

Empathy Levels in Health Professions Students

by

Justin A. Hall

Submitted in Partial Fulfillment of the Requirements

for the Degree of

Master of Health and Human Services

in the

Master of Health and Human Services

Program

YOUNGSTOWN STATE UNIVERSITY

August 6<sup>th</sup>, 2019

Empathy Levels in Health Professions Students

Justin A. Hall

I hereby release this thesis to the public. I understand that this thesis will be made available from the OhioLINK ETD Center and the Maag Library Circulation Desk for public access. I also authorize the University or other individuals to make copies of this thesis as needed for scholarly research.

Signature: \_\_\_\_\_  
*Justin A. Hall*, Student Date

Approvals: \_\_\_\_\_  
*Dr. Joseph P. Lyons*, Thesis Advisor Date

\_\_\_\_\_  
*Dr. Kelly L. Colwell*, Committee Member Date

\_\_\_\_\_  
*Dr. Ronald Chordas*, Committee Member Date

\_\_\_\_\_  
Dr. Salvatore A. Sanders, Dean of Graduate Studies. Date

## Abstract

Justin Hall: Empathy Levels in Health Professions Students

**Introduction** Health professions and human services have one thing in common, which is that they work with people. However, the work they do is often very different. The purpose of this study is to explore the topic of empathy in health care professions students. This was explored because the ability to empathize can potentially make the person a better clinician. Better clinicians may also make better decisions which can lead to better health outcomes. **Methods** The study had 173 participants in majors or programs in health and human services. Two groups were given a researcher designed survey to assess their empathy levels. The survey given consisted of ten statements and then asked participants to rank their agreeance with the statements using a Likert scale. The two groups were categorized into health profession students and human services students. The survey was designed to give insight into both groups' empathy levels and the ability to compare the two. **Results** The study indicated there was no statistical significance in the differences between the ways these groups responded to the survey. **Conclusion** The results were not what was expected and did not support this study's hypotheses. It is recommended that further studies be conducted to draw a more solid conclusion to the research question of whether empathy is stronger in health care professionals. It is also recommended that further studies can be used to determine if empathy training is worth the time, effort, and resources in universities and in organizations that currently utilize them.

## **Acknowledgements**

I would like to thank and acknowledge the hard work of Dr. Andy Chang, PhD in the department of Mathematics and Statistics for all his assistance with the analysis of the data in this research study. Dr. Chang not only jumped in and was willing to help in any way he could, he did so many times when not even in the country or convenient. He consistently allowed this to be my own work, but always was willing to steer me in the correct direction.

## Table of Contents

<b>Chapter 1: Introduction .....</b>	<b>1</b>
<b>Chapter 2: Literature Review .....</b>	<b>5</b>
2.1 Empathy versus Compassion and Sympathy .....	5
2.2 Empathy and the Brain.....	6
2.3 Empathy and Culture .....	7
2.4 Digital Empathy Concerns.....	8
2.5 Health and Human Service Professions.....	9
2.5.1 Nursing.....	10
2.5.2 Respiratory Therapy.....	14
2.5.3 Social Work .....	16
2.5.4 Dietician Programs.....	18
2.5.5 Physical Therapy and Exercise Science.....	20
2.5.6 Criminal Justice and Forensic Science .....	22
2.5.7 Dental Hygiene .....	23
2.5.8 Public Health.....	24
2.6 Clinician Burnout.....	25
<b>Chapter 3: Methods .....</b>	<b>27</b>
<b>Chapter 4: Data Analysis .....</b>	<b>31</b>
4.1 Descriptive Data.....	31

4.2 Kruskal-Wallis H Test .....	32
4.3 Discussion of Analysis.....	33
<b>Chapter 5: Conclusion and Discussion .....</b>	<b>35</b>
<b>References .....</b>	<b>39</b>
<b>Appendix 1: Researcher Designed Survey.....</b>	<b>44</b>
<b>Appendix 2: Institutional Research Board Approval.....</b>	<b>45</b>

## Chapter 1: Introduction

Health care organizations are struggling to fill critical positions as the number of health concerns and the number of the elderly adults increases. It is (often) reported that patients are treated inadequately at health care facilities, which can be detrimental to a patient's health outcomes.

