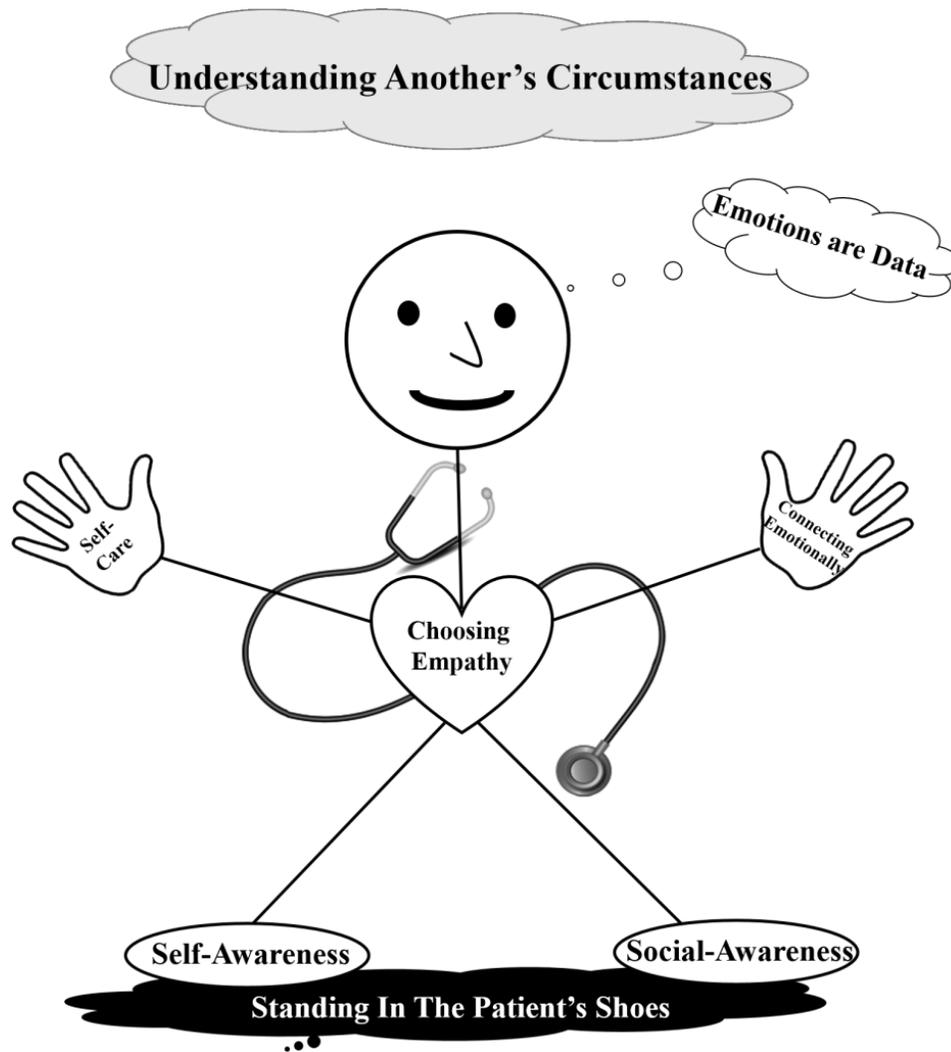


Figure 8. HiM Research Themes. The researcher’s conceptual understanding of the qualitative themes from this study is illustrated in Figure 8.

Conclusion

There was no statistically significant change in the pre-post JSPE scores for the 26 CMSRU HiM workshop participants. Eight of the research participants saw an increase in JSPE scores, while two participants’ JSPE scores remained the same. Overall, the JSPE scores of 16 subjects decreased. With regard to gender, seven females JSPE scores increased, while only one male’s JSPE score increased. However, the JSPE scores of eight male

subjects decreased and the JSPE scores of 8 female subjects decreased. None of these findings are statistically significant.

The results of the qualitative findings confirmed research participants found the HiM workshops informative and beneficial, by providing a safe place to discuss empathy as a choice in personal relationships and professional practice, while also providing tools to recognize emotions are data. Recognizing emotions as data assists with emotional awareness, emotional connection, and modulating and regulating emotions which provides the physician with the ability to stand in the patient's shoes. Students also recognized the importance of self-care as it relates to empathic relationships and physician burnout. All research interviewees agreed that HiM workshops opened their minds to the idea that empathy, although natural in inclination to most individuals, is also a skill which can be developed.

Chapter 5

Discussion

Medicine has evolved to encompass an alliance between the doctor and patient, in which the doctor must understand the patient holistically (Kaba & Sooriakumaran, 2007). Research supports the importance of empathy in general practice consultations for the purpose of achieving higher patient satisfaction, enablement, and improvement in some health outcomes, such as diabetes control and the common cold (Lundy et al., 2015). Empathy has been defined in the clinical context as involving an ability to understand the patient's situation, perspective, and feelings and to verify, act on, and communicate that understanding with the patient in a therapeutic manner (Hojat, 2009; Mercer & Reynolds, 2002; Neumann et al., 2009).

Empathy is one of the essential learning objectives identified by the Association of American Medical Colleges (AAMC, 2012). However, much of the existing literature indicates that medical students often experience declining empathy levels by third year of study. A decline in empathy is a major concern for medical educators and patients (Hojat, 2007; Hojat et al., 2002a, 2004, 2007, 2009). There is sparse literature in the medical field that explores the association between emotional intelligence (EI) and empathy in the doctor-patient relationship. Stratton, Elam, Murphy-Spencer, and Quinlivan (2005) found that medical students' EI was positively correlated with communication and behavioral skills. A careful review of the literature available regarding the incorporation of the tenants of humanistic training using EI theories and frameworks as a learning intervention within a medical school curriculum has revealed limited research.

This research was focused on CMSRU M1 students who participated in two 90 minute workshops focusing on the theories and frameworks of emotional intelligence, as it

relates to empathy. The purpose of this study was to determine if Humanism in Medicine (HiM) workshops influenced empathy scores, as measured by the Jefferson Scale of Physician Empathy (JSPE-MS) in the quantitative phase of the research. In addition, both a pre- and post-HiM workshop demographic survey were administered to students for the purpose of determining descriptive statistics of the population studied. The HiM workshop surveys also included an open-ended question asking participants to define/describe empathy. In the qualitative research phase, four interviews were facilitated with research participants who completed both HiM workshops, HiM workshops pre-post surveys, and the JSPE I and II.

This research is important because a decline in medical student empathy has been studied by medical educators for nearly twenty years and is considered a phenomenon (Chen, Lew, Hershman, & Orlander, 2007; Hojat et al., 2002, 2009). Students often come into medical school with a large capacity to empathize, but when they face the clinical reality of medicine, they may shift to having more of an objective outlook on medicine or opt to use more technology (Neumann et al., 2011). This reliance on technology may further limit human interaction. Students may have idealistic expectations coming into medical school, but can react with detached concerns and decreased empathy as they face disappointing situations (Neumann et al., 2011). Additionally, some physician exemplars may exhibit an implicit emphasis on detachment, self-interest, and objectivity, which may be emulated by students, often described as the hidden curriculum (Hicks, Schumacher, Guralnick, Carraccio, MD, & Burke, 2014).

According to Morley, Roseamelia, Smith, & Villarreal (2013), research indicated medical students tested had a decline in compassion and empathy after their first year of

medical school. Often debated questions regarding empathy have included whether a decline in empathy can be mitigated and/or and can it be nurtured, preserved and developed with training (Feighny et al., 1998; Hojat et al., Reiss, Kelley, Bailey, Dunn, & Phillips, et al., 2012). While some people may be naturally more empathic, existing research and the results of this study suggest empathy is a skill which can be developed (Reiss et al., 2012).

Discussion of the Findings

Quantitative Phase. The learning interventions were facilitated as two 90 minute classroom based Humanism in Medicine workshops. The data analysis determined there was no statistically significant change in the JSPE scores pre- and post-HiM workshops as illustrated in Figure 9.

