I, Kellee M. Fields, hereby submit this original work as part of the requirements for the degree of Doctor of Education in Curriculum & Instruction.

It is entitled:
“Community College Healthcare Students’ Conceptions of Empathy: A Program-Wide Mixed Methods Case Study”

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Community College Healthcare Students’ Conceptions of Empathy: A Program-Wide Mixed Methods Case Study

A dissertation submitted to the Graduate School of the University of Cincinnati in partial fulfillment of the requirements for the degree of Doctor of Education

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Abstract

Community colleges play a vital role in the education of our Nation’s healthcare professions. In order to respond to the rising economic and social needs of the healthcare sector, community colleges are meeting the challenge by providing health professions skills and training programs to meet these shortages. These crucial programs are charged with educating a diverse group of students which reflect upon the large scale demographic population changes in society. Patients and employers in recent years have voiced their concerns about the role of healthcare providers as they note a decline in essential professionalism traits and behaviors. In particular, the healthcare professional should espouse the ethical value of empathy as it is extremely beneficial to all stakeholders. This study explored students’ conceptions of empathy to provide information about the timing and effectiveness of potential strategies to develop this desired professionalism skill. A mixed methods case study design was used in which a quantitative survey measuring students’ empathy for their patients was embedded in a primarily qualitative case study which interviewed three groups of students (first-year, second-year, and graduates) in a Respiratory Care Program at a community college. The qualitative interviews revealed empathy was developed through the curricular aspects of role modeling, case study, and clinical experiences. As the students progressed through the program, a contextualization of empathy in practice occurred. In addition, empathy was present and sustained throughout the program as demonstrated by the empathy scale. In summary, the students exhibited empathy toward their patients and associated its valued meaning in the profession. The study findings may have broad implications for healthcare programs regarding curriculum design and strategies, instructors, and students. In addition, this study may also contribute to the vast changes taking place within our Nation’s healthcare system by affecting the way healthcare professionals are educated.
Ultimately, these findings hopefully may contribute to fostering the professional behavior of empathy among healthcare practitioners in order to improve patient care.
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Chapter One: Introduction

Community colleges play a vital role in the education of the Nation’s healthcare professions. According to Murray (2011), 60% of U.S. healthcare professionals are educated at community colleges. These institutions provide training in the form of postsecondary vocational certificates and associate degree programs for the vastly increasing healthcare workforce such as nursing, medical assistants, community health educators, medical laboratory technicians, and respiratory therapists (Biswas & Kelley, 2011). The demand for healthcare positions with these particular credentials continue to increase as Carnevale, Smith & Strohl (2013) report a 23% growth rate when compared with 2010 data from the Georgetown Center on Education and the Workforce. In order to respond to the rising economic and social needs of our Nation’s healthcare sector, community colleges are meeting the challenge by providing health professions skills and training programs to meet these shortages. These crucial programs are charged with educating a diverse group of students which reflect upon the large scale demographic population changes in society (American Association of Community Colleges, 2011).

Value of Empathy in Healthcare

In addition to proficient content area knowledge and practice, the health care practitioner should possess an arsenal of professionalism skills in order to best serve patients (U.S. Department of Labor, 2012). The importance of non-technical skills cannot be overlooked in the education of future healthcare workers. Patients and employers in recent years have voiced their concerns about the role of healthcare providers as they note a decline in essential professionalism traits and behaviors (Makely, 2013). In particular, the healthcare professional should espouse the ethical value of empathy as it is extremely beneficial to all stakeholders (Hojat, 2009). Empathy is defined as: “a predominately cognitive (rather than emotional) attribute that involves an
understanding (rather than a feeling) of experiences, concerns and perspectives of the patient, combined with a capacity to communicate this understanding” (Hojat, 2007, p. 80).

Possessing the ethical value of empathy is highly extolled in the healthcare professions (Dunbar & Nichols, 2012). Academic health educators agree it is a common goal among healthcare programs in the development of students to become competent, caring, and compassionate practitioners (Graber, Mitcham, Coker-Bolt, & Wise, 2012). Despite this shared view, healthcare curricula often focus upon requisite, technical knowledge and lack the promotion of ethical values such as empathy (Graber et al., 2012).

A small number of health professional schools have investigated ways to incorporate empathy into the required curriculum and foster experiential learning practices (Dunbar & Nichols, 2012; Graber et al., 2012; Ozcan, Ofnaz, & Bakir, 2012; Morihara, Jackson, & Chun, 2013). A dearth in the literature exists, however, regarding empathy education in allied healthcare community college programs. The non-existence of empirical studies of empathy within healthcare education at the community college level is astounding, especially since it is an ethical value that is so desired among health professions. According to Graber et al. (2012), many healthcare programs realize the importance of educating students to become caring and empathetic healthcare practitioners; however, these components are not imparted in the actual curriculum.

In addition to healthcare educators, all stakeholders within the realm of healthcare deem empathy a virtuous and worthwhile behavior to possess (Hojat, 2009). Patients, who are often considered the most vulnerable, find empathy an essential component for a healthcare professional to espouse (Jangland, Gunningberg, & Carlsson, 2009). A study conducted by Jangland et al. (2009) found that patients are often dissatisfied with their experiences involving
healthcare professionals and point to a lack of empathy and concern in their medical care. Patients were told to “pull yourself together,” and there is “nothing we can do” by healthcare workers (2009, p. 9), which led to feelings of rejection and decreased dignity.

In addition to patients, the public at large is in agreement that the world would be a better place if its citizens possessed empathetic behavior as demonstrated by our Nation’s efforts to value democratic educational processes (Stitzlein, 2014). Even President Obama noted that “as a country we seem to be suffering from an empathy deficit” (as cited in Stitzlein, 2014, p. 82). He continued,

I believe a stronger sense of empathy would tilt the balance of our current politics in favor of those people who are struggling in society. After all, if they are like us, then their struggles are our own…Of course, in the end a sense of mutual understanding is not enough. After all, talk is cheap; like any value, empathy must be acted upon. (p. 82)

Furthermore, physician and noted empathy researcher Mohammadreza Hojat maintains that “empathy can be viewed as remedy for the psyche and soul of human kind…and may be it can serve as a means of achieving a global peace here, there, everywhere on Earth (2007, p. 214).

In light of continued social and economic demand for jobs in the health professions as well as changes in the demographic population growth of community college students, a gap in the research exists in how to educate students with professionalism skills. In particular, an absence of information concerning empathy development in the healthcare professional at the community college level continues to persist, even though other members within the healthcare sector and the community at large have valued and documented its importance.
Statement of the Problem

Henderson (2012) reported that the United States Department of Labor has forecasted the healthcare and social assistance sector will have the largest employment sector growth from 2010-2020 with 5.6 million jobs added among all labor sectors. This sector is also predicted to have the fastest growth rate of 3.0% when compared to all other major employment sectors. Coupled with this accelerated job growth, the U.S. population also continues to change demographically as a result of an increasing population of older adults and diverse ethnic groups. According to the U.S. Census Bureau (2008) the number of people 65 years and older is projected to increase from 40.2 million in 2010 to 54.8 million in 2020; this age group will count for 16.1% of the population in 2020, up from 13.0% in 2010. Ethnic groups are also becoming more prevalent as increases in Asian and Hispanic origin populations are expected to be among the fastest growing minority and immigrant groups at a rate of 34% and 37% respectively. This increased diversity and population growth will likely present challenges to healthcare professionals as they grapple with not only how to care for the sheer numbers of these patients, but also provide quality patient care to many distinctive ethnic groups.

These changes in population growth and labor force suggest that pedagogical adaptations should be made in the delivery of courses that meet the wide expansion of the healthcare sector. In order to meet this demand, our Nation’s community colleges must rise to the challenge by providing these much needed future healthcare workers with not only the necessary technical knowledge, but the awareness and training for making sound, non-technical, and often ethical decisions. These professionalism traits may also be referred to as soft skills. Some examples of key employable characteristics are ethical behavior, communication, teamwork, and problem-
solving skills (U.S. Department of Labor [D.O.L], 2010). To date, a lack of research exists in the community college setting which addresses effective ways to teach professionalism skills.

The Partnership for 21st Century Skills also recognizes individuals should possess certain attributes in order to be successful in today’s competitive, global environment. All workers should possess “life and career skills” such as “social and cross cultural skills” (P21 Framework Definitions, 2009, p. 6). Examples of “social and cultural skills” include the ability to “interact and work effectively with others and diverse teams” by conducting themselves in a respectful manner with people from a wide range of backgrounds as well as to “respond open-mindedly to different ideas and values” (p. 7). “Leadership and responsibility” are also important as employees should “be responsible to others” by acting “responsibly with the interests of the larger community in mind” (p.7). The 21st Century Skills initiative is focused on common characteristics and knowledge that is vital to all citizens to be a successful nation and its implications are applicable to community college healthcare students and their need to possess professionalism skills.

Community colleges may influence these important skills by providing students with educational opportunities to acquire and possess these competencies. Community colleges make a difference in the Nation’s economic wellbeing, healthcare system, and citizenry as they historically educate a varied demographic student population including those underserved. Murray (2002) suggested the role of the community college faculty is to promote the acceptance and service aspects, which espouse the long-standing mission and philosophy of these institutions. The “open door” inclusionary policies and affordability of these institutions have made the community college a melting pot of non-traditional students that come with a wide variety of backgrounds (Cohen & Brawer, 2008). In order to better serve the community as well
as the Nation, community colleges must find ways to educate our widely varied population of future healthcare workers with the necessary content knowledge and professionalism skills that are required for quality patient care.

The increasing numbers of healthcare occupations coupled with the wide range of potential healthcare students accentuates the need for professional skill development in community college allied health educational programs. Even though professional skill development has been identified as being essential, few studies have been conducted on the topic. In addition, most studies have taken place at the baccalaureate and graduate levels.

While there are many professional skills that are necessary in order to be a competent and valued employee, empathy is a key characteristic in healthcare according to Americans (Graber et al, 2012). In addition, the healthcare community has largely accepted the importance of empathy in effective practice (Dunbar & Nichols, 2012). Empirical studies by Hojat (2007) and Hojat, Mangione, Gonnella, Nasca, Veloski, & Kane (2001) suggested empathy is considered to be the principal ethical value for healthcare workers to possess. Improved patient outcomes and better quality patient care have been attributed to empathetic involvement by health professionals (Hojat, Louis, Maio, & Gonnella, 2013). Further research has also suggested that healthcare professionals who demonstrate empathy have increased job satisfaction, contentment, better organization and clinical competency (Hojat 2009; Marcus 1999; Reynolds & Scott 1999; Stepien & Baernstein, 2006). Empathetic practice has indeed yielded positive outcomes such as increased patient satisfaction and trust, which may lead to better quality care in the form of diagnosis, compliance, and lower cost of medical care (Hojat, et al., 2013).

The importance of empathy and its role in providing quality patient care and positive aspects for healthcare workers has led several professional healthcare programs at the
baccalaureate level to incorporate empathy into their curricular objectives (Ozcan et al., 2012). One quantitative study, called the “Caring Professionals Program,” focused on the effectiveness of specific training strategies to foster empathy development. The program was founded on a common philosophical belief that “caring and empathy are innate human qualities, which require awakening and validating, rather than instilling” (Graber et al., 2012, p. 92). The interventional courses comprised students in physical therapy, occupational therapy, physician assistant, and nurse practitioner programs and consisted of six elements: experience, reflection, problem solving, role-modeling, active participation, and didactic strategies. The courses were integrated throughout the entire length of the professional program curricula and evaluations for its effectiveness were addressed through empathy assessments which have not yet been published (p. 91).

Even though empathy is considered to be an important component in healthcare education, little research has been conducted. A few studies of undergraduate programs and their challenges of teaching empathy (Dunbar & Nichols, 2012; Morihara et al., 2013; Spiro, 1992) have taken place. The research indicated that programs face curricular issues in promoting a cognitive, more definitional approach or an intrinsic, active process of teaching empathy (Stepien & Bernstein, 2006). Empathy in a patient-healthcare professional relationship often involves a perspective-taking stance within the provider, which includes a cognitive element as well as emotional intelligence (Graber et al., 2012). The difficulty lies somewhere between the cognitive and internal aspect of empathy construction (R. Cruess, S. Cruess, 2012). In addition, some programs have a difficult time with institutional support and faculty development when considering empathy in their curricula. In some circumstances, institutions lack the funding or
the interest and faculty do not have the time or resources (Graber et al., 2012; Mohiara et al., 2013).

A comprehensive analysis of educational strategies to teach empathy among undergraduate medical students was conducted by Stepien & Baernstein (2006). The study investigated 13 peer-reviewed qualitative and quantitative studies and found that communication skill workshops were found to be impactful and had positive changes for students in regard to empathy education. However, the researchers found the studies had issues with definitions of empathy, sample size, control groups, and variation among empathy instruments. In addition, the study suggested that more research is needed in the different dimensions of empathy education whether emotive, motivational, cognitive, or behavioral.

Empirical studies conducted with professional programs at the graduate and undergraduate level have also shown a decline in empathy among healthcare professionals. The research attributed the decline in empathy to a lack of positive role models, rigorous coursework, time constraints, and lack of positive experiences during pre-clinical and clinical education (Bellini, Baime, & Shea, 2002; Fairchild, 2010; Hojat, Mangione, Nasca, Rattner, Erdmann, Gonnella, & Magee, 2004). As a result of these unfortunate findings, Orzcan et al. (2012) argued, “In the education of healthcare professionals, the decrease in empathy should be prevented and what has been lost needs to be regained” (p. 533). These studies reveal discouraging factors which are relevant to the decline of empathy among healthcare professionals, however, there is a profound gap in the literature regarding empathy education throughout healthcare community college programs and what students find meaningful.

To ameliorate these matters surrounding empathy education, healthcare educational researchers at the baccalaureate level have suggested seeking students’ conceptions and ideas of
healthcare professionalism and empathy. Morihara et al. (2013) proposed “student perspectives should be considered when developing professional education curricula” to make the curriculum for undergraduate medical education more relevant. A study by Byszewski, Hendelman, McGuinty & Moineau (2012) focused on students’ insights into professionalism to gain a further understanding of how to develop soft skills into their curriculum. The researchers found that role modeling was an effective teaching method and evaluations of these skills needed to be enhanced.

Motivation for the study

This mixed methods case study was an expansion of the researcher’s pilot study and therefore was based on the conclusion that empathy is a key component for healthcare professionals to possess. To date, there is a lack of research regarding empathetic professional skill development with community college healthcare students. Community college healthcare programs have the opportunity to provide educational experiences within their curricula which may help nurture and develop cognitive and intrinsic components of empathy among its students. Understanding and appreciating students’ conceptions of empathy may lead to curriculum improvements in the teaching of non-technical skills and may possibly inform future healthcare education curricula.

This study focused upon the importance of empathy education and how community college students within a particular healthcare program are supported in the development of this vital attribute. Exploration of how empathy was conceived by the students throughout the program was garnered through a mixed methods case study approach and used to promote potential insights as to how educators may develop future curricula. The qualitative data collections at intervals within the program’s educational process were used in order to achieve a
better understanding of how to identify innovative and effective methods of instruction. Gathered data across the curriculum from newly enrolled students, second-year students and graduates were used in order to provide indications as to whether more cognitive or intrinsic strategies are necessary at certain times within a program. In addition, students’ comments revealed what components of the curriculum made an impact on their empathy development. The quantitative data collection achieved through surveys were used to enhance and support the qualitative findings and lead to a better overall understanding of the program’s approach to empathy education. The conclusions drawn from this mixed methods case study contribute to a greater understanding of empathy development within the community college student and begin to fill the gap in the research that currently exists in this area. These findings may lead to improvements in the timing and structure of activities specifically designed for this purpose. The results may also serve as an indication to community college healthcare programs that empathy education is a worthwhile and important endeavor.

**Purpose of the Study**

The purpose of this study was to explore community college healthcare students’ conceptions of empathy as an ethical value in the development of their professional identity. The study was conducted in order to explore students’ perceptions of how the associate degree professional healthcare program supported this endeavor. A mixed methods case study design was used to gain students’ insights as their notions of empathy may help inform future healthcare curricula. Quantitative data was embedded within the qualitative case study. The quantitative archival data from surveys administered to all students in the healthcare program and recent graduates were used to understand the level of empathy among the students and to bolster the case study findings. Qualitative data in the form of student interviews were gathered from a
small set of students among the following three groups: first year students, second year students, and recent graduates. The incorporation of multiple data sources has been chosen to provide a more complete understanding of how students understand empathy throughout the clinical program; whereas as a study with a single quantitative or qualitative focus would most likely not provide an in-depth, holistic appreciation of this ethical value.

**Research Questions**

The overall research question this study seeks to answer is: “How do community college healthcare students’ conceptions of empathy potentially aid in the formation of curriculum development?” This overarching research question will be addressed via two research questions:

1. What aspects of the program supported the development of empathy for current students and recent graduates?
2. How does empathy develop across the Respiratory Therapy Program?

**Theoretical Foundation**

This mixed methods case study was guided by the qualitative research paradigm called social constructivism. I chose this approach as its tenets align with the ontological, epistemological, axiological and methodological goals of the study. The primary reason for having chosen this approach is how it answers the question of “What is the nature of reality?” From an ontological perspective, constructivism recognizes that people develop conceptions and beliefs from intertwined prior experiences and their daily reality. Since individuals lead unique lives, truth cannot be defined and one cannot possess a purely objective stance about reality (Maxwell, 2013, p. 43). Meanings can be varied and have several different facets as they are often “negotiated socially and historically” (Creswell, 2013). In addition, Creswell (2007) notes that participants’ interpretations are often based on historical and cultural norms within society;
however, they are not simply “imprinted” but often formed through “interaction with others” (p.21).

The students I serve come to our institution with their values and experiences in place which have created a personal and constructed reality. Teddlie and Tashakkori (2009) contend that investigators should “employ empathetic understanding of those being studied” (p. 73) in order to gain insights to the values that participants hold. If educators are going to help students understand and incorporate the use of professionalism skills into their career, they must relate to students’ prior knowledge and possible lack of experience in this area by the consideration and appreciation of who they are and where they are coming from.

Both Merriam (2009) and Creswell (2013) contend that constructivism is interpretive as it seeks to understand how people create reality based on interactions and beliefs. Merriam (2009) suggests that the impetus lies with the researcher to flesh out meanings and values. Within this study, the relationship between the researcher and the persons being researched come from an epistemology of closeness, as I have a connection and deemed interest in students’ conceptions of empathy in healthcare programs. With this in mind, the axiology, or role of the values in this constructivist research was “biased” and therefore warranted clear and well defined interpretations in the findings of this report (Creswell & Plano Clark, 2011).

Constructivism encourages an inductive methodological process as the researcher typically starts with “participants’ views and build up to patterns, theories, and generalizations” (Creswell & Plano Clark, 2011, p. 42). In other words, it is up to the researcher to realize these views and interpretations in accordance with a well-planned coding and thematic process. My selection of a mixed methods case study helped explore the participants’ interpretations of
empathy, which enhanced and provided more substantiated findings both qualitatively and quantitatively.

Constructivism takes into account that humans create meaning and make conscious choices which can vary. The goal of this research was to rely on the participants’ understandings of empathy in order to validate and illuminate ways in which instructors might develop healthcare program curricula. For these reasons, the interpretive framework of constructivism was chosen for this mixed methods case study research project.

Definition of Key Terms

Terms related to the study. Within this dissertation narrative there are several terms that warrant an explanation. The following terms will be defined in the context of a healthcare professional: professionalism, ethics, integrity, empathy, sympathy. The literature is replete with definitions of profession, professionalism, and medical professionalism. For this paper, the definition will focus on of the term medical professionalism as this case study research pertains to allied healthcare students. The following definition is somewhat lengthy and should be applied in a medical/healthcare context:

Profession—an occupation whose core element is work based upon the mastery of a complex body of knowledge and skills. It is a vocation in which knowledge of some department of science or learning of the practice of an art founded upon it is used in the service of others. Its members are governed by codes of ethics and profess a commitment to competence, integrity, morality, altruism, and the promotion of the public good within their domain. These commitments form the basis of a social contract between a profession and society, which in return grants the profession a monopoly over the use of its knowledge base, the right to considerable autonomy in practice and the privilege of
self-regulation. Professions and their members are accountable to those served, to the profession, and to society (Cruess, Johnston, & Cruess, 2004, p.74).

Four other terms often used when discussing healthcare professionalism attributes. The terms include ethics, integrity, empathy and sympathy. Makely (2013), defines “ethics” as “standards of conduct and moral judgment,” and “integrity” as “of sound moral principle” (p.55). Hojat (2007) proposes that empathy when used in the patient care realm can be defined as “a predominately cognitive (rather than emotional) attribute that involves an understanding (rather than feeling) of experiences, concerns, and perspectives of the patient, combined with a capacity to communicate this understanding” (p. 80). Sympathy is different from empathy, in that it involves an “affective response,” which is geared toward emotion and “feelings of a patient’s pain and suffering” (Hojat, 2009, p. 414).