Empathy is defined as the ability of humans to relate to one another's situation, be it good or bad. Empathy can be broken down into different subtypes: cognitive, affective, and compassionate. Cognitive empathy is the ability to understand someone else's situation and why they may be behaving a specific way. People expressing this kind of empathy typically excel at communication. Affective empathy describes the connection one shares with another person during a given situation. This kind of empathy causes emotional connection with others. The final subtype, compassionate empathy, goes beyond understanding and moves one to help the other person (Heyes, 2018). Health care providers are faced with complex and intense situations and need to have empathy to do their job effectively.

The emphasis on health care provider empathy began with Hippocrates of Greece. In approximately 275 AD, Hippocrates wrote an oath for physicians, which is used today, demands practitioners care for their patients ethically (Bjelica, 2019). Other health care professionals including respiratory therapists and other allied health professionals have modified versions of the oath. The Hippocratic Oath is most famous for its line *primum non nocere* or "first, do not harm". Interpretations and application of the Hippocratic Oath by individual clinicians may vary. The goal of any health-care treatment should be remediation of a concern, even if the treatment plan involves discomfort. For example,

following a knee replacement, patients often report pain and weakness of the knee for several weeks. However, following therapy and healing, the pain and weakness will be alleviated, and the patient will have a knee that works better, and with less pain.

Health care and human services professionals are focused on helping people with a range of concerns, from health care to social issues. Many health care organizations believe that empathy is a valuable trait for a clinician to possess. While there is research on empathy at the professional level in the health and human service field, there is a lack of research on empathy at the collegiate level. This may be why many collegiate programs do not include any empathy training in their curriculums. Therefore, one must ask whether it is worth including empathy training in a collegiate program.

Some studies suggest empathy is a natural trait and cannot be taught, while others suggest empathy is a teachable skill. For example, an academic commentary titled “Empathy and the Development of Affective Skills” states:

Empathic students have stronger affective skills and are capable to acquire, develop, reinforce, and display strong affective behaviors, abilities, and attitudes. As an innate quality, empathy is malleable. The level of empathy can be influenced by educational interventions inculcated into students during the entire curriculum, including both didactic and experiential training. The effectiveness of educational methods may be strengthened by activities that help students enhance empathy and achieve required affective skills. Empathy and the empathy-based affective skills essential in patient-centered care should be routinely and deliberately



taught, modelled, and assessed across the continuum of health care curricula (Ratka, 2018).

This commentary suggests what is already happening, which is the involvement of empathy training in not only professional programs, but also in the organizations employing these professionals. For example, the Cleveland Clinic Foundation has an empathy series for employee training. The Cleveland Clinic Foundation recognizes that ongoing empathy training is as important as continuing education for clinical skills and knowledge.

Little research has been done to assess empathy amongst students in a health professions and human services programs, and even fewer studies have compared these two distinct groups. The present study aims to investigate different programs and how student empathy levels vary between programs. This study is inclusive of both health care and human services programs (including criminal justice and forensic science), at the masters and doctoral level. The expectations are that this study will allow not only Youngstown State University, but outside organizations to see where these students may differ. This will also help organizations determine if empathy training is worth their investment in time and money.

Several questions emerge: do certain health and human services students exhibit greater empathy than others, and if so, why? Would students benefit from empathy training during undergraduate or graduate studies across both health professions and human services programs, or only in some?

Based on the current literature, the following are expected results: (1) Health professions students will demonstrate greater empathy than human services students.

(2) Health professions students of different disciplines will demonstrate lower or similar levels of empathy in their survey responses.

The following departments at Youngstown State University were surveyed for this study: health and human services, social work, criminal justice, forensic science, respiratory care, nursing, public health, dental hygiene, laboratory science, medical assisting, physical therapy, emergency medical services, and allied health. Many programs have undergraduate and graduate level programs, which were all included.

## Chapter 2: Literature Review

### 2.1 *Empathy versus Compassion and Sympathy*

Empathy is commonly mistake or confused with other terminology, such as compassion and sympathy. Empathy is the ability to understand and share the feelings of another person. An example of empathy is the feeling of sadness one gets when losing a pet. Empathy is being able to also feel the pain of the friend that lost their pet. Sympathy is similar to, but cannot be used interchangeably with, empathy. Sympathy is the ability to take part in someone else's feelings, most often by feeling sorrow about their misfortune(s) (e.g. the feeling sorrow for someone who just lost a home to a fire). Compassion is also confused with empathy and sympathy. Compassion means having concern for someone else's misfortune and for their suffering. Sympathetic concern is the ability to assess someone's situation and determine why they feel the way they do. An example of compassion would be listening to a patient talk about their pain and actively participating in the discussion (Svenaesus, 2015).