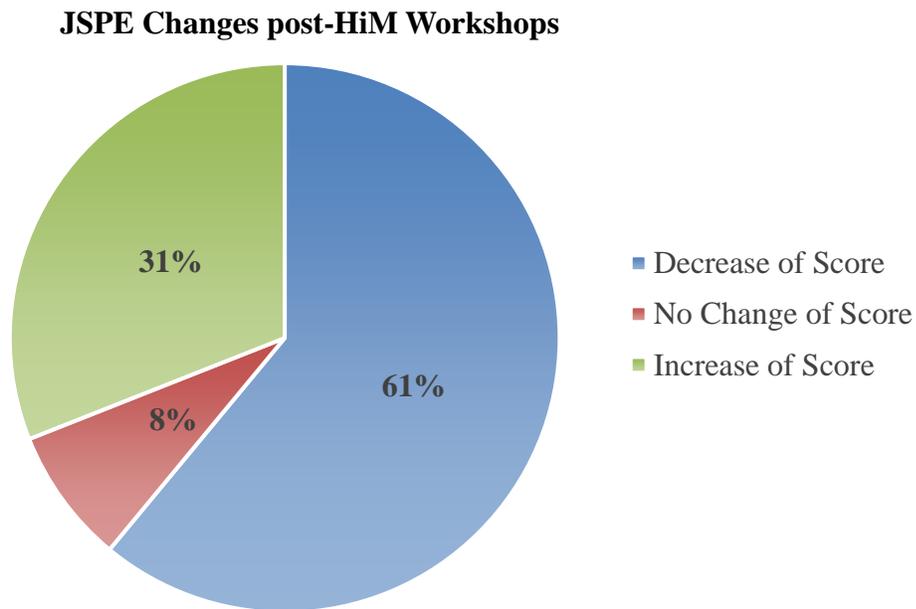


Figure 9. JSPE Score Changes post-HiM Workshops

Overall JSPE scores pre-post-HiM workshops decreased by 3%. JSPE scores for male subjects' pre-post-HiM workshops decreased by 5%, while JSPE scores for female subjects decreased by 1%. Although the changes in JSPE scores post-HiM workshops are not considered statistically significant, 61% of research participants experienced a decrease in JSPE scores. Thirty one percent of subjects JSPE scores increased and 8% of the participant's scores remained the same. The average of the JSPE scores post-HiM workshops decreased by 5 points for male subjects. The average of the JSPE scores post-HiM workshops decreased by 1 point for female subjects. The overall average decrease in JSPE scores post-HiM workshops was (<3) points. The actual JSPE scores for participants ranged from 95-126 pre-HiM workshops and 82-125 post-HiM workshops. The possible range of JSPE scores are from 20-140. None of these findings are statistically significant.

Some of the possible reasons research participants have experienced a minimal decrease in JSPE scores may be due to the increased demands of the medical school curriculum, attributed to the stress of studying and working in this environment. The increased demands due to medical school matriculation may have already begun to take its toll on students in terms of their time, physical state, and emotional well-being, affecting empathy (Dyrbye, Thomas, & Shanafelt, 2005). Research also suggests a focus on science and rationality during medical training tends to emphasize detachment and objective clinical neutrality, and prioritizes the technologic over the humanistic (Shapiro, 2011).

Gender differences. The results of the gender differences observed in this study find that women in general are more empathic than men. This is consistent with previous research in which earlier versions of the JSPE were used with samples of physicians (Hojat et al., 2002b); medical students (Hojat et al., 2001, 2002a); and nursing students (Ward et al.,

2009). For the most part, gender findings by other researchers using self-report scales, such as the JSPE, are consistent with these findings (Chen, Lew, Hershman, & Orlander et al., 2007; Wen et al., 2013). New neuroimaging techniques are providing much more specific information supporting commonly held assumptions about gender differences. Derntl and colleagues (2010) reported results of a multidimensional study including functional MRI and a self-report questionnaire, showing that females and males rely on divergent processing strategies when solving emotional tasks: While females seem to recruit more emotion-related regions of the brain, males activate more cortical or cognitive-related areas. My research findings on gender differences with regard to empathy are in agreement with the reports that female physicians spend more time with their patients, have fewer patients, and render more preventive and patient-oriented care (Hojat et al., 2002).

JSPE and age. The Pearson's Correlation was used to compare age pre- and post-JSPE. The average age for the 26 research participants included in this study was 23 years old. There was no significant relationship found between age and JSPE. These findings are consistent with other studies observed among medical students in which no significant relationship was found between empathy scores and age (Hojat, 2007).

Qualitative Findings

The qualitative interviews supported the premise that HiM workshops provided information and activities for the purpose of understanding, recognizing and utilizing behavioral and communications skills which support empathy in the doctor-patient relationship. Specific interviewee comments (Tables 14 & 15) highlight the relevancy of the learning intervention design and use of the emotional intelligence theories, supporting earlier research by Goleman (1998, 2000) and Mayer, Salovey, and Causo (2004). The respective

EI researchers suggest emotions are an extremely important part of our lives, profoundly affecting our actions. HiM interviewees also confirmed the importance of understanding the important role emotions play in interpersonal relationships.

Understanding the Patient

Patients seek empathy from their physicians. A physicians' emotional attunement to one-self and others assists in understanding patients' emotions (Halpern, 2003). The act of empathy acknowledges the understanding of the emotional state of another without experiencing that state oneself. Research participants in this study recognized this need to understand the patient.

Clinical empathy, once known as “bedside manner” and traditionally regarded as less important than technical acumen, is now recognized as no mere frill. Seventy seven percent of HiM research participants described empathy as an ability to understand another’s circumstances. In this clinical context, empathy is defined the ability to stand in the patients shoes and convey an understanding of the patient’s situation as well as a desire to help (Hojat, 2007, 2009; Hojat et al., 2002).

The emotional attunement to the other differs from that which physician educators previously deemed as detached cognition. Empathy requires an understanding of others' feelings and concerns, emanating from awareness of one’s own feelings (Goleman, 2000). The ability to understand the other in the clinical context or role taking of others is based on the sense of self-awareness, such as the participants discussed when recognizing themselves as separate beings (Goleman, 2000). Research participants discussed and emphasized the importance of being able to convey the patient’s perspective.

Self-Awareness and Social Awareness in the EI Framework as it Relates to Empathy

Goleman's (2000) framework of EI (four quadrants of self-awareness, self-management, social awareness, and relationship management) are analyzed as a wide array of competencies and skills that drive and affect medical student and physician performance and patient care.

The self-awareness cluster of EI competencies, according to Goleman (1998, 2000) contains three competencies: emotional awareness which is comprised of recognizing one's emotions and their effects; accurate self-assessment is to know one's strengths and limits; and self-confidence. Self-confidence provides a strong sense of one's self-worth and capabilities. Thus, self-awareness is an essential component in the development of empathy. Self-awareness relies on knowing one's own internal states, preferences, resources, and intuitions. According to Goleman, (1998, 2000), self-awareness lies at the core of ego-centric awareness, which is the first step in the development of social skill. The quality of self-awareness promotes the development of "other" awareness, as defined by Goleman's theory of performance (2000).

Goleman (1998, 2000) describes social awareness in relation EI, as to how people handle relationships and awareness of others' feelings, needs, and concerns. According to Goleman, (2000) the social awareness cluster of EI includes: empathy, defined as sensing others' feelings and perspectives, and taking an active interest in their concerns; service orientation, defined as anticipating, recognizing, and meeting another's needs; and other awareness, which includes reading a person and /or group's emotional currents and power relationships.

HiM workshop activities included in the HiM program design, included practice exercises known as “reading the room.” These activities provided an opportunity for students to gain perspective of the emotional cues and currents of the patient, to better forge empathic relationships. Mayer, Salovey, and Caruso (2000, 2004) describe the empathic individual, as one who can read emotional currents, picking up on patient nonverbal cues, such as tone of voice or facial expression. This becomes especially important when physicians have to correctly interpret facial or non-verbal expressions of pain behavior (Goubert et al., 2005). Research participants commented that HiM workshop activities provided effective methods to better understand and recognize the role emotions play in the doctor-patient relationship, which ultimately can affect empathic communication and meaningful therapeutic interactions benefitting both the patient and the physician.