Empathy and sympathy are often used together in everyday language, but when used in the healthcare practitioner’s vocabulary and applied in a patient care context they are distinctive. (Hojat, 2009). Empathy in this domain is often thought of as bringing about positive patient outcomes whereas sympathy in excess is associated in an unfavorable way as it can lead to poor decision making in clinical situations (Hojat, 2009). Likewise, Fairbairn (2002) contends that “the ability to empathize is an indicator of our humanity, while sympathy is an emotional response, immediate and uncontrolled, which may overwhelm us whenever we identify closely with another’s situation” (p. 28). For the discussion within this dissertation, empathy is seen as a vital professional attribute that healthcare workers should possess in order to understand and better serve patients.

Methodological terminology. A mixed methods case study design has been selected as the research method for this dissertation study. According to Creswell and Plano Clark (2011),
mixed methods research from a methodological point of view “focuses on collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies” (p. 5). The quantitative and qualitative means for posing a question, collecting data, analyzing data, and interpreting results based on that data relates to what Teddlie & Tashakkori (2009) call a strand. The embedded design is a mixed methods approach where the researcher combines the collection and analysis of both quantitative and qualitative strands within a traditional quantitative or qualitative design (Creswell & Plano Clark, 2011). This dissertation research project will employ an embedded case study approach in which the strand of quantitative data from archival surveys will provide a supportive and secondary role for the overall qualitative case study project.

This mixed methods case study will use the notation system developed by Morse (1991) in order to provide a useful understanding of the processes involved. “Quan” is used to indicate quantitative methods and “qual” is used to denote qualitative methods. The relative priority of the two methods may be indicated by the use of uppercase and lowercase letters. In addition, Plano Clark (2005) added parenthesis to indicate methods that are embedded within a larger framework. This dissertation study will therefore be denoted with the QUAL (quan) notation, as it indicates that a secondary quantitative strand has been implemented as an enhancement within a larger qualitative case study component.

**Delimitations and Limitations**

This mixed methods case study explored students’ conceptions of empathy throughout a community college healthcare program and was conducted in order to provide potential insights and strategies to inform future healthcare curricula. There are several delimitations and limitations that can be discussed for this study. One associate degree, professionally accredited,
Respiratory Care Technology healthcare program within a Health and Public Safety Division of a large, Midwestern community college was chosen for the “case” within this study. The research was conducted over three months during the spring semester of 2015. The sample within the case comprised the entire program of students and recent graduates for a total of 47 students. Archival data in the form of surveys was used as quantitative data to strengthen the findings of the case study and were not developed nor administered by the researcher. Interviews were utilized as the qualitative data strand and were subject to my personal interpretations. Even though a peer de-briefer was incorporated to validate my constructions, it is important to note that qualitative research is subject to personal bias and interpretation. While the setting, timing, and number of participants was typical of an accredited healthcare program of this type, the study findings are not generalizable as the research was conducted in order to inform and provide potential strategies to promote empathy education in healthcare programs within the community college setting.

**Significance of the Study**

In spite of the significantly positive outcomes that empathy purports for patients as well as healthcare professionals, this ethical value remains underdeveloped and not clearly elucidated within healthcare professions curricula. Some strides have been made, as medical education has recently acknowledged empathy’s importance in the provider-patient role as nearly all medical schools in the U.S. have adopted the education of this vital attribute into ethics and professionalism curricular objectives (Haramati, 2013). Even though medical schools have decided to make empathy education a priority, there exists an overall “hidden curriculum” for its practice among all health professions programs (p. 272). Research is needed in the realm of health professions education as a sparse number of studies have been conducted about the
infusion of this component into the curricula. In addition, few studies have investigated how to teach empathy to health professions students (Dunbar & Nichols, 2012) and to date there is a dearth of studies that exist with health professions students and empathy education in the community college setting.

This mixed methods case study intends to fill the gap in the research that exists with healthcare students in the community college setting and empathy education. Specifically, it focused on an exploration of students’ conceptions of empathy throughout an associate degree healthcare program. The study was conducted in order to provide information about the timing and effectiveness of potential strategies that were used to incorporate the development of empathy as a part of the healthcare student’s professional identity. This study may enhance further understanding of students’ thought processes and empathy constructs so healthcare educators may appreciate and integrate these perceptions into curriculum development. In addition, this study may illuminate the importance of the community college’s role in providing the increasingly changing and growing healthcare sector with knowledgeable, skillful, and empathetic healthcare professionals. The following chapter will review the literature concerning professionalism and empathy education. It will also introduce situated learning theory, the theoretical premise for this study and its application in the teaching of professionals in healthcare. The subsequent chapters will discuss the methods used in this study, present findings, and finally propose implications and suggestions for further research.
Chapter Two: Literature Review

The review of the literature is focused upon the professionalism skill of empathy and how this vital ethical attribute is promoted in the healthcare professions. The first section will examine the community college’s role in student acquisition of professionalism skills. The second section will discuss situated learning theory, the theoretical premise of this study and then impart how medical schools have espoused this theory. The third section will address how healthcare educators employ its principles to teach empathy through effective learning strategies.

The design of this study was influenced by the literature findings. While there were several studies that pointed to successful methods to foster empathy development in undergraduate and professional schools, a gap in the literature exists with community college healthcare students. The literature review will inform the reader about the strategies derived from situated learning theory that exist within these institutions. In addition, the former research supported this study in its efforts to explore the conceptions of healthcare community college students in order to inform future curricula and identity development within the novice healthcare professional.

Professionalism Skill Development in Community College Healthcare Courses

Exploding community college enrollment coupled with a diverse student population has increased the necessity for effective methods of instruction in order to meet the needs of a changing global economy (American Association of Community Colleges [AACC], 2012). The importance in preparing allied healthcare professionals is exceedingly timely as “key healthcare professions are projected to experience a shortage by 250,000 health care workers by 2020” (AACC, 2011, p.6). The expansion of healthcare services is due to many factors such as the increased population of our aged citizenry, the Patient Protection and Affordable Care Act
(2010) and the response to policymakers’ directives for homeland security needs and disaster relief (AACC, 2011).

According to the U.S. Department of Labor [DOL] (2012), professionalism skills, also called soft skills, constitute qualities such as communication, leadership, teamwork/collaboration, work ethic, and critical thinking. These attributes may be mastered over time when they are initiated, developed, practiced, and matured (DOL, 2012). Healthcare professions educators are in agreement with these practices and have also suggested that society expects the healthcare worker act in accordance with certain principled expectations and guidelines that are typically thought of as unwritten rules of conduct (Russell et. al, 2011; Sox, 2002). According to healthcare education literature, professionalism constitutes a variety of beliefs such as reliability and responsibility, integrity, respect for others, duty, empathy, expert knowledge, communication skills, accountability, autonomy and self-regulation (Russell et. al, 2011). Classes offered that focus on these important aspects of healthcare professionalism should be taught by instructors who have received specific professional development in soft skills training in order for their students to ascertain the concepts of these skills.

**The DOL Allied Health Competency Model.** The Employment and Training Administration [ETA] (2011), a division of the DOL, has established an Allied Health Industry Model in conjunction with the Health Professions Network (HPN) and the National Network of Health Career Programs (NN2). See Figure 1. This model documents “workplace and technical skills required for workplace success in economically important industries and serves as a resource for educators in the development of their curriculum, certifications, and tests that assess work-place competencies” (ETA, 2011). According to the ETA, the term competency “is the
capability to apply or use a set of related knowledge, skills, and abilities required to successfully perform "critical work functions" or tasks in a defined work setting” (ETA, 2011).

Each tier contains competencies for allied healthcare professions that progressively become more industry specific with regard to content area near the pyramid apex. Each area or section has objectives that healthcare educators can use when developing their curriculum. The competencies proposed in the Allied Health Competency Model serve as principles to guide a national movement toward core curriculum design within allied health programs, specifically community colleges (Krismer, 2014).

Professionalism skills are embedded throughout the model and have an integral place within these said competencies. It is important to note, for the context of this study, the professional skill of empathy is addressed in the tier “Industry Sector Technical Competencies,” under the category “Patient Interaction.” The objective states “Empathy when client/patient verbalizes questions or concern” (ETA, 2011)

Inferences being made to empathy take place in the “Industry Wide Technical Competencies” tier. The category “Health Industry Ethics” contains the following objectives:

1. “Act in the best interests of the client/patient,”
2. “Make ethical decisions,”
3. “Respect clients’ rights and responsibilities,” and
4. “Demonstrate an awareness of cultural competence in the context of cultural, social, age, and ethnic diversity” (ETA, 2011). All of these objectives can be accomplished in part by possessing empathetic behavior.

**Misconceptions of Professionalism Skills.** Rosenbaum, Deil-Amen, and Person (2006) found that many students in community colleges lack professionalism skills, and educators at these institutions often assume that students already have these skills developed. They also note that their research gives a glimpse into the lack of professionalism training at some community colleges and suggests these institutions offer courses to their students. Interestingly, the study found that students within healthcare programs exhibited slightly higher levels of
professionalism than other areas like business; however, it was still noted that even healthcare educators often assumed that their students possessed these vital skills. A significant finding was that students (especially those underserved) who exhibit professionalism traits have higher graduation and success rates.

**Application of Medical School Training in Community College Healthcare**

**Education.** A lack of research exists in the education and training of professionalism skills with community college allied healthcare students; however, there are clear guidelines and preparation for medical school students. After exploring healthcare professionalism literature, I decided to espouse some of the concepts used in medical practice as it is a parallel healthcare profession and has much to offer in terms of the literature regarding professional skill education. I contacted Sylvia Cruess, M.D., a leading authority on the teaching of medical professionalism and inquired as to her knowledge of professionalism training with community college healthcare students. Dr. Cruess replied that she knew of none that existed, but declared “it is important to start early and have professionalism pervasive throughout the health care system. As we believe that our objective is to assist students in developing their professional identity, this process can begin very early. My reaction is that the cognitive base is the same and the definitions, attributes and behaviors expected are very similar” (S. Cruess, personal communication, May 23, 2014).

Dr. Cruess and her colleagues have established a framework for the teaching of medical professionalism that describes an explicit and implicit approach (Cruess S. R. & Cruess, R. L. 2012). The framework is rooted in the educational theory of situated learning which can be described as a model of learning in a community of practice (Lave and Wenger, 1991). Implicit (implied) and explicit (obvious) aspects of practice are inherent in situated learning and even though much of the complexity of learning is implicit the “explication and abstraction are
themselves situated in social practices, as they are developed in the process of ongoing activity of one sort or another” (McLellan, 1996, p. 50).

Explicit teaching of medical professionalism entails a cognitive approach which involves defining terms and attributes. Explanations are necessary and should not be inferred, as they are meant to further clarify the obligations that the physician has with society (Cruess, S. R. & Cruess R. L., 2012). The implicit aspect of teaching medical professionalism is concerned with the experiences and reflection that occurs with the student during his/her development as a medical professional (p.259). Both of these aspects of training enhance the formation of a professional identity within the healthcare worker and can be applied to curricula in the allied health fields.

**Summary.** The significant role community colleges play in healthcare education necessitates the development of enhanced pedagogical strategies to address the changing landscape of our society. This section of the literature review addressed the importance of professionalism skills and their necessity in healthcare occupations obtained through the community college route. A national model and curricula were discussed with specific regard to the professionalism skill of empathy. In addition, due to the lack of inquiry and the dearth of research that exists with community college healthcare students and professionalism skills, I sought information from a key contributor in medical education. The adviser suggested that the education of professionalism skills among physicians and other healthcare professions are similar as they both seek competence in technical and non-technical skills.

The next section of this review will describe some key components of situated learning (Lave & Wenger, 1991; McLellan, 1996; Rogoff, 1995), the theoretical base for this study and its relevance in medical school education. The final section of the literature review will examine
how educators from undergraduate and graduate healthcare programs use situated learning strategies to infuse empathy formation into their curricula in order for the novice to develop identity formation within the healthcare community.

**Situated Learning Theory**

Maxwell (2013) describes theory as “a set of concepts and ideas and the proposed relationships among these, a structure that is intended to capture or model something about the world” (p.48). A sound educational approach to teaching and learning should be “how we work” and “guide our practice,” otherwise our thoughts and intuitions can cloud the intentional, informed choices that lead us to particular outcomes (R. Cruess, S. Cruess, & Steinert, 2009, p.32). In essence, theories should provide a scaffold to build intellectual knowledge, but also provide practical application in the process.

Situated learning focuses on the relationship between learning and the social context in which it occurs. Lave & Wenger (1991) studied situated learning and proposed a process called “legitimate peripheral participation” to explain how there is a relationship between “newcomers and old-timers, and about the activities, identities, artifacts and communities of knowledge and practice” (p.29). The goal of this sociocultural practice is to become a “full participant” and eventually become a member of the community.

Lave & Wenger (1991) originally became interested in the process of apprenticeship and found that many educators actually thought it was synonymous with situated learning. After studying various craftsman and craftswomen, they concluded that apprenticeship was actually more than “learning by doing;” learning is an “integral and inseparable” aspect of social practice (p. 31). They realized that learning was complex, as it was not just “general theoretical knowledge;” knowledge and learning were related and the meaning was “negotiated” through
interests in the learning activity involved (p.31). The holistic person needs to be understood; they are not just a “receiver” acquiring facts, but rather “agent, activity, and the world mutually constitute each other” (p.33).

Lave and Wenger (1991) contend that some constructivist views such as experiential learning focus solely on an individualistic and cognitive approach; however, they found that situated learning can be a “transitory bridge” between the cognitive and the social aspects of learning (p.34). Wenger (1998) asserts that educational institutions often premise that students learn by individual and methodic practice which forces learning out of context. This view often leads the student to feel bored and not connected since socialized processes of collaboration incorporated with action and meaning are not valued and utilized. Lave and Wenger (1991) argue against such compartmentalized, individualistic strategies; hence, the person is not by themselves, they are part of a sociocultural community, a “person-in-the-world” (p. 52). Learners should be actively engaged in their social community in order to construct their identity within it.

The learner, who intends to become a full participant in their community, exists within a system of relationships and activities, learning to master new ideas. As the novice learns new tasks and procures understanding, he/she becomes a “different person with respect to the possibilities enabled by these systems of relations” (Lave & Wenger, 1991, p. 53). According to Lave & Wenger (1991), the learner constructs her identity in this fashion. Identity is related to motivation and finding meaning through activity. As a person becomes an agent and community member, her identity shifts from newcomer to practitioner. Wenger (1998) added that learning and identity are intertwined and often thought of as a “transforming process.” Learning is not just based on “an accumulation of skills and information, but a process of becoming” (Wenger, 1998, p. 215).
Situated learning theorist Barbara Rogoff (1995) also contends that the learning process may take place at different levels and planes which occur simultaneously in a dynamic and active process. Apprenticeship, guided participation, and participatory appropriation are regarded by Rogoff “as inseparable concepts reflecting different planes of focus in sociocultural activity—community/institutional, interpersonal, and personal” (p. 141). These interactions are not compartmentalized and in no particular order as they merge together and involve each other in concepts of learning and development. Rogoff (1995) suggests that educational researchers take into account sociocultural activities when analyzing their data. Different yet blended layers of cultural activity should be considered as individuals, groups, and communities are transformed during the learning process collectively and not detached from each other (p. 159).

Lave and Wenger (1991) discuss the importance of language and the role of stories in apprenticeship. Stories can aid in the decision making process of the novice. “Talking about and talking within a practice” can have meaning in the learning process (p. 109). “Talking about” is sharing information about social lore and “talking within” is imparting information about specific activities. Stories and talk are a key factor in legitimate peripheral participation; as the learner develops her identity, she learns “to talk” and not just learn “from talk” (p. 109).

Lave and Wenger (1991) also differentiate between the learning curriculum and the teaching curriculum. The learning curriculum validates learners and their community by “providing situated learning opportunities and evolves out of participation in a specific community of practice; it is viewed from the perspective of the learners” (p. 97). Conversely, a teaching curriculum is for the “instruction of newcomers,” and the meaning of what is learned becomes convoluted because the instructor knows all (p. 97). The impetus for this research lies square on the premise of the Lave and Wenger’s (1991) learning curriculum as the exploration of
students’ conceptions of empathy in a healthcare setting may help mold and build a much needed professionalism curriculum.

In addition to general education environments, situated learning theory has been advocated as an “overarching framework” to enhance the “design and delivery of instructional programs” (Cruess et al., 2009, p. 32). This type of constructivist educational theory has received attention as a valuable and applicable way to construct learning in the health professions (Cruess et al., 2009; Maudsley & Strivens, 2000) as it is based upon the idea that knowledge is situated in context along with the student’s activity and cultural realm (Cruess et al., 2009). According to Maudsley & Strivens (2000),

Of the educational theories available, situated learning theory best describes the most effective design model to transform students from members of the lay public to expert members of a profession possessing skills and a commitment to a comment set of values (p. 537).

Situated learning merges content knowledge, the “what to know,” with non-technical, professional skills, which is the “know how” of professional practice (Cruess et al., 2009). Similarly, Maudsley & Strivens (2000) contend that some professional groups such as engineers and accountants have a “straightforward knowledge base” involving technical problems, whereas schoolteachers and healthcare professionals in fields such as medicine and nursing are engaging content knowledge in their social interactions with their clients. In order to optimize the learning experience, professional curricula should combine authentic activities within specific social contexts in order for novice students to observe, communicate, and participate in their newly chosen profession. Maudsley & Strivens (2000) claim knowledge and practice are in close association as “Accruing experience is a powerful promoter of learning” (p. 538).
**Importance of situated learning in medical school education.** Cruess et al. (2009) have proposed strategies for teaching and learning professionalism in the medical field and have set situated learning as their framework based on the work of McLellan (1996). Some of the key components that they incorporate are cognitive apprenticeship, collective learning, reflection, practice and articulation of learning skills (p. 33). Cognitive apprenticeship contains four dimensions: modeling, scaffolding, fading, and coaching. Cognitive apprenticeship is different from the traditional approach of an “I show you, now go do it” system. Teachers should identify the processes of the task clearly, situate theoretical concepts in a relevant way, diversify learning conditions, and express commonalities so that students can transfer their experiences (p. 34). The process of modeling is when the teacher actually shows the learner what to do. Scaffolding refers to arranging tasks from individual learning experiences to much larger challenges. Fading is like weaning; it implies giving the learner more responsibility and independence. Coaching is a process where the apprentice is given attention, skill building lessons, knowledge and direction while accomplishing certain challenges (p.34).

Cruess et al. (2009) explains that collaborative learning is best accomplished through “collective problem solving, displaying and identifying multiple roles, confronting ineffective strategies and misconceptions, and developing collaborative work skills” (p. 35). Healthcare, like many other professions, requires teamwork and effective learning strategies that promote collaboration as an important part of the curriculum.

Reflection has been proposed by many in medical practice as an important professional competency (Cruess et al., 2009). It is often thought of as three types of activity: reflection in action, on action, and for action (p. 35). These are processes of thinking with your instincts,
evaluating a situation after it happens, and providing avenues for professional training to occur for learners.

Practice is providing opportunities for learners to hone their skills. Mastery comes through repetition which offers the learner a space to test, redefine, and increase skills. As practice occurs, the skills become ingrained and established (Cruess et al., 2009).

Lastly, Cruess et al. (2009) explains articulation as it refers to students “articulating their knowledge, reasoning, or problem-solving processes in a specific domain” (p. 36). It is often associated with personal goal setting, but can apply to setting targets for others to achieve within the learner’s environment. Effective communication and explanation can accomplish articulation.

Alignment with this study. Situated learning theory provides an overall foundation for this case study as it offers a sound philosophical approach to address challenges in healthcare education by promoting the learner’s acquisition of knowledge, skills and values in a specific knowledge community. This research study involved students from an associate degree Respiratory Care Healthcare Program who hold a particular body of professional knowledge, skills, and principles. In addition, situated learning promotes a “learning curriculum” which “is a field of learning resources in everyday practice viewed from the perspectives of learners” (Lave & Wenger, p. 97, 1991). The consideration of students’ perceptions espoused by situated learning theory most importantly align with this investigation as it distinctly incorporated students’ conceptions of professionalism in order to inform future curricula.

Situated learning theory encourages a gradual learning process that occurs in a social and active environment. Over time, this preparation enables the learner to construct his or her identity and achieve legitimate participation (Maudsley & Strivens 2000). In this inquiry,
surveys and interview responses were analyzed from three different groups (first year, second year, and graduates) across the program. Conducting the study in this manner allowed the researcher to investigate potential empathy differences among each group, but also allowed for an overall understanding of the developmental components of this value. Therefore, this study was conducted from a situated learning perspective as it recognized the program’s continuity and structure to support the learning process during the entire two-year program.

**Summary.** Situated learning promotes a holistic process which may lead to professional identity formation within students and thereby promote membership within their respective practices (Cruess R. L., & Cruess, S. R., 2006). The valued experiences espoused by this theory provide an enculturation process for students in professional programs such as medical school, but may also be applied to health education programs at the community college level. This research study sought to discover students’ conceptions of empathy as it is a vital part of identity formation within the constructivist ideals of situated learning and therefore aligns with this theory. The next section of the literature review will discuss key components of situated learning and how undergraduate and graduate health professions educators often incorporate these ideals into their curricula in order to inculcate the professional value of empathy.