Figure 10. Goleman’s (2000) EI Framework

This research supports a framework for applying Goleman’s description of self-awareness as it relates and overlaps with awareness of the other. As this framework applies to the doctor-patient relationship, students described themselves in HiM open-ended survey questions and interview responses as “standing in the patient’s shoes.” This ability to stand in the patient’s shoes, allows students to take the perspective of others and cultivate rapport with a broad diversity of people. This self-awareness and sensitivity to others is critical for empathic communication to occur between the physician and the patient. Relationship management skills and social awareness/social skills are essential to medical student empathy and physician professionalism and patient satisfaction (Goleman, 1998, 2000).

The Physician–Patient Emotional Connection

Dr. Helen Reiss, Director of the Empathy and Relational Science Program at Massachusetts General Hospital states,

The role of the physician in appropriately utilizing cognitive empathy, allows him/her to get under the patient’s skin and see the world from their point of view. This ability to see the world from the patient’s point of view, also allows the physician to back out of the situation, in an effort to be objective and make the best rational decision (Kasam, 2014, p. 2).

Previously, medical educators, such as Larson and Yao (2005), considered empathy expressed by physicians to be an “emotional labor”, where physicians can either use “deep acting”, also known as method acting, to generate consistent cognitive reactions to a patient, or “surface acting” to forge empathic behavior in the absence of cognitive reactions to the patient.

Goleman and George (2015) have recently expanded their definition of empathy to include the necessity of authenticity within the empathic interaction. This definition aligns with Shapiro, Morrison, and Boker (2004) who caution against “selective” empathy. They describe selective empathy as a performance that is generated in response to certain evaluative situations, or something that naturally arises toward certain likeable patients or patients similar to the student. Shapiro, Morrison, and Boker (2004) implore an authentic empathic interaction needs to be cultivated toward all patients, especially stigmatized, marginalized, or otherwise unappealing patient populations to ensure humanistic patient care.

HiM research participants discussed emotions and a practice of empathy that honors its emotion based dimension, which may potentially change other aspects of the culture of medicine (Shapiro, 2008, 2013). For example, instead of the emotional detachment routinely encouraged in clinical interactions in decades past, or selective empathy, students discussed being willing to develop “compassionate solidarity” with the patient’s suffering, an attitude which Coulehan (2009, p. 585) describes as a process which begins with empathic listening and responding, requires reflectivity, self-understanding, vulnerability and is in itself a healing act.

Aligning with Coulehan’s (2009) statements regarding compassionate solidarity, the four HiM interviewees agreed that rather than defending against their patients’ distress, from a position of empathy, physicians could learn to recognize their own vulnerability to suffering and therefore be willing to connect with others, including their patients. Humanism in medicine is described as healthcare training and practice which fosters a culture of altruism, empathy, open communication, respect, dignity, and compassion for patients and professionals (Charon, 2001). CMSRU M1 research participants agreed empathy is essential

to establishing an emotional connection in the foundation of the doctor-patient relationship. An emotional connection with patients is a fundamental principle of humanistic medicine, facilitated by building trust and forging collaborative doctor-patient relationships.

Emotions are Data

Research participants discussed HiM workshop activities and tools highlighting the concept that “emotions are data.” Emotion or emotional regulation is described as the skillful understanding and balancing of emotions (Tamir, 2009). It is a general term that encompasses several component parts, which include being aware of and paying direct attention to emotions of one-self and others, understanding and labeling emotions, allowing emotions to occur without necessarily acting on them, and managing or modifying emotional reactions so as to meet important goals, such as empathic communication, integral to the doctor-patient relationship (Tamir, 2009).

The concept of emotional regulation aligns with the emotional intelligence theory (Mayer, Salovey, & Caruso, 2004), suggesting the ability to accurately perceive, access and generate emotions, assists in understanding and affectively regulating emotions, promoting emotional and intellectual growth. HiM interviewees discussed HiM workshop activities, including those focusing on emotion modulation and regulation in post-HiM workshop interviews. Collectively, the HiM interviewees agreed the concepts and activities discussed in the HiM workshops, provided them with information to continue developing skills which can effectively assist in regulation of their own emotions. The process of self-regulation enhances collaborative, empathic communication with patients (Mayer, Salovey, & Caruso, 2004).

If physicians fail to regulate their emotions adequately in their interactions with their patients, they may experience feelings of being emotionally drained over time. Physicians' inability to properly manage their emotions could lead to emotional exhaustion, which is the most obvious manifestation of burnout (Maslach, Schaufeli, & Leiter, 2001). Burnout is defined as a progressive loss of idealism, energy, and purpose experienced by people in the helping professions as a result of the conditions of their work (Maslach, Schaufeli, & Leiter, 2001). Estimates of physician burnout ranging from 30-70% suggest burnout is prevalent among physicians worldwide (Shanafelt et al, 2002, 2005; Halbesleben & Rathert, 2008).

All physicians can be at risk for burnout as a result of both work and personal characteristics. Work factors contributing to burnout include: work overload, having the bulk of one's time at work spent on tasks inconsistent with one's career goals, and high levels of work-home interference. Personal characteristics predisposing physicians to burnout include: working in a solo practice, being early in one's career, lacking a sense of personal control over events, and attributing success to chance instead of personal accomplishments (Sanchez-Reilly et al., 2013). Physician burnout has serious repercussions, such as deterioration in patient care, medical errors, substance abuse, interpersonal difficulties, depression and suicide (Halbesleben & Rathert, 2008). Furthermore, unprofessional conduct and less altruistic values, including a lack of empathy, are more common in physicians with burnout (Dyrbye et al., 2010).

Self-Awareness, Burnout, and Self-Care as it Effects Empathy

Medical school can be viewed as a competitive environment for which students must push themselves past their limits in order to succeed, ignoring any personal problems or health complaints that can be viewed as a weakness or that just cannot be dealt with

immediately. Given that medical students train in an environment that naturally breeds stress and burnout, it is important to place emphasis on self-care, stress reduction, and wellbeing in medicine. Self-care is of the utmost importance since there is evidence that burnout is also prevalent among medical students (Dyrbye et al., 2010). The manner in which a medical professional takes care of himself, affects the manner for which he takes care of another human being. Thus, it is vitally important to be aware of this and readdress the balance between work and self-care.

As a training domain, self-care is a spectrum of knowledge, skills, and attitudes including self-reflection and self-awareness, identification and prevention of burnout, appropriate professional boundaries, grief, and bereavement (Sanchez-Reilly et al., 2013). Aligning with the EI framework of self-awareness (Goleman, 1998, 2000), the importance of developing self-awareness also deserves particular attention in the realm of self-care. Self-awareness, defined as a clinician's ability to combine self-knowledge and a dual-awareness of both his or her own subjective experience and the needs of the patient, was identified in the field of psychology as most important in the psychologists' ability to function well in the face of personal and professional stressors (Coster & Schwebel, 1997). Greater self-awareness among clinicians may lead to greater job engagement and compassion satisfaction, enhanced self-care, improved patient care, and satisfaction (Sanchez-Reilly et al., 2013). Conversely, clinicians who possess lower levels of self-awareness have a greater likelihood of burnout and empathy decline (Dyrbye et al., 2011). Healthy relationships of self-care and the care of others in the clinical setting have been grounded in the research since the 1990's and continue to be discussed in the current literature (McClafferty, 2016).

However, current evidence indicates medical students, residents, and fellows continue to receive inadequate self-care training (Sanchez-Reilly et al., 2013). Improving physicians' wellness and implementing self-care strategies is a multifactorial process according to Arnetz (2001) and Sanchez-Reilly et al. (2013) and includes attention to both personal and professional self-care. Personal self-care refers to strategies for individual physicians to take better care of themselves. Self-care starts with the recognition that people have multiple personal dimensions to attend to in order to live a “good life”, including inner lives, families, work, community, and spirituality (Chittenden & Ritchie, 2011; Dyrbye et al., 2011). Strategies for personal self-care include: prioritizing close relationships, such as those with family, maintaining a healthy lifestyle by ensuring adequate sleep, regular exercise, taking vacations; fostering recreational activities and hobbies, practicing mindfulness meditation, and pursuing spiritual development (Sanchez-Reilly et al., 2013). In the accreditation standards for US and Canadian medical schools, the Liaison Committee on Medical Education (LCME), while highlighting the importance of student well-being, exposure to end-of-life care, and the provision of personal counseling as a resource, does not specifically identify self-care (LCME, 2012).

CMSRU HiM workshop participants recognized and discussed the importance self-care and the understanding that physician perfection is not a realistic ideal, as it relates to the care of their patients. HiM workshop interviewees believe an outdated healthcare system that expects their doctors to be committed to their jobs to the exclusion of all in else in is flawed. Additionally, these research participants questioned the traditional beliefs about the value of physician detachment. Collectively, interviewees agreed that if self-care is supported and strengthened in their personal and professional environment, the very characteristics of

the medical school curricula and caring for patients that may convey a risk for empathy decline and burnout could instead bring great gratification and a sense of professional and personal purpose.

The Skill of Empathy Allows for Standing in the Patient's Shoes

Neuroscientific research of recent decades has achieved significant progress in establishing the neurobiological basis for empathy, after discovering the mirror neuron system (MNS) as being related to people's capacity to be empathic (Derksen, Bensing, & Lagro-Janssen, 2013). Scientists have now added new insights based on functional magnetic resonance imaging (fMRI) experiments. These fMRI experiments have shown that individuals, who score higher in a questionnaire measuring their tendency to place themselves in the other person's shoes, activate their MNS more strongly while listening to other people's problems (Bastiaansen, Thioux, & Keysers, 2009). These results draw the "soft" concept of empathy into "hard" science.

Most experts now agree empathy is first and foremost a skill which can be developed (Goleman, 1998, 2000; McLaren, 2013). This skill allows the accurate identification and understanding of emotional states and intentions in oneself and others. In order to develop the ability to understand, regulate and work with one's own emotions, self-awareness is imperative. When a physician can clearly identify and regulate the emotions of himself/herself and others, rather than be overwhelmed by them, he/she has the ability to connect emotionally and engage with the patient, allowing him/her to respond or act in a manner that is appropriate for patient. This perceptive engagement between physician and patient is considered the pinnacle of empathic skill (McLaren, 2013) and allows the physician to stand in the patient's shoes. Perceptive engagement requires that the physician behave or

engage in a manner that focuses on altruism, in the concern and care of the patient, exemplifying patient centered care and humanism in medicine (McLaren, 2013).

Research participants' comments regarding empathy align with educational theory and research (Carrick, 2010; Duffy and Perry, 1996) which suggests once individuals understand and construct their own mental models, they internalize the concepts. In this study, HiM interviewees agreed that assimilating the various benefits of preserving, nurturing, or developing empathy resulted in a skill set which can be built upon.

Implications

This study provides implications to both higher education and medical education. The implications of the findings of this research for practice/education, research, and policy are presented. In addition, this study adds to the body of knowledge regarding empathy in medical education

Practice/Education

This study's intent was to determine if medical student's empathy was influenced by two 90 minute workshops focusing on emotional intelligence theories and competencies as they relate to empathy. Findings from this research support earlier research that positively influencing empathy is possible by communication and behavioral skills workshops. Further integration of various novel approaches to preserve and effect empathy should be considered in order to promote empathic communication in the doctor-patient relationship.

Implications from this research suggest learning interventions may be effective in nurturing and preserving empathy in undergraduate medical students. Medical educators and those committed to humanism in medicine suggest in order to spread the habit of humanism (Gold Foundation, n.d.), it is necessary to establish clear expectations and standards for

trainees early in the educational process. The Gold Foundation (n.d.) suggests this can be accomplished by providing experiences and opportunities for healthcare professionals to understand the patient perspective and to reflect on their role as caregivers and to identify, reward, and promote exemplary role models/mentors. HiM workshop communication activities can assist students in recognizing patients' verbal and nonverbal emotional cues and language for empathic responses. By paying attention to emotions, how to identify them, and how to make determinations about which emotional responses are most beneficial to the patient, students and clinicians alike are able to become more familiar and comfortable with the expression of empathy.

Research

The purpose of this explanatory mixed methods research study was to determine if Humanism in Medicine (HiM) workshops, focusing on emotional intelligence theories and competencies as they relate to empathy, influenced empathy scores, as measured by JSPE scores pre and post learning intervention. The change in empathy scores was not statistically significant. However, 31% of research participants did experience an increase in JSPE scores, while 61% of research participants showed a decline in JSPE scores, suggesting within this specific sample, some medical students are at risk for empathy decline.

The widely acclaimed benefits of empathy have a small empirical base. Defining empathy remains problematic, with researchers calling for conceptual clarity to aid future research (Batt-Rawden, Chisholm, Anton, & Flickinger, 2013). Randomized controlled trials reporting long-term data to evaluate the longevity of intervention effects are needed.

Although a few studies of sufficiently high quality show promising results, much more

research is needed to claim the effectiveness of empathy in clinical practice on evidence-based grounds (Derksen, Bensing, & Lagro-Janssen, 2012).

Additionally, an understanding of the existing research and the results of the present study, support the need for longitudinal studies to determine the effect of empathy patterns on physician burnout over time and its relationship to the mental health of physicians.

Estimates of burnout range from 30-70% among physicians worldwide (Halbesleben & Rathert, 2008; Shanafelt et al., 2002, 2005). Physician burnout has serious repercussions, such as deterioration in patient care, medical errors, substance abuse, interpersonal difficulties, depression, and suicide (Dyrbye et al., 2011; Shanafelt et al., 2002, 2005; West et al., 2009).

Lastly, research in the area of medical student empathy is needed, as there is a paucity of research related to behavioral and communication workshops specifically focusing on the theories and frameworks of emotional intelligence, as it relates to medical student empathy. A thorough review of the literature found only several articles on the relationship between EI and empathy as it relates to medical students and residents (Cherry, Fletcher, O'Sullivan, & Dornan, 2014). The present research, although not generalizable beyond this sample, adds to this body of literature and research.

Policy

It has been widely recognized that empathy decline can occur during medical student training. Medical educators must continue to address burnout, isolation, anonymity, and depersonalization which increase during matriculation, by instituting self-care initiatives in the medical school environment (Sanchez-Reilly et al., 2013). This research has identified a potential risk for empathy decline in some medical students. Policy supporting the allocation

of funds to promote further research in the area of empathic communication is essential. At the institutional level, policies focusing on self-care initiatives for medical students should be further investigated and supported. At the national level, Neumann et al. (2011) have already highlighted the need for an examination of the cost effectiveness of empathy in light of the recent focus of policy makers and health insurers on the efficacy of health care. Patient satisfaction scores are now being used to calculate Medicare reimbursement under the Affordable Care Act, with more than 70% of hospital and health networks using patient satisfaction scores in physician-compensation decisions (Boodman, 2015). It will be a challenge, however, to draw the attention of policy makers to empathy as an effective and efficient way of delivering health care.

Limitations

Although this study was carefully prepared, as with all research, there are some inherent limitations to this study. Due to the small homogeneous sample, results may not be generalizable beyond this specific population. Longer-term follow-up is needed to determine whether the observed changes in empathy are transient or durable over time.