**Empathy Education in Undergraduate and Professional Health Professions**

As stated previously, the theory of situated learning and its application in health professions programs may provide the intellectual, affective and social expertise necessary to become a competent health care professional. Little research exists among health professions education researchers and empathy education other than in medical schools; however, some studies have shown effective processes which included a variety of methods from learning constructs based upon communication, experiential learning, and role modeling (Graber et al.,
The remainder of this literature review will address proven educational approaches to enhance empathy acquisition within the healthcare professional. These curricular practices may, in turn, be applied at the community college level. Lastly, a glimpse into the newly studied topic of ethnocultural empathy development will be discussed as a way to further enhance this valued ethic in the healthcare professional.

**Communication.** Lave and Wenger (1991) recognize that language is not simply a system of talking about the world, but rather language is equally important as a means of acting in the world (p. 22). They see language as complex and distinguished among practitioners, which enhances participation in the professional culture. Several health care educational programs have validated communication’s role in empathy and employed strategies to encourage its use among healthcare professionals. The strategies found to enhance communication and empathy include small group workshops, role play, audio and videotaped encounters with patients, structured case studies, and patient shadowing (Hardee and Platt 2010; Orzcan et al., 2012).

Brown et al. (2011) found that relationships existed between listening and communication styles and levels of empathy among health science students. They administered a questionnaire containing the Jefferson Scale of Physician Empathy [JSPE] (Hojat, Mangione, Mangione, Vergare & Magee (2002), the Listening Styles Profile [LSP] (Watson, Barker & Weaver, 1995) and the Communicator Style Profile [CSP] (Norton, 1978) to 860 varied undergraduate healthcare students after completing courses for one year. The study revealed the participants showed an overall strong level of empathy. In addition, “people” and “time” listening styles (from the LSP) were predictive of JSPE empathy and that “friendly and relaxed” communication styles (form the CSP) were also predictive of empathy. These results suggested
that a segment of the variance in empathy can be explained by both the listening and communication styles of the participants; thus educators may improve students’ empathy by strengthening communication skill building techniques within coursework.

Both Hardee and Platt (2009) and Nordby and Nohr (2011) investigated communication challenges among healthcare professions and their patients. Specifically, healthcare professionals noted that finding the right words to express when confronted with ill patients was a real concern. Nordby and Nohr interviewed 20 paramedics and found that empathy communication can be improved by several approaches. The participants desired an increase in knowledge of non-technical areas such as communication strategies in order to understand patients’ needs in relationship to their own ethical perspectives. They also suggested that colleagues and managers should support each other by promoting initiatives in communication such as debriefing, self-reporting, and meetings.

Even though sound communication skills are considered to be a necessary professional attribute with many clinicians, unfortunately some personal barriers and conceptions still exist between patient and provider. Hardee and Platt (2009) also recognized the dilemma of “what to say” to a “problematic patient” (p. 20). The researchers found that providing training and role play opportunities to practitioners improved the worry and dilemma they may experience. For example, following a simple pattern such as listening to the patient, observing non-verbal cues, understanding what is important to the patient and what is physically and mentally taking place with the patient helps this process. Verbal acknowledgements such as “Sounds like this is a scary time for you,” and “I think I’m understanding that you are upset because …” may indeed improve empathy communication between patients and clinicians.
Ozcan et al. (2012) investigated whether a 10 hour empathy course improved empathetic skill and tendency among medical school and nursing school students. They found improved empathy scores as demonstrated by pre and post scores from the Empathic Communication Skills Scale (ECSS) and Empathic Tendency Scale (ETS) as developed by Dökmen (1998). Specific situated learning strategies such as exposure to role models, patient shadowing, case studies, theatrical performance observation, and role playing were incorporated into the course which led to a positive effect on learning empathy and gaining empathy skills and tendency (p. 532).

**Experiential learning.** Wenger (1998) contends that learning cannot be “designed,” as it is often dynamic and transpires with experience and practice (p.225). Situated learning involves participation and experience at its core, as the many forms of learning are negotiated by the learner to form an identity within in a socially configured realm (p. 226). Experiential learning often involves storytelling, as mentioned previously, which may occur in the form of theater, literature, and reflective writing. It may also involve simulated experiences such as role play.

Vanelaere, Timmermann, Stevens, and Gastmans (2012) conducted a study in which nurses and other healthcare associated employees underwent an empathy session where they were a simulated patient in a healthcare facility. Their findings revealed that all participants underwent at least one experience that had a profound impact. For example, one participant exhibited a feeling of helplessness and insecurity:

During the night, I got thirsty and couldn't reach my drink. You cannot fathom what it means to be dependent on others for everything, to not be able to reach it yourself, to lie there thinking, ‘when is someone going to show up, or who should I call?’ (p. 74).
The participants in the study attributed the qualitative interviews and reflective process as also adding to their experiences in understanding empathy. Several of the participants asked the researchers to continue meeting them and to continue the empathy program because it had made such an impact on their professional identity.

In the “Caring Professionals Program” (Graber et al., 2012) healthcare educators from a variety of programs such as physical therapy, occupational therapy, and nurse practitioner have come together to infuse elements of caring and empathy into their curricula. Experiential approaches to learning are one of the conceptual foundations for their program (p. 91). One component involves students who interview a caregiver for a sick or elderly person. Each team reflects upon their experience and then answers questions about their interview. Another activity involves an “aging game” where students imaginatively experience the gradual or abrupt loss of something paramount to their lives, such as their eyesight (p.93). The on-going program is currently undergoing an analysis of the methods and results of the program and will employ the use of the JSPE (mentioned earlier) in order to assess empathy growth among its students.

**Role modeling.** McLellan (1996), a situated learning theorist mentioned previously, explained that students may learn a “great deal from their position on the periphery” in the learning community (p. 252). Role models are considered to provide a pivotal role in the educational process of situated learning as they allow the novice member of the community to observe how the mentor behaves and speaks to others within the said culture. This process enables the novices to move from the periphery where they are not fully involved, to a more significant role where they may gain confidence as well as competence.

Cronenwett (2001), as cited in Graber (et al., 2012, p. 94), contends that role models may have an “almost incalculable and transformable effect on students.” Role models can impart
both communication skills and experiences with prior patients which have allowed them to be successful empathetic practitioners. Observation of role models by the student in the clinical setting may have a successful impact on how to effectively communicate as professionals in the field (Cruess, Cruess, & Steinert, 2009).

Preceptors, or clinical educators who supervise students in a field environment, indeed provide an important role in professionalism skill development. In a study of preceptor dietetic students, survey data found that attitudes exhibited by the preceptor in alignment with situated learning mentor characteristics were what students desired (MacLellan & Lordly, 2008). Students cited approachability, adaptability, and reflectivity as being integral to their success. In addition, being made to feel valued by the mentor assisted the student in becoming a professional. Essentially, clinical mentors should not only exhibit empathy for the patients for whom they serve, but also their students whom they educate.

Several studies have also cited student role models as an important asset in professional development for a variety of reasons, including empathy enhancement (Glass & Walter, 2000; McKay-Harmer, Huffman, & Johnson, 2011). Similarly, both researchers concur that peer mentoring may be a valued supplement in the nursing practicum experience. Nursing staff in a clinical setting may feel stressed and unable to properly train novice student nurses as they try to fulfill their needs in a hectic and understaffed environment. In addition, nursing faculty shortages are the norm at many institutions, putting strain on instructors to not only deliver all the necessary content knowledge, but provide support in professional training.

Accordingly, McKay-Harmer et al. (2011) conducted a study of mentor and novice perceptions of a clinical peer mentoring experience. They found that peer mentoring helped both
the student and the mentor demonstrate empathy for the patient (p.200). Other findings included an increase in self-confidence, organizational skills, and teamwork.

**Ethnocultural empathy.** Given the increasing demographic changes in healthcare, cultural differences often reside among its patients as well as its providers (Dysart-Gale, 2006). Recently, ethnocultural empathy has become an important consideration in the healthcare field and the development of this competence for clinicians in providing care for their patients (Rasoal, Jungert, Hau, Stiwne, & Anderson, 2009). Ethnocultural empathy can be defined as “empathy toward people from racial and ethnic cultural groups who are different from one’s own ethnocultural group” (Wang, et al., 2003, p. 223).

While the importance of empathy in the healthcare professions is often discussed, there is little mentioned of the relevance of ethnocultural empathy among students in health programs (Rasoal et al., 2009). In order to address this issue, Rasoal et al. (2009) investigated ethnocultural empathy differences in four masters-degree health care programs by using the Scale of Ethnocultural Empathy (ESS) developed by Wang et al. (2003). The findings showed that psychology students had significantly higher ethnocultural empathy than other study programs such as nursing, medicine, and social work in their first semester. Little differences between students in their first and in later semesters were obtained (Rasoal, et al., 2009, p. 300). The researchers considered differences may be attributed to (a) levels of admission grades and applications requirements or (b) different cultures and expectations from the program environment.

**Conclusion**

The professionalism skill of empathy is a desired trait for healthcare practitioners to espouse; moreover, the trait is associated with positive clinical outcomes for patients as well as
the clinician (Hojat, et al., 2009). For these reasons, promotion of student empathetic behavior is often considered to be a program goal among health professions educators; however, many programs do not clearly articulate the value in their curriculum (Graber, et al. 2012; Boyle et al., 2009). Very little research exists as to how the health professions incorporate empathy education in its programs, especially at the community college level where there is a complete lack of inquiry.

Situated learning theory has been considered to be an effective paradigm to assist health professions educators in program design (Cruess & Cruess, 2006). Furthermore, the socio-cultural approach that situated learning provides enables the student to gradually inculcate the practices, values and skills of a specific expert community (Budwig, 2013) which in turn may lead the novice student to achieve an identity within the said profession. Situated learning theory has been adopted as the foundation for this research study for it aligns with the setting, participants and goals of this study. Most importantly, situated learning considers students’ perceptions in the learning process (Lave & Wenger, 1991), which is exactly the aim of this endeavor.

Healthcare educators have employed a variety of situated learning practices to enhance professionalism skills such as empathy (Graber et al., 2012; Hardee & Platt, 2009; Harmer, Huffman, & Johnson, 2011; Nordby & Nohr, 2011; Vanlaere et al., 2012). These meaningful methods include small group workshops, case studies, role play, patient simulation experiences, and role modeling. Many of these strategies have taken place in graduate and undergraduate health professions schools; however, these techniques may be very applicable in the community college setting as well.
Ethnocultural empathy, which is providing empathy for people other than one’s own cultural group (Wang, et al, 2003), may also provide an insight to curriculum enhancement. Healthcare is widely reflecting what is taking place within our nation’s demographic population changes ((Rasoal, et al., 2009) while patients and aspiring professionals may certainly benefit from ethnocultural empathy. Indeed, a better awareness of cultures other than our own might possibly provide improved patient and provider outcomes (Dysart-Gale, 2006).

The existing literature surrounding empathy education in healthcare professions is meager; furthermore, studies at the community college level are non-existent. This literature review provides a basis for the understanding of empathy education and serves to bolster this study’s goals. By exploring conceptions of community college healthcare students, this research may provide insights for curricular improvements in the allied health fields. Most importantly, the information garnered from this investigation may potentially increase empathy understanding among future healthcare professionals and improve relationships with the patients they serve.
Chapter Three: Methodology

This research study utilized a mixed methods case study approach to explore students’ conceptions of empathy in order to inform healthcare programs at the community college level. Case study research, a primarily qualitative process, may sometimes incorporate additional data collection that may involve quantitative sources relevant to the case (Teddlie & Taskakkori, 2009). This mixed methods study employed the use of quantitative data embedded within a primarily qualitative case study. The study was conducted from January-March of 2015. The first part of the following methods chapter will include the study context, definitions of mixed methods and case study research along with reasons for their selection in this project. The next sections will discuss the research design and appropriate validity concerns.

Context

Merriam (1998) explains that case studies are “an intensive, holistic description and analysis of a single unit or bounded system (p. 12). The bounded system for this case study is a Respiratory Care Program within the Health and Public Safety Division of a large, urban community college called “Jefferson Community College.” The associate degree Respiratory Care Program started in 1970 and was one of the first healthcare programs offered at the institution. The program provides the surrounding communities with the majority its Respiratory Therapists.

Participants. Pseudonyms have been incorporated throughout this study to protect anonymity of participants. This case included 47 student participants. There are 19 first-year students, 11 second-year students and 17 graduates from the class of 2014. The program also consists of two faculty members and several adjunct instructors.
This study is designed to explore students’ conceptions of empathy in order to possibly inform future curricula for professional health care courses; therefore, the Respiratory Care Program was selected as it contains components of ethical behavior development within its curriculum and endeavors to promote and practice values which lead to positive patient outcomes and overall professional career satisfaction. Further explanation will follow in the next section regarding the definitions and meaning of mixed methods and case study in this particular inquiry.

**Mixed Methods Definition and Selection**

Mixed methods is a research methodology that focuses on research questions that call for real-life contextual understandings, multilevel perspectives, and cultural influences (Creswell & Plano Clark, 2011). It employs rigorous quantitative methods which focus on frequency and depth of views while also incorporating qualitative research that provides insight into their meaning (Creswell & Plano Clark, 2011). Creswell (2011) described mixed methods as not just simply collecting distinct forms quantitative and qualitative data, but it is “merging, integrating, linking or imbedding the two strands” (p. 535).

Mixed methods methodology validated the exploratory and confirmatory types of research questions that have been posed in this study. Since this study was conducted over several months’ time and did not occur longitudinally, mixed methods was an appropriate selection as it supported a “snap shot” approach. In addition, mixed methods processes allowed for a better understanding of the students’ conceptions of empathy through detailed survey analysis along with the students’ lived experiences as revealed through the interview process. Merging the two strands of data through these multiple processes fortified the findings of this study as each played a role in the discovery of the students’ conceptions. Either method utilized by itself during this
small time frame would not have provided enough substantial data to conduct a worthy investigation. Therefore, mixed methods was chosen as a suitable methodology in order to answer the qualitative and quantitative research questions. The research questions were:

1. What aspects of the program supported the development of empathy for current students and recent graduates?

2. How does empathy develop across the Respiratory Care Program?

Case Study Definition and Selection

Creswell (2007) provided a detailed explanation of the qualitative case study:

Case study research is a qualitative approach in which the investigator explores a detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a case description and case-based themes. (p. 73)

Similarly, Merriam stated (1998) that case studies are usually “employed to gain an in-depth understanding of the situation and meaning for those involved” (p. 19). Yin (2003) added that case studies enable the investigators to “retain the holistic and meaningful characteristics of real-life events” (p. 4). The central approach to this case study will answer the research questions which may provide relevant and informative student perspectives to inform healthcare curricula development.

This case study may be deemed “particularistic” in its nature as it poses to address “practical problems—for questions, situations, or puzzling occurrences arising from everyday practice” (Merriam, 1998, p. 29). Teachers of health professions tackle with imposed credit hour reductions in addition to a myriad of other challenges when considering curricular components. This case focused in particular on the important non-technical aspect of empathy.
education and how an associate degree healthcare program’s students considered this attribute. Information provided by these student participants revealed ways in which curriculum may be enhanced to support this ethical value in a time when curricular confronts are present.

The use of case study in this research project allowed for the consideration of in-depth student responses regarding the professional behavior of empathy. Empathy is not easily defined in healthcare and students’ conceptions of this attribute require a thorough understanding. Therefore, a one-time survey (quan component) would most likely not elucidate the students’ feelings. In this study, student interviews (QUAL component) were conducted in order to provide detailed information about their conceptions of empathy, in order to add a richer picture of the students’ conceptions. The case study approach using both sets of data gave insight to the empathetic culture which exists within the program and yielded potential strategies that other healthcare programs may potentially employ. These aspects were taken in consideration when considering how to potentially answer the two research questions.

**Embedded case study.** Yin (2003) explained that an embedded case study design can be used in research studies to investigate a single case with more than one unit of analysis (p. 50). The embedded units within this study comprised the three groups or subsets of the case. The embedded units are: the first year students, the second year students, and the recent program graduates. Data collection took place concurrently within the embedded units in the form of previously administered surveys and interviews. Creswell and Plano Clark (2011) call this *sequential timing*. Survey and interview data were analyzed separately and then brought together as two distinct yet important data components of the study. In addition, this timing allowed for a streamlined and organized process. I chose an embedded case study design in order to assess students’ conceptions of empathy among each of the student groups as it provided an in-depth
look into the complexities, similarities, and differences in each set, but also enabled me to look at the program as a whole in a “snap shot” approach.

**Research Design**

This research involved the case study of an associate degree Respiratory Care Program in a community college context. Yin (2003) refers to this nested arrangement as “a survey within a case study” (p. 63). In other words, Morse’s (1991) mixed methods nomenclature would label this study as QUAL(quan). This notation system was used in the study to provide a simplistic depiction of the research processes involved. The system labels the priority (using uppercase and lowercase letters) and the sequence of activities (using arrows or plus signs) as previously explained in the *definition of terms* section of this dissertation.

This case study employed a concurrent embedded mixed methods design in which the purpose was as Creswell explained “to collect qualitative and quantitative data simultaneously as one form of data plays a supportive role to the other data form” (Creswell, 2011, p. 544). According to Yin (2003), embedded case study designs rely on “more holistic data collection strategies for studying the main case but then call upon surveys or other more quantitative techniques to collect data about the embedded unit(s) of analysis” (p. 63).

Program-wide surveys (archival data) provided the quantitative and supportive component for the overall qualitative case study approach. Qualitative data in the form of interviews were obtained from small subsets of recruited first year, second year, and third year students. The two sets of data were implemented during the same phase of the study. The concurrent timing process allowed for a streamlined approach as each form of data was analyzed independently from each other.
As stated previously, a single data set was not sufficient for this particular study as it would not satisfy the research questions. The embedded design allowed for the different quantitative and qualitative forms of data collection to enrich the findings. In addition, the embedded design aligned with the philosophical constructivist approach as it employed the overarching frame of a case study. For this study, multiple data collection with three groups of students has made the process somewhat complex, so I utilized Creswell’s suggestion (2011) that mixed method researchers provide a diagram for a general understanding of the research study along with Morse’s (1991) notation system. An organizational depiction and procedural visual aid is presented in Figure 2: Mixed method, single case, embedded design.
### CONTEXT
Conceptions of Empathy in Community College Healthcare Students

### CASE STUDY-QUAL(quan)
Respiratory Therapy Program

<table>
<thead>
<tr>
<th>First Year Students</th>
<th>Process</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>quan</td>
<td>QUAL</td>
</tr>
<tr>
<td>KCES survey</td>
<td>n = 15</td>
<td>n = 5</td>
</tr>
<tr>
<td>Product</td>
<td>SPSS generated</td>
<td>Transcripts, Memos</td>
</tr>
<tr>
<td></td>
<td>Group &amp; comparison data</td>
<td>Thematic analysis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Year Students</th>
<th>Process</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>quan</td>
<td>QUAL</td>
</tr>
<tr>
<td>KCES survey</td>
<td>n = 15</td>
<td>n = 5</td>
</tr>
<tr>
<td>Product</td>
<td>SPSS generated</td>
<td>Transcripts, Memos</td>
</tr>
<tr>
<td></td>
<td>Group &amp; comparison data</td>
<td>Thematic analysis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Graduates</th>
<th>Process</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>quan</td>
<td>QUAL</td>
</tr>
<tr>
<td>KCES survey</td>
<td>n = 15</td>
<td>n = 5</td>
</tr>
<tr>
<td>Product</td>
<td>SPSS generated</td>
<td>Transcripts, Memos</td>
</tr>
<tr>
<td></td>
<td>Group &amp; comparison data</td>
<td>Thematic analysis</td>
</tr>
</tbody>
</table>

Figure 2: Mixed method, single case, embedded design.
Sampling

This mixed methods case study utilized purposeful sampling techniques as described by Teddlie and Tahakkori (2009) as they “are primarily used in QUAL studies and may be defined as selecting units based on specific purposes associated with answering a research study’s questions” (p. 170). Maxwell (2013) further justified purposeful sampling as it seeks to obtain important information that may not otherwise be obtained from other types of groups. Purposeful sampling was utilized in this study for its applicability to the particular research questions regarding empathy as a professional value within associate degree healthcare students. The sampling process occurred four times in this study. The first year, second year and recent graduates of the program were sampled separately for the qualitative case study strand, while the quantitative strand drew on a collective sample of the entire program (including recent graduates). Please see an overview of sampling and data collection in Table 1. After a brief description of case study sampling, detailed information concerning the sampling strategies will be accounted for in the qualitative and quantitative method sections.

Case study sampling. The Respiratory Care Program was identified for its unique role as the single case in this study and was pivotal to answering the particular types of research questions (Yin, 2003). Furthermore, the research was conducted within this program in order to potentially inform clinical educators from similar programs and provide an in-depth understanding of this novice student group of professionals. The associate degree Respiratory Care Program was chosen in particular because there is a dearth of information concerning professionalism education, particularly empathy education among programs other than nursing and other professional schools such as medical school, dental school, and physical therapy. In addition, research is warranted and timely as associate degree healthcare programs are growing
and supplying a large facet of our nation’s healthcare (Carnevale et al., 2013). Understanding students’ perspectives in this case may lead to curricular advancements. For these reasons, a Respiratory Therapy Program within a large, urban community college was chosen to be the case in this mixed methods study.

Table 1

Matrix of Data Sources and Data Collection Methods for Community College Healthcare Students’ Conceptions of Empathy: A Program-Wide Mixed Methods Case Study

<table>
<thead>
<tr>
<th>Data Collection Tool</th>
<th>Data Type</th>
<th>Sub-Category</th>
<th>Collection Methods</th>
<th>Analysis Method</th>
<th>Research Questions Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi-Structured Interviews</td>
<td>Qual</td>
<td>Student interviews</td>
<td>Digital Audio Recording, Memos, Transcription</td>
<td>Thematic</td>
<td>Q#1</td>
</tr>
<tr>
<td>Survey</td>
<td>Quan</td>
<td>Program wide; Kiersma-Chen Empathy Scale (KCES)</td>
<td>Survey Monkey</td>
<td>Descriptive and group comparative statistics generated via R Core Team Program</td>
<td>Q#2</td>
</tr>
</tbody>
</table>

Qualitative Strand

Qualitative data in the form of student interviews were used to answer the following research question: *What aspects of the program supported the development of empathy for current students and recent graduates?* The bounded system or the case has been described previously; therefore, as Merriam (1998) suggested, the researcher must decide how to select a “sample within the case” (p. 65) when obtaining forms of data. In this study a purposeful sample was used to recruit first year, second year and graduate students for the interview process.
A recruitment form was distributed by the Respiratory Care Program Faculty on my behalf to the program students in January of 2015. In order to recruit the graduates, one faculty member sent the recruitment flyer via email to the 2014 program graduates. The criterion for participant selection was greater than 18 years old, and participation or recent graduate (2014) of the Respiratory Program. In addition, the students were offered a $20.00 Chipotle card for their time after interview completion. See Appendix A: Recruitment Flyer.

Qualitative data collection. The qualitative collection process involves “asking, watching, and reviewing” the data (Merriam, 2009, p. 85). The form of data most often utilized is from interviews which allow the reader to examine the case from another person’s perspective (Patton, 2002). In this case, one student interview took place on campus, in a private location in the Health and Public Safety Division, after the students responded to the recruitment form. The first five student respondents for each student group were contacted by the researcher by email to confirm their interest and interview times were set-up. Additional students were not recruited. Before the interview began, the students were asked to read and sign the IRB (Institutional Review Board) consent form. Please see Appendix B: Participant Consent Form. Three student graduates were sent the IRB consent form (via email) and asked to read it and send it back electronically, as their interviews took place over the phone. One graduate came to Jefferson for the interview. At that time, the students were also informed that they could discontinue the study and not continue. All students decided to participate. Table 2 as follows provides an overview of participant groups, pseudonyms, and demographics.
Table 2

*Interview Participants’ Pseudonyms and Demographic Characteristics*

<table>
<thead>
<tr>
<th>(pseudonym) Student Name</th>
<th>Student Group</th>
<th>Gender</th>
<th>Age</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rin</td>
<td>First year student</td>
<td>Female</td>
<td>32</td>
<td>Caucasian</td>
</tr>
<tr>
<td>Mike</td>
<td>First year student</td>
<td>Male</td>
<td>25</td>
<td>Asian</td>
</tr>
<tr>
<td>Nicole</td>
<td>First year student</td>
<td>Female</td>
<td>31</td>
<td>Caucasian</td>
</tr>
<tr>
<td>Jasmine</td>
<td>First year student</td>
<td>Female</td>
<td>30</td>
<td>African American</td>
</tr>
<tr>
<td>Linda</td>
<td>First year student</td>
<td>Female</td>
<td>28</td>
<td>Caucasian</td>
</tr>
<tr>
<td>Stevie</td>
<td>Second year student</td>
<td>Female</td>
<td>31</td>
<td>Caucasian</td>
</tr>
<tr>
<td>Sally</td>
<td>Second year student</td>
<td>Female</td>
<td>32</td>
<td>Caucasian</td>
</tr>
<tr>
<td>Jane</td>
<td>Second year student</td>
<td>Female</td>
<td>23</td>
<td>Caucasian</td>
</tr>
<tr>
<td>Samantha</td>
<td>Second year student</td>
<td>Female</td>
<td>46</td>
<td>Caucasian</td>
</tr>
<tr>
<td>James</td>
<td>Second year student</td>
<td>Male</td>
<td>39</td>
<td>African American</td>
</tr>
<tr>
<td>Kevin</td>
<td>Graduated in 2014</td>
<td>Male</td>
<td>33</td>
<td>Caucasian</td>
</tr>
<tr>
<td>Lisa</td>
<td>Graduated in 2014</td>
<td>Female</td>
<td>37</td>
<td>Caucasian</td>
</tr>
<tr>
<td>Stephanie</td>
<td>Graduated in 2014</td>
<td>Female</td>
<td>32</td>
<td>Caucasian</td>
</tr>
<tr>
<td>Ed</td>
<td>Graduated in 2014</td>
<td>Male</td>
<td>33</td>
<td>Caucasian</td>
</tr>
</tbody>
</table>

The interviews were devised to be semi-structured rather than follow a specific and rigid format. The flexible style allowed for pertinent information to be garnered from the participants, but also invited them to share their views and conceptions of professionalism. This approach was useful in providing answers to the study’s qualitative research question (Merriam, 2009). After the student agreed to participate in the study, the interviews took approximately 15-30
minutes. Please see Appendix C: Interview Questions. All interview data were audio recorded with the participants’ permission and transcribed through a professional transcription service.

**Qualitative data analysis.** Qualitative data from student interviews will be used as the QUAL component in this case study. Qualitative data analysis is typically known for its predominately inductive process (Teddlie & Tashakkori, 2009). Usually, the researcher starts with particular facts or data and completes the analysis with general themes or conclusions.

In order to begin this process, I began by reading and listening to the interviews for any transcription errors, and to also get an overall impression. I had comprised some notes after the interviews with the participants and referred back to those during this process. Initially the data was “open” coded, which means to simply place words, numbers, and phrases (Merriam, 2009) in the margins of the transcript. I also wrote additional memos to sum up the feelings and ideas that emerged. After that process, I began to “make sense out of the data,” or analyze it in order to “answer research questions” (p.176). The units or segments of information were placed into categories which encompassed small bits of data. The tentative categories or themes were then “fleshed out and made more robust” (p.182) by sorting through the information again. Category construction is thought of as “a highly inductive and intuitive process that should be responsive to the research” (p. 185). The categories and their relationships became tentative answers to the research questions.

The next level of coding I performed was called selective coding. This theoretical process involves interpreting and relating all the categories into one or more themes or central categories. These themes or one central theme should relate to all the others that have emerged from the data (Merriam, 2009) and unite together to form the main themes of a study. As this process became more evident, I developed a categorical coding display which enabled me to
organize the data and depict themes and relationships (Maxwell, 2013). The categorical coding display is provided and discussed in Chapter Four.

**Qualitative validity.** In order to avoid possible threats to the validity of my study, I employed strategies of triangulation, feedback (peer assistance and member checks), memo construction (Maxwell, 2013) and the use of a case study database (Yin, 2003). Triangulation is often used among qualitative researchers to corroborate evidence from different individuals and several methods of data collection (Creswell, 2011). The process of triangulation is often utilized in a constructivist approach to validating research (Merriam, 2009); moreover, it is consistent with the philosophical context of this study as the students were asked to participate in the validation process. In addition, the QUAL interview component was enhanced and fortified by the use of archival survey data as the quan component.

Another strategy for ensuring validity and credibility in the research process is peer assistance which also can be called consultation with experts (Merriam, 2009). The research questions and interview questions were discussed and constructed by the researcher’s doctoral committee and one fellow Health and Public Safety Division (HPS) faculty member with ten years’ experience in clinical education. In addition to the researcher coding the data, a peer debriefer was selected to provide validation (inter-coder agreement). An HPS colleague with a doctoral degree and research experience was asked to read the dissertation research proposal to become familiar with the project. The colleague then reviewed the transcribed interviews and provided her own codes for one student group. A comparison was made between the peer debriefer codes and categories with my own. Both parties agreed on the same major themes.

Another form of feedback used in this research process was to incorporate member checking. Member checking, also called respondent validation is when the researcher solicits
feedback from the participants in the study. The researcher’s interpretation and meaning of the information may not be in alignment with the participants’ account (Hancock & Algozzine, 2006); therefore, member checks were an important component for qualitative validation in this study. After the interviews were transcribed and coded, I randomly contacted one person from each student group to review their transcribed and coded interview. Each student agreed with the transcription and the coding that I had completed.

I undertook Charmaz’s (2006) suggestion to incorporate memos into the study as they aid in the development of conceptions and findings as the analysis unfolds. Memos do not necessarily rely on detailed description; rather they incorporate the researcher’s thoughts throughout the research process as they may lead to invaluable connections and theory development. This process allowed me to jot down thoughts and ideas that were relevant, but not necessarily reported verbatim in the dissertation.

Lastly, case study researchers agree that the plethora of data that evolves from the research project can lead to the daunting task of analysis for the researcher. One suggestion is the use of what Yin (2003) called a “case study database” in which researchers compile all the information from the case such as the interview memos and transcripts, the field notes and transcripts from observations, and the documents’ investigation notes (p. 119). In this way the information is compiled together in one place so that the analysis can take place in an organized fashion. This case study’s data base consisted of survey data, interview notes, transcription, and memos. The case study data base in this project allowed me to organize the data into meanings and themes which coalesced into the findings of the study.
Quantitative Strand

Quantitative data in the form of survey results were collected to answer the research question: *How does empathy develop across the Respiratory Therapy Program?* The Kiersma-Chen Empathy Scale (Kiersma, Chen, Yehle, & Plake, 2013) was administered to the entire Respiratory Therapy Program in the fall of 2014 by the Respiratory Therapy Faculty and was used as archival data in order to support this mixed methods case study. The scale was based on the work of Davis (1994) who theorized that empathy has two domains: cognitive and affective. The following sections will discuss the Kiersma-Chen Empathy Scale, data analysis techniques, and quantitative validity issues.

**The Kiersma-Chen Empathy Scale.** The KCES scale was developed by pharmaceutical and nursing faculty to measure the cognitive and affective constructs of empathy in order to assess changes in student empathy throughout program curriculum (Kiersma, et al., 2013). The instrument consists of 15 items, 9 items pertaining to the cognitive domain and 6 items pertaining to the affective domain. For each of the items, participants rate their level of agreement or disagreement using a 7 point Likert scale, ranging from 1=strongly disagree to 7=strongly agree. Higher scores on the KCES indicate a greater amount of student empathy and scores can range from 15 to 105 (p. 2). Please see Appendix D: The Kiersma-Chen Empathy Scale. The researchers administered the scale to nursing and pharmacy students in pre and post evaluations in order to access student empathy after a situated learning activity in which the students played an aging simulation game (p. 2) The KCES was found to be a reliable and valid scale for evaluating student empathy. The authors note that accreditation standards for pharmacy and nursing students address specific objectives for the importance of empathy as a part of a student’s professional development (p. 4). In addition, the researchers recognized the need for
“healthcare professionals to be well prepared to address the needs of a diverse patient population” (p.3).

Survey sampling and administration. Creswell (2011) defines a population as “a group of individuals having one characteristic that distinguishes them from other groups” (p. 381). To align with Creswell’s definition and provide supporting data for the case study, archival data from the KCES scale was adopted for use in this project for its applicable meaning. The students in the study conducted by Kiersma et al. (2013) are comparative to this inquiry since respiratory therapists are healthcare professionals, like pharmacists and nurses, who possess specific, technical knowledge and directly influence patient care. In addition, the survey investigated empathy attitudes and beliefs which is the goal of this study.

Creswell (2011) explained that a target population or sampling frame is the actual list or record of the sampling units from which the sample is selected. The target population in this study was the students in the Respiratory Therapy Program. A faculty member distributed the KCES survey among first year, second year, and graduate students via SurveyMonkey (a web-based survey tool) in the fall of 2014 and requested their response. Of the 47 students solicited, there were 32 respondents for a total response rate of 68%. 15 of 19 (79%) students in the first year of the program responded, 8 of 11 (73%) second year students responded, and 9 of 17 (53%) of the most recent graduates responded, for a total sample of n=32. Table 3 summarizes the response rates within groups and the entire sample. The Respiratory Therapy faculty member granted permission for the researcher to use the de-identified survey data in her study. Please see Appendix E: Permission from Instructor. The authors of the KCES have also granted permission for the researcher to incorporate the study findings in her dissertation discussion. Please see Appendix F: Permission from Scale Authors.
Table 3

*Response Rates for Kiersma-Chen Empathy Survey*

<table>
<thead>
<tr>
<th>Student Group</th>
<th>Sample Size</th>
<th>Number of Responses</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year students</td>
<td>19</td>
<td>15</td>
<td>79%</td>
</tr>
<tr>
<td>Second year students</td>
<td>11</td>
<td>8</td>
<td>73%</td>
</tr>
<tr>
<td>2014 student graduates</td>
<td>17</td>
<td>9</td>
<td>53%</td>
</tr>
<tr>
<td>All groups</td>
<td>47</td>
<td>32</td>
<td>68%</td>
</tr>
</tbody>
</table>

**Quantitative data analysis.** After IRB approval was granted (January, 2015) the researcher received the de-identified results from *SurveyMonkey* via a Respiratory Program Faculty Member. The researcher exported the data into the statistical program called the *R Core Team Program* (2014) in order to conduct descriptive information. The exported data was checked for accuracy by comparing the existing *SurveyMonkey* results to the R Program input.

Of the 32 respondents, two of the students failed to respond to three items. To account for the missing items, the researcher incorporated the mean of the items and not the sum. Taking the mean in this instance did not count the missing items as zero, which would decrease the sum and cause the score to be falsely down-weighted. By using the mean, the few missing items were ignored and the average of what items were present was considered.

Descriptive and inferential statistics were implemented in order to obtain the quantitative KCES findings. Mean scores and standard deviations for the overall KCES were calculated for the entire program as well as each group of students. ANOVA were calculated for each group to identify differences between the groups. The cognitive and affective scores were then split by
their corresponding questions and the analyses were performed in the same manner. Please see Table 4 for a specific listing of the cognitive and affective questions in the KCES scale.

Table 4
List of Cognitive and Affective Questions in the Kiersma-Chen Empathy Scale

<table>
<thead>
<tr>
<th>Cognitive Questions</th>
<th>Affective Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>(#s: 1, 3, 4, 6, 8, 10, 13, 14, 15)</td>
<td>(#s: 2, 5, 7, 9, 11, 12)</td>
</tr>
<tr>
<td>1. It is necessary for a healthcare practitioner to be able to comprehend someone else’s experiences.</td>
<td>2. I am able to express my understanding of someone’s feelings.</td>
</tr>
<tr>
<td>3. I am able to comprehend someone else’s experiences.</td>
<td>5. It is necessary for a healthcare practitioner to be able to express an understanding of someone’s feelings.</td>
</tr>
<tr>
<td>4. I will not allow myself to be influenced by someone’s feelings when determining the best treatment.</td>
<td>7. I believe that caring is essential to building a strong relationship with patients.</td>
</tr>
<tr>
<td>6. It is necessary for a healthcare practitioner to be able to value someone else’s point of view.</td>
<td>9. Considering someone’s feelings is not necessary to provide patient-centered care.</td>
</tr>
<tr>
<td>8. I am able to view the world from another person’s perspective.</td>
<td>11. I have difficulty identifying with someone else’s feelings.</td>
</tr>
<tr>
<td>10. I am able to value someone else’s point of view.</td>
<td>12. To build a strong relationship with patients, it is essential for a healthcare practitioner to be caring.</td>
</tr>
<tr>
<td>13. It is necessary for a healthcare practitioner to be able to identify with someone else’s feelings.</td>
<td></td>
</tr>
<tr>
<td>14. It is necessary for a healthcare practitioner to be able to view the world from another person’s perspective.</td>
<td></td>
</tr>
<tr>
<td>15. A healthcare practitioner should not be influenced by someone’s feelings when determining the best treatment.</td>
<td></td>
</tr>
</tbody>
</table>
Internal consistency reliability (Coefficient Alpha) was also conducted with the 15 items in order to validate the instrument. The complete analyses are presented in Chapter Four in the form of a narrative description along with corresponding tables and graphs. The quantitative findings show relevant statistical data which support this mixed methods case study.

**Quantitative validation.** Internal validity, or “the degree to which alternative explanations for the obtained results are ruled out” (Teddlie & Tashakkori, 2009, p. 298) should be addressed within any experimental design. Within this study, the sample selection considered the students’ progression through the program and their potentially varied degrees of empathy within these certain times. For this reason, the students were grouped together based upon their experiences and knowledge up to this point into three groups: first year students, second year students, and third year students.

In addition, the statistical conclusion validity, which is the degree to which the statistical processes are appropriate and sufficient to detect variances or similarities, was addressed in this study (Teddlie & Tashakkori, 2009). The study does not exhibit extraneous variance in the setting since it was conducted throughout one clinical program and studied three groups of students at varying levels within it. In addition, the associate degree healthcare program was chosen by these students and is supported by two faculty members who teach in the program. The instructors each worked in the field for at least 10 years as a respiratory therapist; therefore they possess an authentic knowledge of the professional skills as well as technical skills to be successful. These combined attributes aid in the homogeneity of the units being studied.

Even though the small sample size of 32 students posed a threat to statistical validity, the intent of this mixed methods case study was primarily to develop an in depth exploration of students’ conceptions of empathy and not to generalize a population. In addition, the statistics
used in this study may be deemed exploratory and non-inferential as they describe the general findings of the entire sample and the differences or similarities among the student groups.

**Mixed Methods Data Analysis**

The two components of the study were collected and analyzed independently from one another and then combined into a final stage of data analysis. In other words, a parallel mixed data analysis was used to examine the qualitative and quantitative data separately so each could provide an understanding of the research topic; then, these interpretations are “linked, combined, or integrated into meta-inferences” (Teddlie & Tashakkori, 2009, p. 266). In order to make the process more organized, the survey results and interview categorical themes will be placed into a table (Creswell & Plano Clark, 2011). This process enabled the researcher to answer the study questions and present the findings of the study in a concise format.

**Mixed methods validity.** Creswell and Plano Clark (2011) focused on strategies that researchers use in all three phases of data collection, data analysis, and interpretation of research when discussing validity is mixed methods. For example, in the data collection phase, Creswell and Plano Clark (2011) warned of selecting the wrong types of individuals for the study and also collecting two types of that do not address the same topics. In this study, the participants were from the same program and included in both the quantitative and qualitative components. The survey encompassed students from the first and second year classes and also included graduate respondents. The interviews were conducted with small subsets of each of the groups. These groups provided a thumbnail sketch of possible different perspectives and conceptions of empathy which led to a fuller picture of empathy education in the program.

Regarding data analysis issues, Creswell and Plano Clark (2011) reminded researchers to avoid using “inadequate approaches to converge the data” which can also lead to making
“illogical comparisons of the two results of analysis (p. 204)”. In this study, quantitative categorical data and qualitative themes are described with coinciding data and quotes and presented in Chapter Four. The descriptions are interpretable and logical for the reader.

Creswell and Plano Clark (2011) also noted interpretation threats are evident when the researcher does not resolve divergent findings in the data. They suggested collecting more data, reanalyze the data, or re-evaluate the procedures used (p. 204). In this study the data was analyzed separately, and then merged together (Teddlie & Taskakkori, 2007). Divergence was minimal and did not require additional data collection or analysis, as it was attributed to a rare, specific instance of an individual’s conception. These findings are discussed in more detail in Chapter Four.

In addition, Creswell and Tashakkori (2007) asserted that meta-inferences that emerge from quantitative and qualitative components must also “integrate, link, or connect these strands in some way as conclusions gleaned from the two strands are integrated to provide fuller understanding of the phenomenon under study” (p. 108). Certainly each quantitative and qualitative component must be held to the particular standards within each realm, but the immersion of the two can be in the form of “comparing, contrasting, or building upon each other” (p. 108). This study followed these suggested tenets, as the case study QUAL strand revealed rich and descriptive conceptions of empathy within each particular group of students in the program (first year, second year and graduates). The case study findings were supplemented and enhanced by the quan strand. The KCES Empathy Scale (Kiersma, et al., 2013) allowed for an investigation of each student group and the program as a whole, thereby presenting individual differences and an overall picture of empathy.
Ethical Considerations

Ethical issues of research purpose, disclosure, researcher bias, and participant risk have been addressed via the Institutional Review Board (IRB) application process. This doctoral study was an expansion of the original pilot study from the spring of 2013, which was an “expedited review classification,” with a “minimal risk level.” I submitted an amendment to the study November, 2014, in order to continue this line of research involving professionalism skills with community college healthcare students. The study received amended approval from the IRB in January, 2015.

The research purpose is disclosed in the recruitment form (see Appendix A) and the participant consent form (see Appendix B). Privacy issues were also revealed to the participants (see Appendix B) and all transcribed interviews and recordings as well as other memos and notes will be kept in a locked file cabinet and a password protected computer in the researcher’s locked office. After the study is completed the IRB will be notified via their electronic system (ePas). Two years after the researcher’s dissertation defense and graduation from the doctoral program, all documents will be shredded, and audio tapes will be erased that pertain to this study.

All interview participants chose their own pseudonym for the study and details specific to their families and or other affiliations were omitted or altered to ensure identity protection. None of the study participants expressed any discontent nor were there any withdrawals from the study. Since the study took place during the academic school year at the community college where the researcher is employed, she was exposed to the students in the Respiratory Care Program as well as other populations of students and their instructors. The researcher did not discuss the study participants in any way with students or instructors. The study participants
may have revealed themselves as taking part in the study, with each other or with an instructor; however, the researcher did not reveal their identities.