Recommendations

This workshop design was facilitated as two 90 minute workshops, scheduled late in the first semester of medical school and during the first month of second semester, and included a JSPE survey administered during orientation to newly matriculating students (M1's) and a post JSPE survey administered to M1 students immediately following workshop II. The workshops were scheduled to occur during a timeframe proximate to final exams and winter break. Facilitating the workshops during this timeframe may have influenced the results of the study. It would be interesting to duplicate the study at a different

time in an academic year. The original design of the HiM workshops, piloted in the prior year, were facilitated as four, one-hour workshops. Two HiM workshops scheduled in semester one, focused on personal competencies of EI as it relates to empathy and two HiM workshops scheduled in semester two, focused on the social competencies of EI as it relates to empathy. The results of the research presented suggest utilizing the four workshop design and timing across two semesters may better promote a comprehensive continuum to better nurture the development of empathy.

Since the workshop design of this research focused on the theories of emotional intelligence as they relate to empathy, it would be interesting to incorporate an emotional intelligence assessment, such as the Mayer Salovey and Caruso Emotional Intelligence Test (MSCEIT, n.d.) along with the JSPE. The MSCEIT assessment is often used in educational settings. Administering the MSCEIT in tandem with the JSPE, both pre and post learning interventions, would determine if EI scores were also impacted by the HiM workshops.

By performing this study, several areas for future research have been identified. There is a need for additional research on empathy focused programs which occur longitudinally. Ad hoc programs, such as the workshop design included in this research, may serve to improve empathy only in the short term. There are questions which need to be considered, such as, which methods are most appropriate to develop empathy? Should electronic, web-based, or mobile technology, empathy training for physicians, such as the Empathetics program (Empathetics, n.d.), be implemented to nurture, preserve and develop medical student empathy? If so, what is the appropriate timeframe within the medical school curricula when the web based/mobile interventions be introduced and reinforced?

Additionally, longitudinal studies are suggested to determine the effect of empathy patterns on physician burnout and subsequently to evaluate strategies of relating to others' suffering more adequately. The aforementioned research would provide a better understanding of perspective taking and empathic concern and its relationship to the mental health of physicians and medical students. Benefits of this research would be useful in developing strategies to promote the development of empathic communication, patient care, and physician self-care.

Additionally, data support mindfulness meditation as a suggested method for cultivating a kind, nonjudgmental attitude towards self and others (Kabat-Zinn, 2003). Several randomized trials have studied the effects of mindfulness-based interventions for health care professionals, including and medical and premedical students (Shapiro, Astin, Bishop, & Cordova, 2005; Lamothe et al., 2016). The benefits of mindfulness meditation included enhanced sense of well-being, increased empathy, and decreased anxiety. Inclusion of mindfulness meditation within the medical school curricula, possibly as an elective/selective, would provide an additional means of promoting medical student self-care.

Conclusion

Empathy has been variously conceptualized as a behavior, a personality dimension, and as an experienced emotion. Much of this confusion regarding a definition of empathy can be seen as arising from the fact that empathy is both a complex process and a concept whose meaning continues to evolve (Goleman & George, 2015; Halpern, 2007). The study presented is one of the first research studies to look at empathy scores in medical students following a learning intervention focusing on the theories and frameworks of EI, as it relates to empathy. The purpose of this explanatory mixed methods research study was to determine

if CMSRU M1 students' empathy was influenced following participation in Humanism in Medicine (HiM) workshops, as measured by the Jefferson Scale of Physician Empathy (JSPE). This study provides initial empirical evidence that while there was no statistically significant change in empathy scores post learning intervention, there were trends worthy of further investigation. One strategy could be further research on a larger scale.

Research suggests the demands of medical education, as well as other mitigating factors, may result in empathy decline in medical students (Mercer & Reynolds, 2002). The qualitative findings of this study support the need for medical educators to recognize the benefits of educational initiatives focused on empathy which promote behavioral and communication skills to mitigate empathy decline. Additionally, this research supports existing research which suggests initiatives focusing on self-care need to be incorporated in a medical school curriculum, to mitigate medical student burnout and empathy decline. Incorporating self-care initiatives will result in meeting not only meeting the health care needs of the patient, but will support the health and well-being of the provider.

This Mixed Methods research focused on clinical empathy occurring in the doctor-patient relationship, an essential medical activity. Patient-physician empathic communication not only helps capture a patient's account of a medical history and transmits this information, but also has a therapeutic effect, supporting and promoting positive patient outcomes (Loh & Silvalingam, 2008; Reiss et al., 2012). The therapeutic relevance of empathy emphasizes the importance of developing and supporting physician empathy during medical school and residency. Empathy plays an important role in achieving patient-centeredness and is characterized by the respectful and compassionate relationships forged between humanistic physicians and patients (Gold Foundation, n.d.).

Choosing empathy. Research interviewees viewed the concept of empathy as a voluntary choice and not “just” a feeling. If the concept of empathy as a choice, and not simply a feeling, becomes an accepted concept, I agree with the research of Cameron, Inzlicht, and Cunningham (2015) that suggests empathic behavior can and will change. Empathy will be seen as a good choice and medical students and physicians alike may choose it. This daily choice could become crucial as the choice to practice empathy continues. It will be empathy itself, not reason, which impels us to do what is right, without the need to reason it out, case by case. Viewing empathy in this Socratic style suggests the crucial choices are often the ones that put one’s own self-interest at stake (Cameron, 2013). The altruistic vision of empathy as a choice aligns with the attributes of the humanistic physician.

President Barack Obama has challenged us, as citizens of the United States and as humanistic members of society at large, to encourage empathic behavior to change the world. President Obama states,

The biggest deficit that we have in our society and in the world right now is an empathy deficit. We are in great need of people being able to stand in somebody else's shoes and see the world through their eyes (Xavier University, 2006).

The qualitative phase of this research confirmed CMSRU M1 HiM workshop participants recognized this challenge, choosing the practice of empathy, spreading the habit of humanism by example.

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Appendix A

Humanism in Medicine (HiM) Workshop 1

CMSRU Lunch and Learn Program- 75-90 minutes/MPR

Marion Lombardi, MS

Susan Cavanaugh, MS, MPH

CMSRU Class of 2019 (M1)

66 students

Breakouts-Students are seated at 8 tables @ 8-9 each

Workshop 1 Objective- Introduction to the tenants of humanism in medicine and emotional intelligence (EI) theories and frameworks and their relationship to the core competencies of medical education.

Purpose: To provide a background on emotions an emotional intelligence as they relate to the qualities of leadership. Additionally, focusing on the importance of empathy in the doctor-patient relationship, considered as one of the five components of emotional intelligence (Goleman, 2000).

Pre-work-Students are assigned to read the article “What Makes a Leader” (Goleman, 1995)

Review –Audience response quiz 10 minutes

- Lunch/Consent Process/HiM workshop Survey I-15/20 minutes
- Group Activity 1-Emotion chart-All M1students are asked to chart their emotions on emotion graph classroom white board (begins discussion of use of emotions as social intelligence)-5 minutes

- Tenants of Humanism in Medicine, Patient-Centered Care, Emotional Intelligence defined-use of Bloom's Taxonomy-5 minutes
- Review Goleman (1998) article. Following small group discussions, students participate in audience response "quiz" based on the salient points of the article-10 minutes
- Theories of EI are reviewed-5 minutes
- Self-Awareness and Self-Management Frameworks of EI are reviewed (Goleman, 2000; Mayer, Salovey, & Caruso, 2004) -5minutes
- The six core competencies of ACGME (Professionalism, PBL and Improvement, Systems Based Practice, Patient Centered Care, Medical Knowledge, & Interpersonal and Communication Skills) are reviewed (previously discussed in Fundamentals) and discussion ensues regarding their relationship to self-awareness and self-management- 15 minutes
- What is empathy? Discussion-10 minutes
- Small group activity-groups of 8 students review, discuss and provide commentary regarding CMSRU created video created with patient actor using EI in a clinical scenario/vs. not using EI in a clinical scenario-15 minutes

Appendix B

Humanism in Medicine (HiM) Workshop II

CMSRU Lunch and Learn Program- 75-90 minutes/MPR

Marion Lombardi

Susan Cavanaugh

CMSRU Class of 2019 (M1)

26 students

Breakouts-Students are seated at 5 tables @ 5-6 each

HiM Workshop II Objectives: Further expand on the concept of Emotional Intelligence; define and explore how emotions can be viewed as data; focus on activities which help students understand emotions are data.