Summary

This mixed methods case study explored students’ conceptions of empathy in order to inform healthcare programs at the community college level. This chapter informed the reader of the definitions of mixed methods case study using an embedded approach along with the reasons for the selection of these strategies. In addition, the chapter provided an outline of the case study design of this study. The qualitative, quantitative, and mixed methods components of this dissertation, including validity and quality issues pertaining to the study were also discussed. The following chapter will provide a holistic and detailed narrative of the case with findings related to the research questions. Analyses and interpretation of the interview and survey data will be detailed in this narrative with qualitative themes and appropriate tables and figures. Inferences associated with convergence and divergence with each of the student groups will also be discussed. Chapter Five will conclude the dissertation with implications from this study as well as garnered experience.
Chapter Four: Findings

The narrative discussed in this chapter portrays the findings for the Respiratory Care Program at Jefferson Community College. The study was conducted to glean insight into how an associate degree healthcare program furthered the role of empathy education as a part of professional identity formation within a novice group of practitioners.

The following sections describe findings related to students’ conceptions of empathy in the Respiratory Care Program as revealed by qualitative interview data and a quantitative survey, which fortified the overall case study. The findings from the data revealed significant overlap and similarities to such an extent that the two previous research questions will now be addressed as one question: What aspects of the program supported the development of empathy and how does empathy develop across the Respiratory Care Program? In order to delve into the students’ conceptions, an in depth examination of the two curricular aspects of coursework and clinical experience within the program are presented and explained in the following two paragraphs.

For the purpose of this study, coursework included all forms of on campus instruction and requirements for the Respiratory Care Program. Instruction in Respiratory Therapy theory and techniques were taught through educational didactic methods as well as laboratory sessions. As stated previously, there were two full-time faculty members who taught the courses in the program. Their names were John, the Respiratory Care Program Department Chair, and Kathy an instructor in the program (pseudonyms). The program consisted of five full-time semesters (greater than 12 credit hours) in which the students participated in coursework every term. Please see Appendix G for the Respiratory Care Program’s curriculum.
The clinical experience component started in the second semester and continued each semester thereafter where the student typically spent approximately 10 hours per week at clinical sites. The sites ranged from hospitals such as pediatric and adult institutions to adult long-term care and rehabilitation facilities. The students were supervised daily by clinical instructors actually employed by each facility while they performed respiratory treatments and provided education for patients. In addition, Jefferson Community College had a clinical instructor visit the site that spent approximately two hours per week with each student.

**Qualitative Interview Findings**

The research question asked, *What aspects of the program supported the development of empathy and how does empathy develop across the Respiratory Care Program?* The 14 students interviewed (five first-year, five second-year, and four graduates) were asked questions that revealed their empathetic development process. An examination of the data showed three key aspects of the program had the strongest influence on the development of empathy, while other aspects had less of an impact. In the following sections I will discuss how role-modeling, case study, and clinical experiences promoted empathy development within the novice Respiratory Care Therapist. Each program aspect the students cited will be addressed incorporating statements from each grade level. Please refer to Appendix H for a coding display which presents a summary of the students’ conceptions of empathy as it relates to their coursework and clinical experience.

**Role modeling.** The qualitative interview data revealed that role modeling in the form of faculty role models and peer role models had an influence on the development of empathy for participants. Role modeling is often part of the hidden curriculum in the education of healthcare professionals and may be learned from teachers, other clinicians, and patients (Gabard, Lowe,
Deusinger, Stelzner, & Crandall, 2012; Haramati, 2013). These informal interactions may be powerful in shaping attitudes and belief systems within the novice healthcare provider. Overall, the role models in this study provided influential examples of ethical professional behavior and conduct. Faculty and peer role modeling will be explored further in the next sections.

**Faculty role models.** During the interview session, 12 of the 14 students interviewed spoke repeatedly about the enormous impact that the Respiratory Care Faculty (John and Kathy), had on their understanding of empathy regarding their profession and program community. Specific examples of how John and Kathy influenced their students are detailed in the section below and organized according to grade level. The students elucidated during the interviews how John and Kathy emulated empathy in their everyday demeanor and pedagogical practices. The students described how the instructors consistently demonstrated empathy in their daily interactions during the two year duration.

**First-year students.** Three of the first-year students discussed how the faculty provided role modeling in the form of narrative stories about their own experiences within the field of Respiratory Therapy. Rin, Mike, and Linda remarked that the stories told by John and Kathy helped them to envision what happens on a daily basis with patients and how they handled the situation in an empathetic way. The faculty members served as role models to the first-year students since that had not experienced actual patient contact.

Rin stated that “They would give us real life scenarios that so you can picture how people (the patients) would feel…they would share some stories and have dialogue with us about what they experienced.” Mike added that the faculty “explained the view of the patients so we can get ahold of what to expect.” Linda said that John and Kathy would “talk about the different things that happened and would give you a scenario…and you’re like ‘that would be very hard.’” Linda
also added that the faculty during the “hard” situations would “always bring out the good” and “tell you things to make you laugh.” These first-year students who had not experienced patients appreciated John and Kathy’s real-life accounts because they were authentic and detailed. The stories and how the faculty responded also provided tangible examples of how to handle the technical and emotional demands of the Respiratory Therapist.

Second-year students. Sally, a second-year student, mentioned how John displayed empathy and understanding with the other students. She remarked, “He understands what I’m going through and he allows us to come in and talk to him if we’re going through anything difficult and get it off your chest, and I definitely feel like that helps.” John’s open-door policy made the student feel cared for and at ease. She also mentioned that both John and Kathy were graduates of the program which made her feel like they understood her struggles. She asserted, “They know what we are going through, because they have been through it themselves.” Sally realized that John and Kathy were able to identify with their students, as having gone through the program and having experienced some of the same struggles.

James, a second-year student, discussed the importance of the narrative stories told by John and Kathy and how they were necessary for learning. James explained “they (the students) need to hear it from another person…it grows on the person, it’s like you know it feels good or whatever it’s like you know they can recall that situation.” James said that the stories they told were “contagious” as they were worth remembering for the future when interacting with patients. James revealed how John and Kathy’s stories were influential as they helped him interact with patients. Recalling their experiences made an impact on his empathy development.

Graduates. Kevin, a recent graduate of the program stated that “They showed us and taught us how to have empathy.” He also added that “John definitely taught that well and right
up front,” after explaining how John knew that “Some students start school without ever having touched a patient.” Kevin remarked that John as well as Kathy provided lots of “hands-on” opportunities to practice procedures right away in the first semester which promoted understanding and trust.

In addition, another graduate named Ed gave examples of how John would reiterate the compassionate assertion “Somebody loves that person, there’s somebody out there that does” during class in order to make students aware of the impact that they would have on their future patients and family members. These frequent statements made by John helped deepen Ed’s empathetic approach toward patients. This was apparent when Ed, during the interview, described how he would see how some healthcare workers mistreat patients, all the while hearing Mike in the background of his mind saying “What if it was your family.” Ed recalled that “Mike would say it over and over and the repetition of it stuck with me.”

Ed stated that his own feelings of empathy and what he learned at Jefferson helped him become a “patient advocate.” He explained how he would go into a patient’s room and assist them as sometimes they were shunned by the other healthcare workers because of their disorder or socio-economic status. Mike’s positive influence concerning patient care helped to remind Ed once he was at the clinical site that patients are real people who should be treated with respect and dignity.

The students cited that John and Kathy demonstrated professionalism (role modeling) in their daily interactions. The narrative stories told by the instructors allowed the students to envision the demands of the profession and how to respond with technical expertise and soft skills such as empathy. In addition, the students’ statements revealed increasing levels of
empathy development as the students progressed through the program as they cited faculty role modeling.

**Peer role models.** Five students made comments in the interviews about their peers in the program and how this also affected their empathetic development within their professional community of practice (Lave and Wenger, 1991). The peer role modeling occurred primarily in the form of program students. In addition, a peer guest speaker was cited by the first year students and will also be discussed. The students recalled how the peers they encountered in the program helped and understood each other which further enhanced their empathy development.

**First-year students.** Linda, a first-year student, remarked the “people that we were in the program with” supported her empathy growth as she added, “So, you know we’re all very empathetic to each other.” Linda explained her sentiments further, “You know we’ve learned that John and Kathy said you become a family…I came from a very small family and now I have a very large family.”

Throughout the program there were peer mentoring opportunities which occurred in the form of procedural skill check-off lists conducted in the laboratory between first-year and second-year students. These occurred in RT-101 (Respiratory Care Science 1), RT-102 (Respiratory Care Science 2), and RT-111 (Clinical Practice 111). Rin, a first-year student said that “talking to the second-years has helped because they’ve learned a lot just through clinicals.” Nicole added that interacting with the second-year students made her less nervous and allowed her to practice her skills with someone who was “like her.” The skill check-off exercises allowed the second-year and obviously more experienced students to assist the first-years in building their technical and social skills with patients. In addition, the second-year students most likely benefited from this experience as they would have had a chance to review their own
knowledge based on their abilities. The two first-year students who mentioned these interactions were positively affected by these activities, as it allowed them to learn from their peers. Consequently, this practice offered a less intimidating experience than just working with their instructors.

**Guest speaker as a peer.** Two of the first-year students discussed how they had a guest speaker in class about their age who was suffering from a chronic respiratory illness. The guest speaker was a newly added component to the RT-100 (Introduction to Respiratory Therapy) class this year, so the other groups had not experienced this classroom strategy. The speaker was a male in his late-twenties who had recently been diagnosed with a form of multiple sclerosis and was sought out by the faculty to come and speak to the students because of his unique situation. The rare, inherited disease struck him suddenly. He had almost died and spent several months rehabilitating as he was attempting to lead as normal life as possible,

The speaker clearly evoked some empathetic thoughts as the students recounted having him in the classroom. Mike, a first-year student, said that the speaker “explained stuff he went through…I looked at him and I still see a human being…he talked about still doing many things.” For example, the speaker gave an account of how he “had been treated like a piece of meat” by some of the healthcare workers that were taking care of him. He also expressed how several healthcare workers, particularly respiratory therapists, treated him with dignity and respect.

Nicole, another first-year student, added that “he was our age, but had a trach” (tracheostomy). She discussed how she could “empathize with the speaker as he talked about doing things that she liked to do” and they had things in common like being a student. Nicole was emotional as she described the guest speaker had been healthy one day and then suddenly
was diagnosed with a genetic and debilitating disorder. Clearly the guest speaker made a significant impact with these two first-year students as he presented ways in which patients can be treated by healthcare workers. The students also realized the speaker was young and very much like them. He also gave insights as to how people with certain respiratory issues may lead somewhat normal lives.

The finding of peer role-modeling as mentioned by the program students detailed positive accounts of professional behavior such as communication, problem solving skills and compassion. According to the student interviews, the peer to peer interactions enabled the students to feel like a family and help each other be successful in their program.

Two of the first-year students were impacted by the guest speaker with a chronic respiratory illness. They identified with him since he was the same age and explained how he managed to have the courage to remain active. The first-year students expressed empathy and sadness for the speaker as they discussed his unjust treatment by healthcare workers.

*Second-year students.* Sally, a second-year student spoke of how several of the students had gone through life-altering events such as death of loved ones, pregnancy, and illness. She also added how there are other parents like herself that “juggle kids, work, and sports while in the program and people understand what you are going through.” Sally explained how their peers had made an impact on their empathy development by demonstrating a culture of care and concern for each other.

*Graduates.* In addition to the family atmosphere and camaraderie that the students possessed, Stephanie (a graduate) remarked that during the clinical rotations, the students would have class once a week to meet and share their patient experiences. These mandatory meetings took place in RT-111 (Clinical Practice 1), RT-112 (Clinical Practice 2), RT-211 (Clinical
Practice 3), and RT-212 (Clinical Practice 4). Stephanie added, “Just talking about experiences in the classroom with the other students and hearing their stories helped me.” She also reflected on her own actions and what she would have done in certain situations, “I would have done this or you know I will never do that because you know it made the patient unhappy.” She added that the meetings “helped prepare us to treat patients well and be comfortable in the work setting.” These meetings enabled Stephanie to implement some of the suggestions by the other students and also gave her validation and assurance when interacting with patients.

**Case studies.** The majority of students interviewed (9 of 14) described case studies as a useful approach to help students understand and develop empathy in addition to the application of essential content knowledge. The case studies were utilized in nearly all the Respiratory Care courses and were based on real life scenarios that the students might encounter with patients as a practitioner. They comprised a wide-range of emotional and difficult topics such as death and dying, socioeconomic status, HIPAA (Health Insurance Portability and Accountability Act), and ethical behavior. Please see Appendix I for some specific examples of case studies given to the students.

**First-year students.** Mike, a first-year student explained that “Case studies not only went over the physical, but over how a patient feels,” and John and Kathy’s dialogue set the tone for these important conversations. Mike spoke about the patient and how they might feel, but did not provide any examples since he had not experienced a clinical rotation.

Rin, a first-year student, also added that the case studies gave them an opportunity to discuss the differences between empathy and sympathy. She learned that it was better to have empathy than sympathy because sympathy might actually “lead to a patient not receiving the best
treatment necessary.” Rin explained that the healthcare worker might get too involved with the patient emotionally which would be detrimental to the patient’s care.

Second-year students. Jane, a second-year student, also agreed that case studies helped the technician understand a patient’s feelings as she discussed a case in which the patient had COPD (chronic obstructive pulmonary disease):

We are taught to acknowledge how patients are feeling, but a patient always doesn’t want to hear ‘I understand what you’re going through’ because in their mind they are saying ‘well you are breathing fine right now.’ We learned to say ‘what can I do for you’ rather than just saying ‘I understand.’ (Jane, personal communication, February 19, 2015)

Sally, a second year student, agreed, “Case studies are ways to address people and how to handle certain situations…because it’s like when you go into a patient’s room your emotion kicks in too.” She recalled a particular case where there was a young child who had been injured in a car accident and how emotionally distressing the situation can be. She described how the classroom case studies prepared her for the reality of the clinical world, “you know in the back of your mind that it is somebody else’s kid and you have to keep it professional…you have to have empathy and compassion with them, but keep it professional.”

Like the first-year student, both Jane and Samantha remarked how the case studies helped them realize the differences between empathy and sympathy in a practitioner sense. Jane remarked that she learned in class that “some people are just looking for sympathy but it’s like sometimes if you go too far with it then that can be detrimental to the patient.” Samantha also added that they “discussed the differences between sympathy and empathy” and how it applied to “upset family members and how to answer their questions.”
Graduates. Lisa, a graduate, recognized that cases were not just clinical facts about patients and their condition, but addressed challenging issues in which she faced in real practice. She recalled a socioeconomic case in which an indigent person wanted the Respiratory Therapist to give him/her more than the allotted free medication from the clinic. She discussed how the instructors prepared the students:

We would talk about how they (the patient) would perceive things and how you would perceive things and how to bridge that gap. They (John and Kathy) were always good about discussing case studies and not just being so clinical and technical that you forget the human that’s involved. They trained our thinking so that we came into the field thinking like that. (Lisa, personal communication, February 21, 2014)

Lisa stated that she was better equipped to recognize and speak to patients more appropriately as a result of the case studies completed in class.

The use of case studies within the program brought to life events that actually happen, thus preparing students as much as possible for the technical and professional responsibilities that would be required of them to uphold in the field. Kevin, a graduate, also agreed that the program’s use of case studies brought to life inevitable clinical events: “You know you go in there with someone that’s on a vent that maybe was in a car wreck and you can relate to their emotions; it’s really sad but at the same time you as the therapist are like ‘I wanna help ya and I want your family to feel better.’” Kevin showed a level of confidence in his content knowledge and ability to help his patients but also revealed his empathy for them.

Certainly the case studies that John and Kathy incorporated into the classroom were opportunities for the students to learn technical processes and skills involved within the healthcare profession of Respiratory Therapy, but they also provided ways to discuss the
attributes of empathy and when sympathy can be problematic with the patient. The students identified case studies to be helpful in their development of empathy.

**Clinical experiences.** Clinical experiences also played an important role within the Respiratory Care Program in enriching the students’ development of empathy. The clinical experiences were applicable to the second-year and graduate students since they had progressed into that part of their program training. As a result, the first-year students will not be discussed in this section. However, it is interesting that two of the five students did mention that the clinical experiences would be valuable in their empathy development. For example, Rin added that “I’m only starting out…during clinicals you’re interacting with patients and you’re actually seeing it whereas now I’m just scratching the surface.” Mike added, “We didn’t have clinic time, so right now John and Kathy help us in class…direct contact and direct experience will feel that (empathy).”

The clinical experiences encompassed a rich environment that enabled the students to actually put into practice the technical and the professional skills that were learned from the classroom setting. The themes which emerged from the interview process included the various groups of people at the clinical sites who fostered empathy development. The interaction between the different groups included clinical instructors, healthcare workers, patients, and their families. A summary of these influences will be discussed by student group.

**Second-year students.** Sally, a second-year student, described how the clinical instructors prepared the novice practitioner for how to approach the patient physically and emotionally. She remarked, “Working with a seasoned therapist may help you understand that before you go into the room that the patient has this disease, may have this long to live, gone through this surgery…they help you understand all that.” The clinical instructors demonstrated
the importance of performing technical tasks with empathy, as they showed interest in how to help the patients truly feel better.

Interestingly, a second-year student (and two graduates to be discussed later) expressed how they learned what not to do from various healthcare workers such as other therapists, nurses, and physicians. James commented on how some healthcare workers get lulled into their job and forget to recognize their purpose for being there. He added, (they) “get too comfortable because they do things so long and become robots…they tend to forget about why they are there.” James did not see himself that way as he revealed that

Every day is an adventure and every day is different…I don’t know who’s gonna’ bless me or who I’m gonna’ bless…not that I don’t have a bad day you know, but no matter the bad stories, I make a bad story good in some type of way. (James, personal communication, February 11, 2015)

James’ positive outlook revealed how he was not going to let negative experiences with other healthcare workers get in the way of providing quality patient care.

Several of the second-year students discussed how the patients made an impact on their empathetic development. Jane, a second-year student, described how she learned to have empathy for the patients because of the pain that they were experiencing. More importantly, she explained that observing patients and communicating with them helped her realize that patients have different pain tolerances and not to make assumptions about their condition. Jane illustrated, “so just trying to figure out where that’s coming from and actually listening to them and not like ‘well you’re fine’…those tests came back negative so ‘you’re imagining that.’”

Jane stated that she realized that patients are “sometimes scared” because of an acute condition or may be “in chronic pain and have learned to live with illness” so communication
and proper assessment is vital to their treatment. For example, she discussed a person with COPD (chronic obstructive pulmonary disease) might always be short of breath, but when asked if they are feeling short of breath they might respond “no” because they are used to their condition. She said that she has to “go off of what the patient states,” but it is also important to recognize the patient’s disease along with their signs, symptoms, and emotions in order to give them appropriate care.

Stevie discussed that the clinical experiences exposed her to a wide variety of patients and this helped her empathy formation. She remarked, “Seeing all kinds of people going through all different situations gives you a chance to see all the different aspects of this field.” The wide-range of experiences she spoke of included burn units, pediatrics, and pulmonary rehabilitation with older adults. Working with people who were young, old, and very ill gave her multiple opportunities to learn how to treat a variety of patients in an empathetic manner as she progressed through the program. Stevie added, “The clinical rotations were the biggest component” when understanding empathy and relating to a person’s situation. Her wide range of experiences with different types of patients from children to geriatric patients presented her with “a broad view of everybody that’s dealing with respiratory issues.”

Patient’s family members at the clinical sites helped shape empathy development with the students in the program. Samantha described that “there’s family members in the room and they’re all so upset and usually ask all kinds of questions, so I try to be very understanding.” She added that she had been in a hospital with a sick relative before and “it was very understandable how they were feeling.” Samantha was able to find a relationship between her own prior experience of being in the hospital with a loved one and her new role as a practitioner.
James also said that “every day he experiences and shows empathy as he hears the families’ stories and experiences.” He spoke about their unique situations and acknowledged, “I treat each and every one of them like they are the only family there as I listen to them.” When speaking about a certain patient’s family member he expressed that he “gave her a hug and assurance.” He also added that “empathy was a form of love” and that other healthcare workers get comfortable doing things so long that they become like robots.” James was obviously moved by his interactions with patients and their family members and acted on his feelings by expressing care and compassion. Consequently, James provided individualized attention to each patient to show empathy and additional thoughtfulness. James transformed his feelings of empathy into action as he treated each patient with value and care.

**Graduates.** The graduates conveyed during their interviews that empathy was shaped as a result of their daily interactions with their clinical instructors, other members of the healthcare team, and patients. The clinical experiences enabled the novice practitioners to have a practical understanding of empathy which is essential in the developing healthcare professional. Lisa, a graduate student, explained,

“I’ve learned more as far as empathy through the clinical rotations then the textbooks, but of course you can’t have one without the other. We couldn’t go into the field and not know what we’re doing. You have to know the how and then you have to have some social skills and some people skills. (Lisa, personal communication, February 21, 2014) Kyle, also a graduate, revealed that going out to the clinical site was where his learning experiences were culminated. He commented, “When you go to the field you actually get to feel and see what it all really is.”
Students indicated that the clinical instructors also provided empathy enhancement. Stephanie, a graduate, also added that the clinical experiences allowed her to observe and learn from her clinical instructors (Respiratory Therapists). She remarked, “I definitely found ways that they showed me helped the patient and I’d say okay, ‘I like how they do this’ and the patient seemed to respond to that…‘so I think I’m gonna’ use this.’”

Stephanie also described how the clinical instructors provided treatments to patients not only with skill, but also incorporated a “good bedside manner” as they would “phrase their comments to the patients empathetically.” Stephanie remarked that she learned how to perform certain procedures, but more importantly, she learned how to make statements to patients that would “put them at ease and make them feel better.”

Lisa, another program graduate, also agreed; “We learned a lot from our clinical instructors…they would coach us through it and help us.” She added that “I would see how they would speak to the patients and what was appropriate.” The clinical instructors were role-models as they provided the novices with effective strategies for taking care of patients’ physical and emotional needs by teaching and modeling skilled patient procedures as well as using appropriate communication skills.

As mentioned previously, several of the graduates expressed how they learned what not to do from various healthcare workers such as other therapists, nurses, and physicians. Ed displayed his irritation as he spoke about several of the other healthcare professionals that he works with on a daily basis who “do not go out of their way to help patients.” He revealed that it made him “pretty upset…just picturing my mom or dad in there and then somebody treating them like that.” Ed stated that he deals with the situation by “acting on it…if there’s something I can do like get a blanket, get glasses of water...anything I’m able to do even if it’s not my job per
se.” His comments disclosed empathy for patients and how he felt compelled to provide his patients with the best care that he could offer. Ed gave detailed examples of how he acted upon unjust patient situations to provide empathy. The empathy in action was a mature and fully evolved professional skill.

Stephanie (a graduate) also recognized that sometimes negative behaviors and actions can provoke a positive learning experience; “You know unfortunately you do see things that you’re like ‘when I’m a therapist I won’t do it that way,’ or ‘you know that doctor or nurse was not great.’” She also realized “how patients react negatively” to other healthcare workers who do not display empathy and clearly communicated that the clinical experiences helped her determine appropriate patient care as she “picked up little things here and there.” Stephanie’s recognition of how other healthcare workers who were successful with displaying empathy through communication showed an advanced practitioner state. She was able to remember those experiences and then utilize them with future patient encounters.

The healthcare workers noted by the students during their interviews made an impact on the way they viewed the environment of the clinical site. Even though their experiences with certain workers and the patients were negative, the students learned what not to do in the way they physically approached the patient with their treatments. They also recognized that some healthcare workers ignore the patient’s physical and emotional needs, which displayed a lack of empathy and respect for the patient. These experiences helped shape the students’ future outlook concerning patient treatment and care.

The graduates also mentioned that having participated in clinical experiences enabled them to develop empathy for the patients that they were caring for. Lisa learned how to interpret patients’ signs and symptoms through her field experiences. She stated “some people really truly
have pain or fear and that’s relayed through many different ways: anger, fear, or even screaming.” She said the students learned “more as far as empathy through clinical rotations, but of course you can’t have one without the other…we could go into the field and not know what we’re doing.” Lisa’s statement indicated that it was essential for her to develop empathy in both the classroom and the clinical site, but when exposed to the clinical site the marriage of technical and non-technical skills were realized.

Ed’s previously described experiences of unprofessional healthcare workers also made him keenly aware of vulnerable patients and the injustices that can happen to them within a healthcare institution. Ed expressed sadness when he spoke about “patients with lice or another nasty skin disorder and how they were ignored…just seeing that makes it grow on me…just seeing that, ya’ know!” For Ed, some of the patient encounters he observed when a patient was treated callously stirred empathy within him as displayed through his interview comments. As stated previously, Ed was moved to action as he gave accounts of how he would provide underserved patients with ice, a blanket, or just a smile when other healthcare workers would not.

The clinical experiences cited by the second-year and graduate students provided multiple opportunities for empathy development. The students revealed how their clinical instructors, other healthcare workers, patients and their families enriched their technical skills and also allowed them to experience empathy in their chosen career path.

The next section will discuss the quantitative survey findings from the Kiersma-Chen Empathy Scale (Kiersma, et al., 2013) which demonstrated both convergence and divergence with the QUAL aspect of the case study.
Quantitative Findings

The research question, *What aspects of the program supported the development of empathy and how does empathy develop across the Respiratory Care Program?* may be addressed through the KCES which represented the quantitative (quan) and supportive aspect of this mixed methods case study. The following section will present the archival survey findings for each of the student groups (first-year, second-year, and graduates) within the Respiratory Care Program. The information presented will discuss the convergences and divergences between groups.

**Kiersma-Chen Empathy Scale findings.** Before the findings are presented, a brief overview will be reiterated in order to remind the reader of the KCES features. The instrument consists of 15 items; 9 items pertaining to the cognitive domain and 6 items pertaining to the affective domain. The questions are generally worded and pertain to healthcare workers’ attitudes and feelings of empathy for their patients. For each of the items, participants rate their level of agreement or disagreement using a 7 point Likert scale, ranging from 1=strongly disagree to 7=strongly agree. Higher scores on the KCES indicate a greater amount of student empathy and scores can range from 15 to 105 (Kiersma, et al., p. 2, 2013).

As stated previously, of the 32 respondents, two of the students failed to respond to one item. To account for the missing items the mean of the items was incorporated and not the sum. Taking the mean in this instance did not count the missing items as zero, which would decrease the sum and cause the score to be falsely down-weighted. By using the mean, the few missing items were ignored and the average of what items were answered was considered for the analysis. The R Core Team Program (2014) was used to conduct the statistical analysis.
Table 5 depicts the means and standard deviations for each of the student groups. The mean was accomplished by computing a scale score for each of the 32 respondents. The scale score is the average of all 15 items. Since there were two students who did not respond to an item, their average was computed accordingly by only including the valid items (14). Following the average scale score per individual, an average score on the scale score was computed for each group (first-year, second-year, graduates). The four negatively stated questions were reverse scored.

The grand mean for the three groups falls between “somewhat agree” and “agree” on the Likert scale with the questions that pertained to the attitudes and feelings toward respiratory therapy patients ($M = 5.75, SD = .50$). The 8 second-year students had the highest mean score of 5.89 ($SD = .40$). The 15 first-year students had the second highest mean score of 5.81 ($SD = .57$). The 9 graduates had the lowest mean score of 5.53 ($SD = .43$). However, the means are virtually the same among the groups.

A one-way Analysis of Variance (ANOVA) was conducted as an exploratory measure to test group differences across the empathy scale score. Results indicated that the groups were not statistically different from each other $F(2, 29) = 1.27, p = .295$. Therefore, post–hoc tests were not conducted.
Table 5.

Mean and Standard Deviation by Student Group for Kiersma-Chen Empathy Scale Items

<table>
<thead>
<tr>
<th>Student Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-year students</td>
<td>15</td>
<td>5.81</td>
<td>.57</td>
</tr>
<tr>
<td>Second-year students</td>
<td>8</td>
<td>5.89</td>
<td>.40</td>
</tr>
<tr>
<td>2014 graduates</td>
<td>9</td>
<td>5.53</td>
<td>.43</td>
</tr>
<tr>
<td>All students</td>
<td>32</td>
<td>5.75</td>
<td>.50</td>
</tr>
</tbody>
</table>

Note. The scale maximum is 7 (strongly agree).

Figure 3 depicts a mean plot with 95% confidence intervals constructed for each grade. The confidence intervals below show that all groups overlap, as the true score for each group falls within every other group’s range.

Figure 3. Confidence intervals mean plot of grade compared to average empathy
The cognitive empathy survey items were analyzed in the same manner and utilized questions 1, 3, 4, 6, 8, 10, 13, 14, and 15. Please see Table 6. The grand mean for the three groups falls between “somewhat agree” and “agree” on the Likert scale with the cognitive questions that pertained to the attitudes and feelings toward respiratory therapy patients ($M = 5.64, SD = .55$). The second-year students displayed the highest mean score of 5.78 ($SD = .47$). The first-year students showed the second highest mean score of 5.73 ($SD = .61$). The graduates had the lowest mean score of 5.37 ($SD = .44$).

A one-way Analysis of Variance (ANOVA) was conducted as an exploratory measure to test overall group differences for the cognitive empathy scale questions. Results indicated that the groups were not statistically different from each other $F (2, 29) = 1.67, p = .206$.

Table 6.

*Mean and Standard Deviation by Student Group for Kiersma-Chen Empathy Scale Cognitive Items*

<table>
<thead>
<tr>
<th>Student Group</th>
<th>$N$</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-year students</td>
<td>15</td>
<td>5.73</td>
<td>.61</td>
</tr>
<tr>
<td>Second-year students</td>
<td>8</td>
<td>5.78</td>
<td>.47</td>
</tr>
<tr>
<td>2014 graduates</td>
<td>9</td>
<td>5.37</td>
<td>.44</td>
</tr>
<tr>
<td>All students</td>
<td>32</td>
<td>5.64</td>
<td>.55</td>
</tr>
</tbody>
</table>

Note. The scale maximum is 7 (strongly agree).

Figure 4 depicts a mean plot with 95% confidence intervals constructed for each grade. The confidence intervals below show that all groups overlap as the true score for each group falls within every other group’s range.
Figure 4. Confidence intervals mean plot of grade compared to cognitive empathy

The affective empathy survey items were analyzed again in the same manner and utilized questions 2, 5, 7, 9, 11, and 12. Please see Table 7. The grand mean for the three groups falls between “somewhat agree” and “agree” on the Likert scale with the affective questions that pertained to the attitudes and feelings toward respiratory therapy patients ($M = 5.92$, $SD = 57$). The second-year students displayed the highest mean score of 6.04 ($SD = .33$). The first-year students showed the second highest mean score of 5.93 ($SD = .66$). The graduates had the lowest mean score of 5.78 ($SD = .60$).
A one-way Analysis of Variance (ANOVA) was conducted as an exploratory measure to test group differences for the affective empathy scale questions. Results indicated that the groups were not statistically different from each other F (2, 29) = .46, p = .639.

Table 7.

Mean and Standard Deviation by Student Group for Kiersma-Chen Empathy Scale Affective Items

<table>
<thead>
<tr>
<th>Student Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-year students</td>
<td>15</td>
<td>5.93</td>
<td>.66</td>
</tr>
<tr>
<td>Second-year students</td>
<td>8</td>
<td>6.04</td>
<td>.33</td>
</tr>
<tr>
<td>2014 graduates</td>
<td>9</td>
<td>5.78</td>
<td>.60</td>
</tr>
<tr>
<td>All students</td>
<td>32</td>
<td>5.92</td>
<td>.57</td>
</tr>
</tbody>
</table>

Note. The scale maximum is 7 (strongly agree).

Figure 5 depicts a mean plot with 95% confidence intervals constructed with each grade. The confidence intervals below show that all groups overlap, as the true score for each group falls within every other group’s range.
Internal Consistency Reliability (Coefficient Alpha) of the entire original scale was performed. Negatively stated items, questions 4, 9, 11, and 15, were reverse scored as previously indicated. The Kiersma-Chen Empathy Scale was found to be highly reliable (15 items; $\alpha = .82$). Figure 6 shows a histogram which displays the frequency distribution of the empathy scores. This distribution of the empathy score appears normal.
Additional descriptive statistics. Additional statistics were conducted with the KCES and include the mean, standard deviation, minimum and maximum, skewness and kurtosis. Please see Appendix K for the data. The highest mean score response for all the groups (first-year, second-year, and graduates) was found in question number seven ($M = 6.72, SD = 0.52$). This response fell between "agree" and "strongly agree" on the Likert scale with the questions that pertained to the attitudes and feelings toward respiratory therapy patients. The affectively based question, "I believe that caring is essential to building a strong relationship with patients" indicated a very strong empathy response among the groups.

Question number six, "It is necessary for a healthcare practitioner to be able to value someone else’s point of view" received the second highest mean score among the groups ($M = 6.66, SD = 0.54$). This cognitively based question also indicated a high level of empathy and agreement among the groups.
The lowest mean score among the groups was found in question number four ($M = 3.07, SD = 1.67$). The cognitively based question read “I will not allow myself to be influenced by someone else’s feelings when determining the best treatment.” The negatively worded question which was reversed scored, most likely contributed to the low score, as the students might have been confused by the wording. For example, another similarly worded question (which was normally worded) also asked about patient’s feelings and the practitioner identifying with them. It read “It is necessary for a healthcare practitioner to be able to identify with someone else’s feelings” ($M = 6.19, SD = .78$). Interestingly, this average score for the groups indicated a high level of empathy and agreement among the groups.

*Normality.* Skewness and kurtosis values for individual questions were primarily negative, indicating the students on average scored above the mean (i.e. a few low scores and a lot of high scores). Skewness for the total cognitive questions was small at 0.25, while kurtosis was also acceptable at 0.32. Skewness for the total affective questions was acceptable at -0.85, while kurtosis was also acceptable at 0.21. Overall, the skewness for the total scale was also small at -0.02, while kurtosis was also acceptable at -0.17.
Chapter Five: Discussion

Introduction

This chapter provides important conclusions drawn from the data presented in Chapter Four. It also discusses the study’s implications for action and limitations. The chapter closes with recommendations for future research based on the findings and conclusions of this study, which sought to provide potential insights and strategies to promote empathy education within healthcare curricula.

Conclusions

The following section addresses the researcher’s conclusions based upon the findings from this mixed methods case study regarding students’ conceptions of empathy. The conclusions for the overarching qualitative case study component (QUAL) and the quantitative (quan) and supportive aspect of the study based on the findings of the Kiersma Chen Empathy Scale (Kiersma, et al., 2013) are addressed via the findings of the question, *What aspects of the program supported the development of empathy for current students and recent graduates?* In addition, conclusions will be made regarding the mixed methods findings.

Qualitative conclusions. Several conclusions may be ascertained from the interview findings regarding the qualitative and primary aspect of the study. According to the student interviews, empathy development occurred primarily through the program aspects of role modeling, case study, and clinical experiences. These curricular aspects provided a substantive foundation where empathy was built and enhanced by the acquisition of technical and professional skills. In addition, the students’ comments and experiences revealed an increase in empathetic awareness in a contextual and professional way as the students progressed through the program.
Several other overall conclusions may be derived from the interviews as the students discussed the role modeling, case studies, and clinical experiences. Interactions with members of the Respiratory Care community proved to be profound in furthering professional behavior, especially empathy among the students. Through these valuable exchanges, the students were able to develop empathetic behavior appropriate within a practitioner-patient context and become enculturated into their professional community. These additional conclusions will be discussed following the empathy building program components of role modeling, case study, and clinical experiences.

**Empathy building program components and curriculum design.** The interview findings revealed empathy was developed through role modeling, case study, and clinical experiences. These program aspects helped to forge empathy within the students throughout the program’s duration and took place within a curriculum which supported professional skills. Several conclusions regarding each aspect will be discussed and how their implementation provided context and meaning of empathy in the Respiratory Therapy profession for the students.

**Role modeling.** A key finding of the study was the importance of role modeling, which was cited by 12 of the 14 students interviewed. The interviews found role modeling with the program faculty and the students in the program were a vital influence on empathy formation. According to the students, John and Kathy’s conduct demonstrated empathy for them and their future patients. The instructors inspired the students by their genuineness and concern for patients by reminding the students that the patients were human beings deserving of dignity and they were loved by someone. They also promoted respect and care for each other in the program which led to a family-like atmosphere.
John and Kathy’s role modeling emulated skilled and empathetic actions appropriate for Respiratory Therapy. Their narrative stories and behavior was used by the students as a lens to view their chosen healthcare profession. For example, the first-year students had not been to a clinical site, but the role modeling that Kathy and John provided allowed them to see a professional within their field on a daily basis. This exposure set the tone for the new students and helped them feel at ease and acquire knowledge for their profession. The second-years and the graduates mentioned John and Kathy and the positive influence they provided. Several graduates even mentioned they were thankful and appreciative of John and Kathy’s empathetic behavior and how it influenced them as a practitioner.

Student peers also provided affirmative experiences which led to empathy development. The second-year students assisted the first-years throughout the program in the laboratory skill building assessments. These opportunities allowed the students to build upon their technical expertise, but also provided rich interactive experiences between the student groups which endorsed a professional community within the program. The peer guest speaker also evoked empathy in the first year students and left a profound effect as he revealed unjust treatment by healthcare professionals.

The role modeling experienced by the students in this study collaborates research conducted by other health professions which has found role modeling to be a primary and influential means for enhancing empathy and other professional skills (Cruess et al. 2009; Glass & Walter, 2000; Graber et al., 2012; Hojat, 2009; McKay-Harmer, et al., 2011). In addition, role modeling exhibited in this study aligns with the situated learning strategies essential for entry into a professional community, which is especially suited for healthcare clinicians as they become familiar with their chosen field (Maudsley & Strivens, 2000; McLellan, 1996).
Case studies. The use of case studies was also found to be important in the development of empathy. The case studies cited in the findings allowed the students to simulate experiences and solve challenging situations they faced in a practitioner role. These findings align with the literature which promote real life scenarios to enhance content knowledge and professional skills (Cruess & Cruess, 2006; Graber et al., 2012). The students in the interviews cited topical matters in Respiratory Therapy such as HIPAA, geriatrics, underserved patients, and death and dying. These ethical situations allowed the students to discuss the issues in class, apply problem solving techniques, and come up with solutions in class in preparation for their upcoming real patient interactions.

The students developed professional knowledge both cognitively and affectively with the incorporation of case studies. For example, the first-year students described how the case studies helped them know what to do technically and ethically, as they were not cognizant of the challenges they would face. They learned how to communicate appropriately in difficult situations. The second-years revealed how they started to see some of the issues they discussed in class, such as death and dying and how it helped them to prepare. They discussed how they utilized the patient assessment and verbal communication skills they learned in school. The graduates recalled how they learned a lot from the case studies and how they encountered situations in practice they discussed in class. The graduates acknowledged the use of case study and their applicability in the real world which demonstrated an advanced understanding of the role of empathy in patient care.

Clinical experiences. The clinical rotations cited by the second-year and graduate students provided authentic opportunities to apply learned technical and non-technical content. In addition, the situations allowed the students to adopt the patient’s perspective in an
environment which led to increased empathy understanding. These findings align with the literature which supports clinical experiences in healthcare for professional development and patient empathy (Brown, Collins, & Duguid, 1989; Cruess, R. L. & Cruess, S. R. 2006; Hojat, 2009).

The students’ clinical experiences allowed for an integration of knowledge which enhanced empathy development. For example, the second-year students realized patient’s pain and fear when administering certain treatments. They recognized how some patients deal with pain differently and how empathy would be helpful whereas sympathy would not. The graduates had become more experienced and therefore seemed to undertake their clinical experiences with confidence and expertise. All the examples the graduates provided of empathy with patients included accounts of how they acted in the patient’s (and families) behalf to provide them with skilled treatment, but also offer empathy. The practical experiences enabled the students to develop empathy with patients and become enculturated in the field of Respiratory Therapy.

**Curriculum design.** The curriculum design of didactic classroom instruction, laboratory sessions, and clinical rotations integrated throughout the program laid a solid foundation for the students to become technically and professionally sound in the study of Respiratory Therapy. The situated learning practices of role modeling, case study, and clinical experiences took place throughout the curriculum and enhanced empathy in a professional context. Furthermore, the curriculum format and content offered the students sequential exposures to technical content, but it was the authentic social interactions which provided the opportunity for students to thrive. The curricular design in this study aligns with the literature that suggests healthcare curricula should teach content specific knowledge but also incorporate cognitive and affective professionalism skills (Brown et al., 1989; Cruess, R. L. & Cruess, S. R. 2006, Graber et al., 2012).
The sequential exchanges occurred with strategies such as case study, role modeling, clinical experiences, patient interviews, surveys, and community service learning. Topics introduced in the coursework such as gerontology and death and dying enabled the students to approach the realistic and often difficult challenges involved in the practice of Respiratory Therapy. The clinical rotations served to apply learned content and skills over a gradual process.

The curricular aspects mentioned in the findings involved actual person to person contact and proved to be the most essential part of learning their craft. The students were able to apply their learned content and technical skills through daily interpersonal communication and practice with knowledgeable experts, other healthcare professionals, patients, their families, and fellow program members. The interactions allowed the novice students to garner professional behaviors and practices through natural experiences, enabling them to learn what is expected from their Respiratory Therapy community. Through the interview findings, the researcher concluded that these valuable interactions took place within a wisely designed program which enabled empathy to be cultivated within the student.

The student interactions were not prescribed or patterned, nor did they follow a charted course. Simply put, the students became part of a professional community who encouraged their efforts over a slow but steady process. This type of learning experience aligns with the literature concerning Lave and Wenger’s (1991) community of practice. A community of practice (Lave & Wenger, 1991) is when students negotiate meaning within their practice while actively learning to become full participating members of the community which they seek to join. According to the study’s findings, the students in the program were active and desired participants within this community facilitated through the Respiratory Care Program. The program components of role modeling, case study, and clinical experiences enhanced by the
curriculum provided the initial impetus for empathy formation. More importantly, the researcher can conclude the socially engaging experiences between the students and the Respiratory Care community inspired the students to develop empathetic behavior toward their patients.