Purpose: determine source of feelings; mood (manage) or emotion (data); match emotions to the task to facilitate thinking & problem solving; use emotions to connect with others & build relationships; understand emotions to motivate people; manage emotions effectively to achieve patient outcomes.

Pre-work-Students are assigned reading- Schueler (2015) article “What Happens When You Run Out of Empathy?”

- Lunch-Buffer line/eating occurs during workshop-10-15 minutes
- Brief review of tenants of Humanism in Medicine and EI-5 minutes
- Break out activity/small group participation- Guided discussion with questions
Scheuler (2015) article-15 minutes

- Discussion of perceiving emotion, using emotion, understanding emotion and managing emotion in the doctor-patient relationship (Mayer, Salovey, Caruso, 2004)-
Exercise breakout-Identifying emotions in others --15 minutes
- Review social awareness and relationship management frameworks of EI (Goleman, 2000) and the importance of these frameworks as they relate to communication/ACGME competencies (previously reviewed in class-Fundamentals)-
5 minutes
- Exercise/breakouts-emotional reserves–Eight to nine students per group selected to understand the importance of self-care as it relates to the doctor-patient relationship (4 different clinical scenarios)-10 minutes
- Administration of HiM workshop Survey II and JSPE post- workshop assessment-15 minutes

Appendix C

IRB Approved HiM Student Recruitment

Dear CMSRU Class of 2019 Students,

I am conducting a study regarding Humanism in Medicine (HiM) workshops and their influence on empathy as part of my doctoral studies. As part of this research, the Jefferson Empathy Scale of Physician Empathy (JSPE-MS) will be administered to M1 students who have agreed to participate in HiM workshops and this research. The JSPE-MS will be administered through CMSRU's One45 system, a secure curriculum management system by which all CMSRU students are able to complete assessments, with a unique identifier, for the purposes of collecting and linking identifying information (e.g., subjects' names) to provide the utmost confidentiality of subject data. The aggregate data will be de-identified when it is provided to a Cooper University Hospital (CUH) statistician for analysis. We are asking your permission to compare the JSPE scores taken during Orientation and those results following HiM Workshop II. Additionally, you will be asked to complete an anonymous HiM Survey, pre and post participation in the HiM workshops, which will be administered through survey monkey. The HiM surveys will also include one open-ended question regarding empathy, pre- and post- HiM workshop participation. There is restricted access to the JSPE allowing only the CMSRU Director of Assessment access and restricted access to the HiM workshop surveys by a Cooper University Hospital (CUH) statistician.

Lastly, I am conducting one-to-one interviews in Phase II of the research to further contextualize the results of the first phase of the study. Research participants who have attended both workshops, completed all surveys, and are interested in taking part in one-to-one interviews with me as co-investigator, will be asked to participate in Phase II of the

research. Participation in the interview process is also voluntary. The data that is collected from the study will be analyzed and used to determine if CMSRU HiM workshops influence empathy. Obtaining feedback from you, the M1 students, is important for review and revision for the HiM workshops and my research.

After reviewing and signing the informed consent form, the JSPE-MS will be made available through the One 45 curriculum management system and the HiM surveys will be sent to you via survey monkey. These assessments will require approximately 10-15 (total) minutes of your time to complete. Your responses will be kept safe, confidential and anonymous.

If you are interested in participating in this research, please complete the attached informed consent forms. Susan Cavanaugh, Principal Investigator and I will collect the consent forms prior to facilitation of the HiM workshops. Participation in this research is purely voluntary and will have no effect on your standing with regard to the Lunch and Learn program and beyond. If you have any questions or concerns, please do not hesitate to contact me at lombardim@rowan.edu or 856-361-2805 or Susan Cavanaugh at Cavanaugh@rowan.edu or 856-361-2856.

Thank you for your participation in this research.
Susan Cavanaugh
CMSRU Asst. Director of the Library and Associate Professor of Biomedical Sciences
Marion J. Lombardi
CMSRU Chief Student Affairs Officer and Doctoral Student, Rowan University Educational Leadership Program

Appendix D

Consent to Take Part in a Research Study

Title of Study: Fostering Humanism in Medicine: A Mixed Methods Study on the Influence of Humanism in Medicine Workshops on Medical Student Empathy

Principal Investigator: Susan Cavanaugh, Co-investigator-Marion Lombardi

This consent form is part of an informed consent process for a research study and it will provide information that will help you to decide whether you wish to volunteer for this research study. It will help you to understand what the study is about and what will happen in the course of the study.

If you have questions at any time during the research study, you should feel free to ask them and should expect to be given answers that you completely understand.

After all of your questions have been answered, if you still wish to take part in the study, you will be asked to sign this informed consent form.

Susan Cavanaugh and Marion Lombardi will also be asked to sign this informed consent. You will be given a copy of the signed consent form to keep.

You are not giving up any of your legal rights by volunteering for this research study or by signing this consent form.

FINANCIAL INTERESTS:

There are no financial interests associated with this study.

Why is this study being done?

This study is being conducted to determine if Humanism in Medicine workshops influence medical student empathy.

Why have you been asked to take part in this study?

You have been asked to take part in the study because you are a CMSRU first year medical student (M1)

Who may take part in this study? And who may not?

Only members of the CMSRU Class of 2019 (M1 students) may take part in this research. All students in this class are above 21 years old. We will include male and female medical students. Participation in this research is voluntary.

How many subjects will be enrolled in the study?

In this study we plan to approach 80 first year (M1) medical students for the purposes of research. These students are attending a mandatory educational lunch series, CMSRU Lunch and Learn. **However, as per the tenants of this informed consent, participation in this research is voluntary.**

How long will my participation in this study take?

We anticipate that this study will take approximately four months to complete. All subjects will be asked to participate in two, 75 minute workshops, encompassing two hours, 30 minutes. Additionally, four to eight students will be asked to participate in 30 minute interviews each.

Where will the study take place?

The study will occur at Cooper Medical School of Rowan University Medical Education Building, Multipurpose room, on Dec. 10 & Dec. 17, 2015, during the Lunch and Learn series, 12:00-1:30 pm.

What will you be asked to do if you take part in this research study?

You will be asked to participate in two-75 minute Humanism in Medicine (HiM) workshops, focusing on the theories and frameworks of emotional intelligence as they relate to the core competencies of graduate medical education and their effect on empathy.

In the first workshop (HiM Workshop I), you will be asked to participate in student centered activities, including case based scenarios and small group interactions, which focus on emotional intelligence as it relates to empathic communication. Additionally, you will be asked to complete a brief HiM survey asking data (race, educational degree, prior career/work experience and a description/definition of empathy).

In the second workshop, (HiM Workshop II), we will further explore emotional intelligence theories and their relationship to empathy in case based scenarios and small group participation. You will be asked to complete another brief HiM survey, similar to the first HiM survey, which will also ask you to define/describe of empathy, following completion of workshop II.

Additionally, you will be asked to complete the Jefferson Scale of Physician Empathy survey (medical student version) (JSPE-MS) in order to compare the JSPE scores taken at Orientation 2015, to those immediately following Humanism in Medicine Workshop II, to determine if participation in the HiM workshops has an effect/influence on CMSRU M1 medical student empathy.

In phase II of the study, four to eight research participants who have participated in the workshops, and completed the HiM surveys and the JSPE following HiM Workshop II, will

be selected to be interviewed to further elucidate the results of the JSPE scores and the HiM survey results.

What are the risks and/or discomforts you might experience if you take part in this study?

This research does not involve physical risk of harm. With regard to the possibility of emotional or psychological distress, the majority of CMSRU medical students' education occurs in small group and classroom settings.

Are there any benefits for you if you choose to take part in this research study?