**Contextualization of empathy.** During the interviews, each student group (first-year, second-year, or graduates) displayed varying levels of empathetic awareness in regard to their chosen profession when they discussed the program’s curricular components of classroom and clinical experience. The researcher concluded that as the students progressed through the program, an evolution occurred in the way the students contextualized the ethical behavior of empathy in regard to their profession. The combination of classroom and clinical interactive experiences provided the rich foundation which helped to shape and mold empathy formation. Each of these interactions enabled the students to build upon their experiences and find more meaning as to how they would provide quality patient care.

A deeper relationship occurred between the graduates and the incorporation of empathy in patient practice. The graduates provided details as to how their actions were empathetic and helped the patients at the clinical sites. They appeared to have a fuller understanding of empathy and its role in patient care as demonstrated by specific examples where technical skills and empathy were merged. The students were comfortable and confident as they described how they would care for the patient both physically and emotionally. The graduates appeared to have possessed an appreciation and commitment for empathy as they revealed ways in which they established it into their daily practices.

Even though the second-year students had been through several clinical experiences, they did not seem to have a clear association of empathy and how they could practice it. The
examples of empathy depicted by the second-year students were not as comprehensive as the graduates and appeared to be more associated with emotions. The majority of the second-year student recounted patient treatment details but did not seem to integrate how empathy aided in the skilled procedures. The students offered definitions of empathy and even revealed how they knew that sympathy could be detrimental to the patient; however they seemed to scratch the surface with actual patient examples of how empathy helped patients. The second-year students realized the need for empathy, but did not elaborate on the important connections with it and positive patient outcomes.

The first-year students had not experienced actual patients at the clinical sites, but still had an appreciation for empathy within their profession. This was evident when several of the first-years explained to the researcher how empathy should be a mandatory behavior to possess. The students envisioned how empathy would help their patients, as they recalled instructors’ and peers’ experiences; however, they did not have actual context for it. The students exhibited uncertainty in their statements regarding how they would combine empathy and patient care, as if they were almost two separate entities. Unlike their counterparts, the first-year students cited more physically related instances such as laboratory work. They were very concerned with learning skills and content as to not hurt the patients.

The guest speaker also made an impression, as the first-year students realized how the suffering patient was their age and identified with the fact that it could have been them experiencing respiratory issues. This finding also correlates with the literature which promotes the use of “living cases” and guest speakers to facilitate empathy understanding (Fairbairn, 2002; Fawcett & Fawcett, 2011). The laboratory components and the guest speaker are just two examples of how the first-year students started to put into practice empathy in the context of their
profession. It was clear the students were true novices as they attempted to become acclimated within their field. According to the findings, the researcher concluded that the first-year students seemed to focus on learning to administer the technical procedures to their future patients but were not yet able to combine empathy within their newly acquired skills.

It was evident that empathy and practice together came into fruition within the students as they progressed through the program. The new first-year students recognized the importance of empathy, but had not yet experienced empathy in action with real patients. The second-year students were more aware of empathy as they had some actual experiences and connections with the behavior and its value. The graduates appeared to be the most evolved with empathy and its infusion into their everyday clinical practices. As a result of the findings, the researcher concluded that empathy development transpired slowly over a students’ two year tenure as a result of the curricular components of classroom and clinical coursework. Empathy formation required an integration of skill and empathetic practice which occurred through a maturation of practical experience.

Professional culture of empathy. Another inter-related conclusion made by the researcher is how the program community members played a significantly influential role in promoting empathy within its culture. Through the interview findings, the community members, such as the faculty members, student peers, clinical instructors, and other healthcare workers, established that empathy was an imperative behavior for the healthcare professional to possess. For example, when the students cited specific strategies or topics such as the use of case study, or gerontology, as being helpful to develop empathy, they also explained how the faculty during these experiences emulated the behavior of care and concern for their patients. The students also cited how the clinical instructors not only modeled technical procedures during the clinical
rotation, but empathy as well during the administration of these tasks. The appropriate words and actions the role-models used served as examples of actions that take place within the hidden curriculum of healthcare education (Haramati, 2013; Morihara et al., 2013). The students learned to align their skills with the empathetic approach that the clinicians used in order to establish a quality provider-patient relationship.

These findings support the literature that professional healthcare organizations agree empathy is an essential ethical element for their members to possess (Haramati, 2013; Hojat, 2009). Many professional organizations have their own code of conduct for their profession, in order to ensure these qualities within their clinicians. Indeed, the American Association for Respiratory Care (AARC) has its own guidelines as outlined in the AARC Statement of Ethics and Professional Conduct (2015). These guidelines were presented to the students immediately in RT-100 (Introduction to Respiratory Care).

The establishment of professional conduct and empathy were established as important factors within the program early on and continued after graduation. After all, how can health professions call for an ethical behavior such as empathy if it is not seen within their local community? The program’s faculty and clinical instructors made an impact on the students as they demonstrated empathy with the students and their patients. The interview data revealed that each student group gave examples of how their mentors on a daily basis showed care and concern in their words and actions. The findings also showed how the instructors communicated the necessity for empathy as they made pointed statements and gave insight as to why it played an important role in their profession. As a result, the students also grew in empathy and matured within their profession as they interacted with all program members.
Therefore, the researcher has concluded the vitality and importance of empathy promotion was deeply seeded within the community members within the program. The sincere relationships that the novices and practitioners established proved to be valuable as they supported each other in their chosen profession. More importantly, the relationships promoted a positive patient-clinician rapport. Therefore, the ethical interactions between the novice Respiratory Care students and its community members were pivotal in building a professional empathetic culture.

**Quantitative conclusions.** The KCES archival data findings demonstrated no significant differences overall among the participant student groups (first-year, second-year, or graduates) at Jefferson Community College regarding the professional skill of empathy. Cognitive and affective empathy based questions were analyzed separately and also demonstrated no significant differences among the groups. Therefore, the survey results indicated that student empathy for respiratory patients did not necessarily develop or become stronger throughout the program. In other words, the student groups did not demonstrate empathy improvement or decline and suggests that empathy did not vary across program level.

Even though the survey results indicated empathy did not progress among the groups, the researcher may conclude empathy was present and sustained in the program within the same findings. The following paragraphs will discuss several conclusions regarding the KCES and also address empathy possession in the program which supported the qualitative claims.

**Study utilization.** The KCES was overall a useful qualitative survey to incorporate in this mixed methods study for a number of reasons. Primarily it was selected for its alignment with this study’s focus concerning empathy as a valued professional skill among healthcare professions. Other types of surveys like the KCES are much longer and are costly to incorporate.
In addition, the survey was validated for healthcare programs such as nursing and physical therapy; therefore it was applicable with the Respiratory Care Program at Jefferson Community College.

The KCES had been previously administered by the Respiratory Care faculty and permission for its use in this project was easily obtained. The survey was also short in length and its questions were easily interpreted as indicated by the high Internal Consistency Reliability (Cronbach’s Alpha) of the entire scale (15 items; $\alpha = .82$). The survey yielded a decent response rate of 68% which allowed the researcher to acquire sufficient data. Even though the survey findings did not show significant empathy differences and improvements among the student groups, it did indicate that the average answer for each group revealed empathetic behavior. See the next section for this discussion.

**Empathy possession.** According to the survey findings, all of the student groups exhibited overall average scores that were between “somewhat agreement” or “agreement” on the Likert based scale with empathy based questions concerning Respiratory Care patients. In regard to the particular cognitive or affective questions, the student group averages did not differ as they were also between “somewhat agreement” and “agreement” on the Likert scale. In addition, skew and kurtosis values for individual questions were primarily negative, indicating the students on average scored above the mean (i.e. a few low scores and a lot of high scores). Therefore, the researcher may conclude in this instance that the students groups on average were healthcare students who endorsed empathetic behavior toward their patients. Overall, a positive association may be made with empathy as an ethical value with these novice professionals and their future patients. This finding does align with the qualitative data in that the average student group score considered empathy to be in accordance in their practice.
Mixed method discussion. This study did not include a mixed methods research question. However, several conclusions concerning the integration of the qualitative and quantitative strands of the project may be made. The interviews revealed empathy was developed through the curricular aspects of role modeling, case study, and clinical experiences. The students’ responses concerning these aspects also led the researcher to find that as students progressed through the program, their interactions and experiences led them to develop a deeper and contextual level of empathy for patients in regard to their chosen profession, Respiratory Therapy.

The quantitative strand provided a supportive and enriching role in the overall case study approach. Overall empathy mean scores along with the cognitive and affective question mean scores did not show any significant difference among the groups. The survey findings indicated that empathy did not develop as students progressed through the program. However, the students did demonstrate empathy with their group average scores and skew and kurtosis values.

Merging the data. Both qualitative and quantitative results overall revealed that the students in both strands exhibited forms of empathy. The qualitative strand data was gathered via person to person interaction. The students responded by giving rich and insightful information as how empathy was developed by their interview comments. The questions asked deeper and contextual questions concerning topics which were related to their studied profession of Respiratory Therapy. This allowed the researcher to observe a progression of empathy in practice with the student groups in the program.

Whereas the interviews in this study allowed for a more contextual data gathering method, the KCES asked fifteen short questions that were very general in nature in order to assess empathy for any healthcare professional. Perhaps if the questions were more relational to
the dedicated healthcare field in which the students were studying, a more contextual form of empathy may have progressed among the groups. For these reasons, the researcher contends that at minimum the student group data exhibited empathy as indicated by their scores and normality values.

Mixed methods studies may have findings that may diverge, as in this case. As stated previously, Creswell and Plano Clark (2011) call upon the researcher to ascertain similarities and differences among the data strands and make appropriate assertions. The mixed methodology utilized in this project shed light on program aspects that enhanced empathy and the importance of role-modeling. According to the students in the program, these strategies made a difference in their empathy behavior applicable to the profession of Respiratory Therapy. In addition, the students exhibited empathy toward their patients and associated its valued meaning in the profession.

Implications

The aim of this study was to explore students’ conceptions of empathy in order to influence healthcare curricula, specifically at the community college level where there is a dearth of research. The findings from this research study have several implications for healthcare programs regarding curriculum design and strategies, instructors, and students. In addition, this study may also contribute to the vast changes taking place within our Nation’s healthcare system by affecting the way healthcare professionals are educated. Ultimately, these findings hopefully may contribute to fostering the professional behavior of empathy among healthcare practitioners in order to improve patient care.

Curriculum design and strategies. The findings from this study may lead to curricular advancements in healthcare educational programs regarding the promotion of empathy within the
novice clinician. This study’s findings suggested that role modeling, case study, and clinical experiences were integral to the building of empathy within the student. Most importantly, the students were exposed to multiple learning opportunities which influenced professionalism. They did not participate in a sole professionalism course, as a “one and done” approach has been proven to not be as effective (Graber et al., 2012; Hojat, 2007; Orzcan, et al., 2012).

This study also gives sound strategies for empathy infusion with novice healthcare professionals. These aspects may be utilized in a time where there are increased demands on community college healthcare programs to reduce credit hours and course offerings such as a semester long class on professionalism. The Respiratory Care Program at Jefferson Community College may serve as a curricular model for other healthcare programs facing the similar issues.

An introductory course (RT-100) taken in the first semester of coursework, introduced the novice to the profession and set a foundation to foster empathy. It included professional expectations of the therapist, study skills, time management techniques and also addressed cognitive (definitions) and affective (emotions) aspects of ethical behaviors such as empathy. During the RT-100 course, the instructors introduced appropriate topics such as gerontology and death/dying with interactive learning strategies such as case study scenarios, group discussion, on-line activities, and reflective exercises. Strategies such as these could be incorporated into any first semester course in order to not only define what empathy really is, but start to describe what the students will soon be experiencing.

The curriculum introduced the students into the “real world” (clinical site) early on (in the second semester). Every semester thereafter, the students spent 10 hours a week at the site. The clinical placements allowed the students to hone their skills with a veteran Respiratory Therapist, but also helped the students to develop empathy by learning how to interact with
patients in difficult situations. Again, the longitudinal placements helped to enrich and authenticate the students’ experiences which helped them gain identity in their new profession.

Another beneficial strategy employed during each clinical rotation was the accompanying mandatory meetings which took place on campus once per week. In the meetings the students met with a faculty member to discuss technical procedures and ethical issues that transpired during the week. These meetings helped to validate the students’ actions and allowed them to ask questions within the safety of their professional community.

Additional curricular suggestions which allowed the students to experience empathy were the laboratory sessions and the case studies completed every semester. Laboratory classes allowed the students to practice the administration of respiratory techniques on each other and on a simulated patient mannequin which actually responded to stimuli. This proved to be a valuable way for the students to experience empathy because they actually felt discomfort and also had to respond to the mannequin as well. Case studies, a strategy used in every class, enabled the students to address the technical knowledge, but also allowed the students to discuss ethical situations. Through the use of case study, students placed themselves into the scenario, discussed options, and then decided on the appropriate strategy. The students recalled these approaches later to use in their actual patient encounters.

Instructors. This study also has implications for instructors and the vital role they play in the formation of empathy within the student in healthcare programs. This case affirms the previous research that has found role modeling to be the most effective means of teaching professionalism (Byszewski et al., 2012; Cruess S. R. & Cruess, R. L., 2012; Maudsley & Strivens, 2000). Therefore, professional development opportunities should focus on educating healthcare educators about the powerful and beneficial influence they have on the students
enrolled in their programs and the effects of the hidden curriculum (Gabard et al., 2012; Haramati, 2013; Morihara, 2013). Suggested professional development opportunities should focus on interactive pedagogical strategies that build content knowledge but also infuse sincere empathetic approaches in provider-patient relationships. Educators should also be made aware of the proven research that has been conducted which validates the attributes of empathy for healthcare stakeholders and the powerful influence of role modeling. Lastly, the professional development opportunities should be sustained, meaningful, and reflective in order to make an impact (Desimone, 2009; Johnson, 2011.).

**Students.** This study was conducted through a constructivist philosophical lens in order to appreciate and utilize students’ conceptions of empathy to influence healthcare curricula. The investigation was the first known research of its kind to focus on qualitative student interviews in regard to empathy formation specifically at the community college level. Therefore, the student contributions were authentic conceptions of what influenced their empathy development and therefore may be helpful to develop future curricula. This study, which sought to promote empathy, also adds value and benefits to the students who will be future practitioners, as research has indicated that clinicians who practice empathy have increased levels of job satisfaction, well-being, and competence (Hojat, 2009; Marcus, 1999; Reynolds & Scott, 1999, Stepien & Baernstein, 2006).

**National level.** This study also has some timely implications regarding healthcare at a national level. These findings may add value to the Office of Employment and Training Administration [ETA] (2011), a division within the Department of Labor (DOL) and the National Network of Health Career Programs (NN2) regarding their efforts to promote professionalism education as a core competency. The pedagogical strategies and importance of
role modeling and culture in student empathy development found in this study may provide some insights to their healthcare curriculum model.

This study’s findings may also provide support for the tremendous growth of the healthcare sector (Henderson, 2012) in order to provide educational recommendations for a vastly changing industry. The suggestions for empathy development found within this study may provide assistance to healthcare educational programs charged with meeting these increasing societal demands. Furthermore, this study may add pedagogical insights to ameliorate this growth as nearly 60% of the Nation’s healthcare professionals are educated within the community colleges (Murray, 2011).

Patients. Ultimately, this study was conducted for the benefit of patients in order to serve them with the quality of care they so rightly deserve. Hopefully, the study’s findings will influence the way future healthcare professionals are educated in regard to the professional skill of empathy. The curricular recommendations and empathy development strategies may, in turn, lead to happier and healthier patients as the benefits of a positive practitioner-patient relationship are extensive (Hojat et al., 2013).

Limitations

This study has several limitations regarding data collection and analysis. The case study was conducted in a community college setting in which the researcher has been employed for 12 years. In addition, the researcher has experienced many profound patient interactions during her 15 year tenure as a medical technologist and considers herself a patient advocate. Albeit the researcher possesses a level of distinct familiarity with these study associations, a concerted and honest effort was made to alleviate these issues during this study; however, personal experiences and bias should be mentioned.
The general overall study was limited in scope as it focused on one program during a time span of three months. This “snap shot” approach allowed for one set of interviews with program students which lasted approximately 30 minutes. In addition, there were 14 interviews conducted among the entire program of 47 students. While the interviews did yield many of the students’ conceptions regarding empathy, it is possible that the one-time, impromptu questions did not give the students adequate time to reflect on all of their program experiences. The singular group (one program) possibly limited the diversity of findings within the study, whereas additional student interview participants in other healthcare fields could have affirmed or led to other findings.

The quantitative aspect of the study utilized the KCES scale. Its role was supportive and informative; as this study’s intent was to develop an in depth exploration of students’ conceptions of empathy and not to generalize a population. The scale findings were limited as to the small sample size of 32 respondents for a total response rate of 68%. These findings revealed there were no differences among the first-year, second-year, or graduates for their feelings of empathy for respiratory patients. A larger sample may have provided more information to the specific study of empathy with students in Respiratory Therapy.

Another limitation with the KCES was the length and lack of specificity for individual healthcare professions. The KCES survey is short with only fifteen questions. It was administered electronically which may have some indications in regard to how meaningful it was to the student. Did the students reflect on their responses? How fast did they complete the survey? Did they take the time to read the questions thoroughly? The findings revealed the negatively worded questions might have been problematic as they were answered lower on the Likert scale, whereas the regularly worded questions asking the same topics were answered
higher on the scale. It is possible that a longer survey administered in person might have different findings.

In addition, the KCES comprised general questions about the way healthcare providers respond to their patients empathetically. It was not contextual within a specific scope of practice such as Respiratory Therapy. It is possible that the KCES might have some limitations in regard to specific and contextual empathy development in the healthcare professional and another survey designated for particular healthcare fields may also yield different results.

**Future research**

The findings in this mixed methods case study have provided some suggestions for empathy education within healthcare programs. However, additional research is needed specifically at the community college level where information is meager. In light of this study’s findings, future research may utilize an in-depth, longitudinal approach for one program or incorporate additional programs from different geographic regions. Future studies could also investigate a broader range of associate degree healthcare programs such as Medical Sonography or Occupational Therapy. Other healthcare areas might reveal their own unique findings or enhance this particular study.

Future research is also recommended particularly with the KCES. Upcoming studies may incorporate larger and diverse sample sizes in order to ascertain substantial and more informative data. In addition, the KCES could be administered throughout different program intervals on a longitudinal scale to determine if empathy levels differ. Other recommendations could include empathy testing before and after a certain pedagogical strategy with the KCES. Other types of empathy scales related to specific healthcare professions may yield improved
findings and maybe employed in the future to investigate a more contextual development of empathy.

**Conclusion**

This mixed methods case study found the associate degree Respiratory Care Program at Jefferson Community College to be an enlightening example of how situated learning strategies such as role modeling, case studies, and clinical experience may promote empathy education. Several implications regarding empathy formation exist for healthcare programs, national interests, and most importantly, patients. Limitations of this study may be due to sample size, survey specificity, and time constraints. Future studies may be conducted on a larger scale with similar healthcare programs using a longitudinal approach. The use of a contextual survey appropriate for specific healthcare professions may also be considered.
References


http://www.bls.gov/opub/mlr/2012/01/art4full.pdf

American Journal of Psychiatry, 159(9), 1563-1569.


Journal of Health and Human Services Administration, 31(4), 412-450.

American Journal of Medical Quality, 28(1), 6-7.


YOU CAN HELP!

Research Participants Needed

For Community College Students Professional Skills Study

Make your voice heard in one interview

- Must be 18 years of age or older
- Enrolled in the Respiratory Care Program
- To thank you for being a participant in the study, you will be given a $20.00 Chipotle gift card after completing the interview.

CONTACT TODAY:

Kellee Fields at 513-569-1672 or kellee.fields@cincinnatistate.edu
Appendix B

Participant Consent Form

Adult Consent Form for Research
University of Cincinnati
Department: Department of Education
Principal Investigator: Kellee Fields
Faculty Advisor: Dr. Jonathan Breiner

Title of Study: Community College Healthcare Students Conceptions of Professionalism

Introduction:
You are being asked to take part in a research study. Please read this paper carefully and ask questions about anything that you do not understand.

Who is doing this research study?
The person in charge of this research study is Kellee Fields of the University of Cincinnati (UC) Department of Education.

She is being guided in this research by Dr. Jonathan Breiner, University of Cincinnati, Department of Education.

What is the purpose of this research study?
The purpose of this research study is to explore entry-level community college healthcare students’ ideas of professional skills.

Who will be in this research study?
About 5 to 15 people will take part in this study. You may be in this study if you are:
• 18 years of age or older
• Enrolled in the Respiratory Therapy Program.

What will you be asked to do in this research study, and how long will it take?
• Participate in one interview on campus that will last approximately 15-30 minutes
• Your responses will be used to create a class for future community college students in healthcare certificates or degree programs

Are there any risks to being in this research study?
It is not expected that you will be exposed to any risk by being in this research study.

Are there any benefits from being in this research study?
You will probably not get any benefit because of being in this study. But, being in this study may help future community college students in healthcare certificates or degree programs understand professionalism skills.