You may develop the skill of empathy. Additionally, the results may be generalizable to medical education, as the implementation of additional, alternative educational approaches to empathy training, have proven central to creating successful therapeutic, empathic physician-patient relationships.

What are your alternatives if you don't want to take part in this study?

Your alternative is not to take part in this study.

How will you know if new information is learned that may affect whether you are willing to stay in this research study?

During the course of the study, you will be updated about any new information that may affect whether you are willing to continue taking part in the study. If new information is learned that may affect you, you will be contacted.

Will there be any cost to you to take part in this study?

There will be no cost to take part in this study.

Will you be paid to take part in this study?

You will not be paid for your participation in this research study

How will information about you be kept private or confidential?

All efforts will be made to keep your personal information in your research record confidential, but total confidentiality cannot be guaranteed. In order to preserve confidentiality, the JSPE will be disseminated through CMSRU's One45 curriculum management system and the access to the data is available only to the CMSRU Director of Assessment, as the CMSRU Office of Medical Education is considered as a data repository. The JSPE data will be released to a Cooper University Hospital (CUH) statistician when it is de-identified for analysis.

Additionally, HiM workshop surveys made will be available through SurveyMonkey. The HiM workshops surveys will be disseminated and collected by a CUH statistician who does not have interaction with CMSRU M1 students. The data will be password protected on The CUH statistician's PC, housed in the Cooper Research Institute. This collection process will ensure the data will remain secure.

In the second phase of the research, four to eight interviews will occur following stratified random sampling of HiM workshop participants. The interviews will occur at CMSRU in a meeting room, date/time convenient to the research participants and will be recorded. The interviews will be masked to protect the confidentiality of the subjects. The transcripts of the interviews will be kept in a safe confidential locked file cabinet in my office within the CMSRU Office Student Affairs and Admissions suite. Word for word transcripts of the audio taped interviews will be hand carried to a CUH qualitative research consultant for analysis. This data, the data analysis and primary researcher's field notes will be stored in a locked cabinet in the private locked office of the qualitative researcher at the Cooper Research Institute. Presentations and publications to the public and at scientific conferences and meetings will not use any subjects' names and other personal information.

What will happen if you are injured during this study?

If you are injured in this study and need treatment, contact your healthcare provider or the Cooper University Hospital Student Health Center.

We will offer the care needed to treat injuries directly resulting from taking part in this study. Rowan University/CMSRU may bill your insurance company or other third parties, if appropriate, for the costs of the care you get for the injury. However, you may be responsible for some of those costs. Rowan University/CMSRU does not plan to pay you or provide compensation for the injury. You do not give up your legal rights by signing this form.

If at any time during your participation and conduct in the study you have been or are injured, you should communicate those injuries to the research staff present at the time of injury and to the Principal Investigator or co-investigator, whose name and contact information is on this consent form.

What will happen if you do not wish to take part in the study or if you later decide not to stay in the study?

Participation in this study is voluntary. You may choose not to participate or you may change your mind at any time.

If you do not want to enter the study or decide to stop participating, your relationship with the study staff will not change, and you may do so without penalty.

You may also withdraw your consent for the use of data already collected about you, but you must do this in writing to Susan Cavanaugh, CMSRU Library, 401 S. Broadway, Camden, NJ, 08103 or Marion Lombardi, CMSRU Office of Student Affairs and Admissions, 401 S. Broadway, Camden, NJ, 08103.

Who can you call if you have any questions?

If you have any questions about taking part in this study or if you feel you may have suffered a research related injury, you can call:

Susan Cavanaugh, Principal Investigator
Library
856-361-2856
Marion Lombardi, Co-Investigator
Office of Student Affairs and Admissions
856-361-2805

If you have any questions about your rights as a research subject, you can call:

Glassboro/CMSRU Office of Research
(856) 256-5150

What are your rights if you decide to take part in this research study?

You have the right to ask questions about any part of the study at any time. You should not sign this form unless you have had a chance to ask questions and have been given answers to all of your questions.

AGREEMENT TO PARTICIPATE

I have read this entire form, or it has been read to me, and I believe that I understand what has been discussed. All of my questions about this form or this study have been answered.

Subject Name: _____

Subject Signature: _____ Date: _____

Signature of Investigator/Individual Obtaining Consent:

To the best of my ability, I have explained and discussed the full contents of the study including all of the information contained in this consent form. All questions of the research subject and those of his/her parent or legal guardian have been accurately answered.

Investigator/Person Obtaining Consent: _____

Signature: _____ Date: _____

Co- Investigator/Person Obtaining Consent: _____

Signature: _____ Date: _____

Appendix E

JSPE Student Survey

 Cooper Medical School of Rowan University	Cooper Medical School of Rowan University Undergrad	Evaluated : evaluator's name By Evaluating : person (role) or moment's name (if applicable) Dates : start date to end date
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* indicates a mandatory response

Jefferson Scale of Physician Empathy- Students (S Version 2.3)

Section A

1. Age
 [positive number only, no decimals]

2. Gender
 Male
 Female

3. Years of Medical School
 1st Year
 2nd Year
 3rd Year
 4th Year
 > 4th Year

4. What Specialty do you plan to pursue?

Section B

Please indicate your level of agreement or disagreement with each statement by selecting the appropriate number choice. A higher number on the 7-point plot scale indicates more agreement.

	1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree
1. Physician's understanding of their patients' feelings and the feelings of their patients' families does not influence medical or surgical treatment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Patients feel better when their physicians understand their feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. It is difficult for a physician to view things from patients' perspective.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Understanding body language is as important as verbal communication in physician patient relationships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. A physician's sense of humor contributes to a better clinical outcome.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Because people are different, it is difficult to see things from patients' perspectives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Attention to patient's emotions is not important in history taking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Attentiveness to patients' personal experiences does not influence treatment outcomes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Physicians should try to stand in their patient's shoes when providing care to them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Patients value a physician's understanding of their feelings which is therapeutic in its own right.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Patients' illnesses can be cured only by medical or surgical treatment; therefore, physicians' emotional ties with their patients do not have a	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

significant influence in medical or surgical treatment.							
12. Asking patients about what is happening in their personal lives is not helpful in understanding their physical complaints	<input type="radio"/>						
13. Physicians should try to understand what is going on in their patients' minds by paying attention to their non-verbal cues and body language.	<input type="radio"/>						
14. I believe that emotion has no place in the treatment of medical illness.	<input type="radio"/>						
15. Empathy is a therapeutic skill without which the physician's success is limited.	<input type="radio"/>						
16. Physicians understanding the emotional status of their patients, as well as that of their families is one important component of the physician-patient relationship.	<input type="radio"/>						
17. Physicians should try to think like their patients in order to render better care.	<input type="radio"/>						
18. Physicians should not allow themselves to be influenced by strong personal bonds between their patients and their family members.	<input type="radio"/>						
19. I do not enjoy reading non-medical literature or the arts.	<input type="radio"/>						
20. I believe that empathy is an important therapeutic factor in medical treatment.	<input type="radio"/>						

The following will be displayed on forms where feedback is enabled...
(for the evaluator to answer...)

*Did you have an opportunity to meet with this trainee to discuss their performance?
 Yes
 No

(for the evaluatee to answer...)

*Did you have an opportunity to discuss your performance with your preceptor/supervisor?
 Yes
 No

Appendix F

HiM Workshop Survey I/Open Ended Question

- 7. Race_____
- 8. Marital Status
 - Married
 - Not Married
- 9. Highest educational level
 - College Degree
 - Graduate Degree or Post Bac
- 10. Undergraduate major
 - Medically Related
 - Not Medically Related

*For those who do not have a medically related major, a comment box can be added to further explain.

- 11. Previous Patient Contact
 - Yes
 - No

- 12. Previous Career
 - Medically Related
 - Not Medically Related

*For those who do not have a medically related previous career, a comment box can be added to further explain.

(1). Open Ended Question. Please define/describe empathy in your own words?

Appendix G

HiM Workshop Survey II/Open Ended Question

13. Race _____

14. Marital Status

- Married
- Not Married

15. Highest educational level

- College Degree
- Graduate Degree or Post Bac

16. Undergraduate major

- Medically Related
- Not Medically Related

*For those who do not have a medically related major, a comment box can be added to further explain.

17. Previous Patient Contact

- Yes
- No

18. Previous Career

- Medically Related
- Not Medically Related

*For those who do not have a medically related previous career, a comment box can be added to further explain.

(1). Open Ended Question. Please define/describe empathy following participation in the HiM workshops?

Appendix H

Operational Definitions

- Accreditation Council for Graduate Medical Education (ACGME): The body responsible for accrediting the majority of graduate medical training programs (i.e., internships, residencies, and fellowships, aka subspecialty residencies) for physicians in the United States. The ACGME has mandated that programs require that their residents obtain competency in six areas to the level expected of a new practitioner which include: Patient Care; Medical Knowledge; Practice-Based Learning; Interpersonal and Communications Skills; Professionalism; and Systems Based Practice (ACGME, 2015).
- Association of American Medical College's (AAMC) Medical School Objectives Project (MSOP): An AAMC initiative designed to reach consensus within the medical education community on the skills, attitudes, and knowledge that graduating medical students should possess (AAMC, 2015).
- Burnout: A psychometric measure of professional distress that includes the dimensions negative perceptions of self and of accomplishment, emotional exhaustion and depersonalization (i.e., treating patients as inanimate objects) (Maslach, 2003).
- Emotional Intelligence (EI): A concept that involves the ability, capacity, skill or a self-perceived ability, to identify, assess, and manage the emotions of one's self, of others, and of groups (Ioannidou & Konstantikaki, 2008).
- Empathy- the feeling that you understand and share another person's experiences and emotions: the ability to share someone else's feelings (Merriam Webster Dictionary, n.d.).

- **Graduate Medical Education:** The period of didactic and clinical education in a medical specialty which follows the completion of a recognized undergraduate medical education and which prepares physicians for the independent practice of medicine in that specialty, also referred to as residency education. The term “graduate medical education’ also applies to the period of didactic and clinical education in a medical subspecialty which follows the completion of education in a recognized medical specialty and which prepares physicians for the independent practice of medicine in that subspecialty (ACGME, 2015).
- **Hidden Curriculum of Medicine:** A set of influences that function at the level of organizational structure, whose social and cultural influences, relate to the context and environment in which learning takes place (Byyny, Papadakis, & Paauw, 2015).
- **Humanistic Medicine:** Healthcare training and practice which fosters a culture of open communication, respect, dignity and compassion for patients and professionals, which is facilitated by building caring, trusting and collaborative relationships with patients (Lewis, 2012).
- **Interpersonal and Communication Skills:** Communication that results in effective information exchange and teaming with patients, their families, and other health professionals (ACGME, 2006).
- **Jefferson Scale of Physician Empathy (JSPE-MS):** The JSPE-MS (Medical Student version) was developed to measure the orientation of medical students toward physician empathy in patient-care situations (Chen, Lew, Hershmann, & Orlander, 2007).

- **Medical Knowledge:** Clinical knowledge about established and evolving biomedical, clinical, and cognate (epidemiological and social-behavioral) sciences and the application of this knowledge to patient care (ACGME, 2006).
- **Patient Care:** Compassionate, appropriate, and effective care for treating health problems and promoting health (ACGME, 2006).
- **Patient Centered Care Model of Medicine:** Providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensures that patient values guide all clinical decisions (ACGME, 2006).
- **Physician Empathy (PE):** The ability to sense intellectually and emotionally the emotions, feelings, and reactions that a patient is experiencing and to communicate that understanding to the patient effectively (Hojat et al., 2002).
- **Practice-Based Learning and Improvement:** Involves investigation and evaluation of student's patient care, appraisal, and assimilation of scientific evidence, and improvements in patient care (ACGME, 2006).
- **Professionalism:** Professional competence is considered the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community, manifested through a commitment to carrying out the responsibilities of a profession, adherence to ethical principles, and sensitivity to a diverse patient population (ACGME, 2006).
- **Systems-Based Practice:** Manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to

effectively call on system resources to provide care that is of optimal value (ACGME, 2006).

- Unconditional Positive Regard: Is the basic acceptance and support of a person regardless of what the person says or does, especially in the context of patient-centered therapy (World Medical Association, 1949).
- United States Medical Licensing Examination Graduate Education (USMLE): A three step examination required for medical licensure in the US, sanctioned by the National Board of Medical Examiners and Federation of State Medical Boards (ACGME, 2006).

Appendix I

Definitions of Empathy

- Empathy - The ability to “put yourself into another’s shoes” (Ioannidou & Konstantikaki, 2008).
- Empathy- The feeling that you understand and share another person's experiences and emotions: the ability to share someone else's feelings (Merriam Webster Dictionary, n.d.).

Clinical Definitions of Empathy

- Physician Empathy - The clinicians’ way of saying “I’m with you, I’ve been listening carefully to what you’ve been saying and expressing, and I’m checking if my understanding is accurate” (Egan, 1997, pg. 99).
- Physician Empathy - The ability to sense intellectually and emotionally the emotions, feelings, and reactions that a patient is experiencing and to communicate that understanding to the patient effectively.” Farlex Medical Dictionary (2012)
- Empathy - In the therapeutic relationship, it is the ability of the care provider to not only sense and feel for the patient, but be able to reflect the experience of the patient (Halpern, 2007).
- Empathy - Originally referred to as “bedside manner” and historically, because of the ambiguity of the concept, debate existed whether empathy could be taught to health care professionals and/or measured (Hojat et al., 2009; Kirk, 2007; Ward et al., 2009).
- Empathy – (in the clinical context) An ability to understand the patient’s situation, perspective and feelings (and their attached meanings); to communicate that

understanding and check its accuracy; and to act on that understanding with the patient in a helpful (therapeutic) way (Hojat, 2009; Mercer & Reynolds, 2002; Neumann et al., 2009).

- Physician's Empathy - Is both a multidimensional and skills-based construct, which includes four components: Emotive: The ability to subjectively experience and share in another's psychological state or intrinsic feelings; Moral: An internal altruistic force that motivates the practice of empathy; Cognitive: The helper's intellectual ability to identify and understand another person's feelings and perspective from an objective stance; and Behavioral: Communicative response to convey understanding of another's perspective." Mercer and Reynolds (2002).
- Physician Empathy - The physician's understanding of the patient and verbal and non-verbal communication of the physician, resulting in a helpful therapeutic action (Mercer and Reynolds, 2002).
- Empathy - (within the context of health care) Is the ability to communicate an understanding of a "patient's world" and is a crucial aspect of all interactions between clinicians and patients (Reynolds, Scott & Jessiman, 1999).
- Empathy - Describes empathy in terms of the measurable neurobiological functions that take place between the physician and patient during an empathic encounter and shares a plethora of empirical data supporting benefits of this healing encounter (Riess, 2010).
- Empathy - Requires a deep understanding of the meaning and feelings of the patient as a whole and not a superficial intellectual understanding of patient's fears and hopes (Rogers, 1957).

- Empathy - An objective, rational, accurate, intellectual process that is “always” good for both patient and practitioner, at the expense of sympathy, which has been historically viewed by some clinicians, as an emotional, self-indulgent, and codependent practice that will lead to burnout and compassion fatigue (Shapiro, 2011).

Appendix J

Humanism in Medicine (HiM) Interview Questions

1. Briefly give an example of a life experience that you have had or you have witnessed that best exemplifies empathy to you?
2. Has your understanding of empathy following participation in the HiM workshops influenced the care of your patients? If so, how?
3. Has participation in HiM workshops influenced or changed your understanding of emotion regulation?
4. Do you believe empathy is innate or learned?
5. Has participating in the HiM workshops changed your understanding empathy? If so, please explain.