What will you get because of being in this research study?
To thank you for being a participant in the study, you will be given a $20.00 Chipotle gift card
after completing the interview.

**Do you have choices about taking part in this research study?**
If you do not want to take part in this research study you may simply not participate. You will not be treated any differently and your grade will not be affected.

**How will your research information be kept confidential?**
- Information about you (name and email addresses) will be kept private by Kellee Fields.
- Your information (all data sources) will be kept in Kellee Fields’ office in locked and secure filing cabinet for 2 years.
- After the study is complete, audio taped interviews will be deleted. Any hard copies (transcripts, notes) will be shredded after three years.
- The signed consent form will be kept for 3 years in a different locked filing cabinet in Ms. Fields’ office.
- The data from this research study may be published; but you will not be identified by name.

Agents of the University of Cincinnati may inspect study records for audit or quality assurance purposes.

**What are your legal rights in this research study?**
Nothing in this consent form waives any legal rights you may have. This consent form also does not release the investigator, the institution, or its agents from liability for negligence.

**What if you have questions about this research study?**
If you have any questions or concerns about this research study, you should contact Kellee Fields at 513-569-1672 or kellee.fields@cincinnatistate.edu

Or, you may contact Dr. Jonathan Breiner at BREINEJM@UCMAIL.UC.EDU

The UC Institutional Review Board reviews all research projects that involve human participants to be sure the rights and welfare of participants are protected.

If you have questions about your rights as a participant or complaints about the study, you may contact the UC IRB at (513) 558-5259. Or, you may call the UC Research Compliance Hotline at (800) 889-1547, or write to the IRB, 300 University Hall, ML 0567, 51 Goodman Drive, Cincinnati, OH 45221-0567, or email the IRB office at irb@ucmail.uc.edu.

**Do you HAVE to take part in this research study?**
No one has to be in this research study. Refusing to take part will NOT cause any penalty or loss of benefits that you would otherwise have. You may start and then change your mind and stop at any time. To stop being in the study, you should tell Kellee Fields at the phone number or email address above.
Agreement:
I have read this information and have received answers to any questions I asked. I give my consent to participate in this research study. I will receive a copy of this signed and dated consent form to keep.

Participant Name (please print) ____________________________________________
Participant Signature __________________________________ Date ______
Signature of Person Obtaining Consent ___________________________ Date ______
Appendix C

Community College Healthcare Students’ Conceptions of Professionalism-Student Interview Guide: Interview Questions

1. What is your role in providing high quality healthcare to your patients in the future?

2. You walk into a room to give your patient with asthma a bronchodilator. As you are preparing the medication the hospital chaplain walks in to pray with the patient and offer Communion. The patient politely asks you if you mind waiting a few minutes.

3. You are called to initiate oxygen therapy as a comfort measure to an end stage COPD patient with DNR status. You are familiar with the patient who has been managing her disease well while living by herself at home. Her daughter expresses relief when she sees you, telling you that oxygen always makes her mom feel better. Then she asks you when you think her mother will be able to return home.

4. You are a guest speaker for The ALS Foundation, addressing the people diagnosed with ALS. You are speaking on the topic of what to expect with their breathing and the options they have as the progressive neuromuscular disease begins to affect the breathing muscles. When you finish talking, you are approached by two men, who appear approximately 26 and 68 years old. They both have questions concerning their ventilation choices. Almost concurrently, they both begin to cry as you discuss the option of a tracheotomy and mechanical ventilation to extend their life. How would you address this situation?

5. It is January and an extremely busy day at the hospital when you are called to the ER for the sixth time that day. The physician asks you to assess the breathing of a patient. Upon your assessment, you find an older gentleman in no apparent distress with stable vital signs and breath sounds. The CXR came back clear and your pulmonary assessment doesn’t indicate any needed intervention. As you discuss your findings with the patient, he admits that he faked his symptoms of chest pain and breathlessness and was only looking for a warm bed and some human contact. He asks if you could delay reporting his assessment to the physician so he can stay a little longer. Better yet, you could really help him by supporting his “symptoms” and recommend admitting him when reporting findings to the physician. Then he wouldn’t have to return to the brutal weather conditions.

6. Empathy is described as……..What components of the program, including coursework and field experiences that you have had so far, do you believe have supported you to grow your understanding of empathy if at all?
# Appendix D

## The Kiersma-Chen Empathy Scale

The following questions pertain to your attitudes and feelings toward [insert patient group here]. Please mark the number on the scale below that indicated your level of agreement or disagreement with each statement, where 1=strongly disagree, 2=disagree, 3=somewhat disagree, 4=neutral, 5=somewhat agree, 6=agree, and 7=strongly agree.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neutral</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>It is necessary for a healthcare practitioner to be able to comprehend someone else’s experiences.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2.</td>
<td>I am able to express my understanding of someone's feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>I am able to comprehend someone else’s experiences.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4.</td>
<td>I will not allow myself to be influenced by someone’s feelings when determining the best treatment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>5.</td>
<td>It is necessary for a healthcare practitioner to be able to express an understanding of someone’s feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6.</td>
<td>It is necessary for a healthcare practitioner to be able to value someone else’s point of view.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7.</td>
<td>I believe that caring is essential to building a strong relationship with patients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>8.</td>
<td>I am able to view the world from another person’s perspective.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>9.</td>
<td>Considering someone’s feelings is not necessary to provide patient-centered care.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>10.</td>
<td>I am able to value someone else’s point of view.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>11.</td>
<td>I have difficulty identifying with someone else’s feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>12.</td>
<td>To build a strong relationship with patients, it is essential for a healthcare practitioner to be caring.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>13.</td>
<td>It is necessary for a healthcare practitioner to be able to identify with someone else’s feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>14.</td>
<td>It is necessary for a healthcare practitioner to be able to view the world from another person’s perspective.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>15.</td>
<td>A healthcare practitioner should not be influenced by someone’s feelings when determining the best treatment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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Appendix E

Respiratory Care Faculty Permission Letter

November 5, 2014

Institutional Review Board
University of Cincinnati
2600 Clifton Ave.
Cincinnati, OH 45220

Dear IRB Members:

I grant Kellee Fields, a fellow colleague and faculty member at Cincinnati State permission to utilize de-identified Kiersma-Chen Empathy Scale (KCES) surveys for her doctoral dissertation. The surveys are administered in our Respiratory Care Program to all students.

Sincerely,

Julie Klensch, RRT
Respiratory Care Instructor
Appendix F

KCES Author Permission Letter

November 10, 2014

Investigational Review Board
University of Cincinnati
2600 Clifton Ave
Cincinnati, OH 45220

Dear IRB Members;

This letter provides Kellee Fields, a community college instructor in Medical Laboratory Technology at Cincinnati State Technical and Community College, permission to use the Kiersma-Chen Empathy Scale (KCES) for her doctoral dissertation to investigate empathy education across the curriculum in one of the College’s healthcare programs.

Dr. Chen and I ask that the KCES data (de-identified) be shared for further scale validation as well as proper citation in any manuscript or publication.

A copy of the KCES and scoring instructions are attached. Please let me know if you have any questions.

Sincerely,

Mary E. Kiersma

Mary Kiersma, Pharm.D., Ph.D.
Assistant Director, Professional Degree Program Accreditation
Accreditation Council for Pharmacy Education
135 S. LaSalle Street - Suite 4100
Chicago, IL 60603-4810
Phone: 312-664-3575
Fax: 312-664-4652
Email: mkiersma@acpe-accredit.org
Appendix G

Respiratory Care Technology (RC) Curriculum

All degree-seeking students must complete a First Year Experience (FYE) course as part of the first 12 credit hours taken at Cincinnati State.

**Program Prerequisite:** PHY 110 Health Physics or high school physics within the last seven years.

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<td>2</td>
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XXX XXX Humanities Elective 3
Total Credits: 46 77 72

**Electives**

Communication Elective
- COMM 105 Interpersonal Communication 3
- COMM 110 Public Speaking 3

Mathematics Elective
- MAT 131 Statistics 1 3
- MAT 151 College Algebra 4

Social Science Elective
- Any ECO, POL, LBR, PSY, SOC 3

Humanities Elective
- Any ART, HST, LIT, MUS 3
Appendix H

Coding Display for Interviews

Classroom
Classroom/case study/all
Classroom/case study/practitioner/perceptions/all
Classroom/case study/practitioner/perceptions/communication/all
Classroom/case study/instructor experience/communication/patients/all
Classroom/case study/instructor experience/communication/patients/empathy/second/grads
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Classroom/case study/instructor experience/patients/communication/approach/gap/grads/bridge
Classroom/casestudy/instructorexperience/patients/communication/approach/gap/grads/bridge/beneficial
Classroom/case study/instructor experience/patients/communication/approach/gap/grads/detrimental

Classroom
Classroom/laboratory experiences/first
Classroom/laboratory experiences/first/practice
Classroom/laboratory experiences/first/practice/robotic
Classroom/laboratory experiences/first/practice/patient
Classroom/laboratory experiences/first/practice/patient/feel/comfort
Classroom/laboratory experiences/first/practice/patient/feel/discomfort
Classroom/laboratory experiences/first/practice/patient/feel/discomfort/empathy

Classroom
Classroom/community outreach/grads
Classroom/community outreach/grads/participation
Classroom/community outreach/grads/participation/patients
Classroom/community outreach/grads/participation/patients/communication
Classroom/community outreach/grads/participation/patients/communication/teach
Classroom/community outreach/grads/participation/patients/communication/gap/bridge
Classroom/community outreach/grads/participation/patients/real
Classroom/community outreach/grads/participation/patients/real/empathy

Classroom
Classroom/patient interview/second
Classroom/patient interview/second/realize
Classroom/patient interview/second/realize/affect
Classroom/patient interview/second/realize/affect/ill
Classroom/patient interview/second/realize/affect/family
Classroom/patient interview/second/realize/affect/family/isolation
Classroom/patient interview/second/realize/affect/family/isolation/empathy
Classroom
guest speaker/first
guest speaker/first/experience
guest speaker/first/experience/real
guest speaker/first/experience/student
guest speaker/first/experience/suffering
guest speaker/first/experience/student/realize
guest speaker/first/experience/student/realize/similar
guest speaker/first/experience/student/realize/similar/empathy
guest speaker/first/experience/student/ sudden

Classroom/reflective worksheets/first/second
reflective worksheets/first/second/death/dying
reflective worksheets/first/second/death/dying/feel
reflective worksheets/first/second/death/dying/feel/dignity
reflective worksheets/first/second/death/dying/deal
reflective worksheets/first/second/death/dying/prepare

Classroom/survey/first
survey/first/gerontology
survey/first/gerontology/realize
survey/first/gerontology/realize/older
survey/first/gerontology/realize/older/physical
survey/first/gerontology/realize/older/overlooked
survey/first/gerontology/realize/older/dignity

Classroom/role modeling/teacher/all
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role modeling/teacher/experience/patients/feel/acknowledge/human/graduate/dignity/empathy
role modeling/teacher/program/second
role modeling/teacher/program/second/similar
role modeling/teacher/program/second/understanding
role modeling/teacher/program/second/understanding/empathy
Classroom/role modeling/peer/all
Classroom/role modeling/peer/all/understand
Classroom/role modeling/peer/all/understand/help
Classroom/role modeling/peer/all/communication
Classroom/role modeling/peer/all/communication/clinical experience

Clinical experience
Clinical experience/clinical instructor/second/grads
Clinical experience/clinical instructor/second/grads/seasoned
clinical experience/clinical instructor/second/grads/seasoned/demonstrate
clinical experience/clinical instructor/second/grads/seasoned/demonstrate/coach
clinical experience/clinical instructor/second/grads/seasoned/demonstrate/coach/appropriate actions/preparedness
clinical experience/clinical instructor/second/grads/seasoned/demonstrate/coach/appropriate actions/empathy

Clinical experience
Clinical experience/Healthcare workers (HCW)/second/grads
HCW/negative/second/grads
HCW/negative/second/grads/forget
HCW/negative/second/grads/forget/lose
HCW/negative/second/forget/lose/robots
HCW/negative/grads/inequities
HCW/negative/grads/inequities/upset
HCW/negative/grads/inequities/action
HCW/negative/grads/inequities/action/empathy

Clinical experience
Clinical experience/patients/second/grads
Clinical experience/patients/second/grads/learn
Clinical experience/patients/second/grads/learn/relate
Clinical experience/patients/second/grads/learn/acknowledgement
Clinical experience/patients/second/grads/learn/communicate
Clinical experience/patients/second/grads learn/communicate/different
Clinical experience/patients/grads/ learn/sadness
Clinical experience/patients/second/grads learn/caring
Clinical experience/patients/second/grads learn/caring/empathy
Clinical experience/patients/second/grads learn/accepting
Clinical experience/patients/second/grads learn/apply
Clinical experience/patients/grads/learn/apply/context
Clinical experience/patients/second/grads/learn/perform
Clinical experience/patients/grads/learn/perform/composure

Clinical experience
Clinical experience/family/second
Clinical experience/family/second/understanding
Clinical experience/family/second/understanding/value
Clinical experience/family/second/understanding/sad
Clinical experience/family/second/understanding/empathy
Appendix I

Ethical Case Scenarios

☐ A patient with emphysema is faced with the decision to undergo LVRS. She questions you, the RT, about the procedure and your opinion. How should you respond?

☐ Answer as honestly as possible

■ Pt’s expect the truth from HC providers

■ Healthcare is best served in a relationship of trust

☐ Address concerns about the procedure including risks and benefits

☐ Prepare for recovery phase and any long-term issues

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☐ A COPD patient in acute respiratory failure refuses treatment. By refusing this particular treatment (NIPPV) the patient could die. How should RT handle this?

☐ Is the person of sound mind to make this decision?

☐ Evaluate the patient's understanding of the situation and inform them of the consequences of their decision.

☐ Document the event

☐ Inform the physician of the refusal

☐ Seek optional treatment and intervention

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☐ A 75–year–old male patient has multiple medical problems, including COPD. The medical team has determined that the patient is capable of making decisions about his medical care. He informed his physician on his last visit that he did not want his life prolonged artificially, and he signed a Do Not Resuscitate order. The patient’s lawyer and the hospital he frequently visits have copies of the DNR order on file. The patient’s spouse and children do not agree with the patient’s wishes and want every measure taken to prolong the patient’s life. The patient has just been brought to the emergency department unconscious and in a state of cardiac arrest.

☐ Question: Whose wishes must the medical team follow?

☐ The patient

☐ He made an informed decision when capable, he has legal documentation that is on file with the hospital and his lawyer
A 40–year–old female patient has been brought to the emergency department following a motor vehicle accident. The patient is in excruciating pain. She is currently breathing on her own, but physicians suspect that she may have broken some ribs, thus making breathing difficult. There is no evidence of lung perforation, but more testing is necessary to confirm this.

Question: Should the patient be given pain medication?
- Pain meds might cause or aggravate resp. depression but pain level & anxiety might also make breathing hard
  - Would giving pain meds be morally neutral or good?
  - The good should not follow as a consequence of the harmful effects
  - Harm should never be intended, but tolerated casually with the intended good
  - The good must outweigh the harm

A mother brings her son into the emergency room during an asthma attack. Though both of his parents work, they cannot afford medical insurance for themselves or him. They also earn too much money to qualify for state or federal aid. He is treated for his asthma attack at the hospital and he and his mother leave. Two weeks later, they return to the hospital in a virtually identical scenario.

Suggested Questions:
- Do you think that this boy is receiving adequate care?…Should he be able to see a primary care physician before his condition gets so acute that he must visit the ER?
- Should everyone be entitled to a basic "minimum of health care"… or to the exact same health care?
- Do you think that health care is a right? If so, are we forced to honor this right?
- If you think it is a right, is this right relative or universal? Does this right exist because of the wealth of the United States, or is it applicable everywhere? Is health care a luxury?
- Does having money entitle a person to better health care? (they may have worked harder for their greater wealth)
- 32 year old hunter fell 16 feet from a tree stand
- Spinal trauma resulted in paralysis and ventilator dependency
☐ The following day, the family requests he was brought out of sedation to decide on his own treatment

☐ The patient chose to remove life support after being assessed that he was in an appropriate cognitive state to make a decision.

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The physician writes an order for the respiratory therapist to turn off the ventilator and extubated.

☐ Should the RT carry out the order? Yes or No

Ethical Dilemma

☐ Autonomy – patient has a right to make that decision. Patient spoke to family about his wishes prior to the injury and his wishes were repeated in a clear state of mind.

☐ Non-maleficence – not enough time to make decision

The patient was removed from the ventilator and died within a few hours.

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☐ 5 year old boy brought to the ER twice in a month due to asthma

☐ Mother admits to smoking one ppd and she smokes in the house

☐ Mother refuses to stop smoking around child because she doesn’t believe smoking has anything to do with her child’s asthma. She tells you “My sister has five kids and smokes around them and none of them have asthma.

Question: Should you file a report with child welfare services that the boy is being neglected? Yes or No

Ethical Dilemma

☐ Autonomy – mother has the right to smoke in her home

☐ Non-maleficence – the child is being harmed

Legal requirements vary state by state. Discuss with mother modifying locations of smoking after reeducating her on how the cigarette smoke aggravates the asthma. Offer smoking cessation counseling/help

Don’t report until after above has been discussed, documented and the same pattern continues.

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☐ 62 yo male pt with COPD in the hospital with an exacerbation and being discharged the following day.

☐ Qualifies for home O2

☐ Smokes 1ppd currently; down from 2ppd
His physician asks you whether or not she should write an order for home O2

Question: Should you recommend home O2 since the patient is still smoking? Yes or No

Ethical Dilemma

- Autonomy – He has the right to continue smoking. Would you be enabling his nicotine addiction

Educate the patient on home O2 safety in relation to open flames and sparks
Offer smoking cessation assistance
*Many patients on oxygen continue to smoke while on home O2 and some will have thermal injuries

A hospital requires all health care workers to get seasonal flu vaccine. The policy allows exemption for medical and religious reasons with the proper documentation.

- Jenny refuses to get the vaccine because it isn’t natural
- You are Jenny’s manager

Question: Should she be fired? Yes or No

Ethical Dilemma

- Autonomy – Jenny has the right to not have her body “invaded”
- Non-maleficence – the hospital has the need to protect a vulnerable population. Health care workers shouldn’t harm patients
- Religious exemption vs. personal belief: are personal beliefs less valued than religious?

It would be within the hospital’s right to fire Jenny for non-compliance

52 yo woman with multi-system failure and ARDS
- Has been mechanically ventilated for several weeks
- Receiving Pavulon (neuromuscular blocker/paralytic) to facilitate ventilation
- PCV / 35 / 150ml / +15 / 100% ABGs are deteriorating
- Resident discusses the situation with the family. They decide to discontinue cardiovascular meds and turn down ventilator support
- Resident orders patient to be immediately placed on CPAP

Question: Should you carry out the order? Yes or No

Ethical Dilemma

- You have a duty to follow the physicians order
☐ Patient is still paralyzed from Pavulon – can nature take its course?

RT did not carry out this order. Called attending physician and explained situation who ordered to wait until Pavulon was discontinued and its effects wore off.

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☐ Scott is a well-liked RT on night shift

☐ His four year old daughter was recently dx with leukemia and his wife recently lost her job

☐ You and a coworker suspect that he is charting treatments without doing them

Question: Should you report Scott to your supervisor? Yes or No

☐ Helen is another RT on night shift

☐ Most of the staff find her rude and unpleasant; she has been written up for arguing with nurses

☐ You and a coworker suspect that she is charting treatments without doing them

Question: Should you report Helen to your supervisor? Yes or No

Ethical Dilemma

☐ Is the situation the same with Scott and Helen?

☐ Your primary duty is to the patient

☐ You do not want to falsely accuse a co-worker. Tell the supervisor what you see – do not offer conclusions or make judgments.
Appendix J

Gerontology Worksheet

1. Why do you think it is mandated to have Gerontology in the Respiratory Care Curriculum?

2. Define ALOS? Many times the ALOS for any given admitting diagnosis increases for the elderly, why is this a concern?

3. How are the following parameters affected by the aging process? Would they increase or decrease? What does this mean to our patients? How does this affect our patient’s WOB?
   - TLC
   - RV
   - FRC
   - Compliance/elastic Recoil
   - Expiratory Flows
   - Diffusion
   - Oxygenation PaO2
   - Alveolar Deadspace
   - Thorax compliance
   - A-a gradient
   - Control of ventilation
   - HR response
   - Stroke volume (cardiac output)

4. What visual changes (name three conditions using the medical name) affect our elderly patients and why should we be concerned about this as healthcare practitioners?
   - A.
   - B.
   - C.

5. When you talk to a patient, how can you tell the patient can hear you and understands you what you are saying?

7. Complete this Aging Game and bring in your results. Website: Aging Game – www.livingto100.com

8. Ask two people you know (or during your clinical visit, if appropriate) over the age of 65 the following questions:
   A. What are your biggest concerns as you age?
   B. If you were in a hospital what would be your biggest fear?
   C. Have you ever had a negative/positive experience with a healthcare provider? If so, what could they have changed to make it a positive experience? What made the positive experience a good experience?
Appendix K

Descriptive Statistics for the KCES

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<th>Question</th>
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<th>Maximum</th>
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<th>Kurtosis</th>
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Note. Negatively worded questions are marked with “-” after the number.