Empathy should also not be confused with altruism. Altruism is defined as the concern in favor of other's happiness and completing actions that make others happy without expecting any recognition or reward (Svenaesus, 2015). Altruism has been witnessed in both humans and animals. Buying a coworker a coffee when they are having a bad day is a way someone can demonstrate altruism. One may not have expected a reward for this action and only did it to make their coworker happy, but this is not the same as being empathetic. Being empathetic is also being able to feel the stress of your coworker and being able to directly relate to their feelings.

Some studies suggest empathy is related to how competent a clinician is in their field. A study titled “Empathy is related to clinical competence in medical care” explored this idea (Ogle, Bushnell, & Caputi, 2013). This study had 57 participants who were current medical school students. The first part of the study involved students taking an objective structured clinical exam (OCSE), which is done hands-on, similarly to a CPR certification test. An independent observer ranked each student’s empathy level during the OCSE testing. The second part of the study involved self-ranking empathy scores using the Jefferson Scale of Empathy (JSE) Health Professions Student Edition (Hojat, 2016). The study also found that the better a student did on the OCSE the higher the independent observer found their empathy to be and vice versa. The study also noted that there was not a significant correlation between the student’s self-reporting of empathy using the JSE and their OCSE scores. One issue with the study that the researcher noted was that it was unclear whether students may have faked their behavior to appear more empathetic.

## *2.2 Empathy and the Brain*

In the 1996 macaque monkeys were observed in a study titled “Premotor cortex and the recognition of motor actions” (Rizzolatti, Fadiga, Gallese, & Fogassi, 1996). Scientists found clusters of what are now known as mimic neurons in these monkeys’ brains. These mimic neurons only activate when two things happen simultaneously: one monkey completing an action and another monkey then copying the same action. Recent studies using brain imaging technology show similar areas of the brain becoming active in humans when experiencing pain and when watching another person experience pain (Greck, et al., 2012). The author suggests that humans have an ability referred to as

empathic mimicry, or the ability to feel or mimic others' feelings. Even just the anticipation of someone else being in pain is enough to activate this part of the brain.

### *2.3 Empathy and Culture*

Health disparities are factors in life that can affect overall health outcome. For instance, someone with a language barrier may be inadequately informed about their illness. Because of this, they may not be fully understanding of what they need to do to get better. If a patient had a high risk of cancer based on their symptoms and are referred to a specialist to investigate their condition further this may be delayed. If a patient had trouble understanding this due to a language barrier, they may not go to a specialist in time to be diagnosed and treated while the cancer is in an early stage. Language is just one example of cultural barriers. Some other cultural barriers include age, gender, race, national origin, location, socioeconomic status, sexual orientation, and more.

One of the most commonly understood and used models of cultural competency is the "Cross Model of Cultural Competency" (Abrishami, 2018). This model is a six-stage continuum of cultural competency in an organization. The first stage is called "cultural destructiveness". In this stage there is no recognition of cultural differences between patients. This then slowly progresses to stage three, which is known as "cultural blindness". At this stage, there is no longer a destructive component. Practitioners and administrators adopt a policy of treating everyone the same, even though different cultures have different needs. This continues to the next stage called "cultural pre-competence". At this stage the administrators and staff recognize that different cultures must be treated in accordance to what is appropriate for each patient. Hospitals may start to hire a more diverse workforce, but they fall short when they do not train them to serve

a diverse population of patients. Hiring a diverse work force is not enough to truly bring culturally competent care to patients. The final two stages are respectively “cultural competence” and “cultural proficiency”. Training is incorporated to make sure each staff member knows how to care for a diverse patient population. The organization eventually reaches the point where this ethos is completely ingrained throughout every facet of the system in the organization.

#### *2.4 Digital Empathy Concerns*

A crossover study was conducted at Gunma University Hospital in Japan where observations were made between regular in person visits with a physician versus virtual visits with a physician, known as telemedicine (Terry & Cain, 2016). Telemedicine is an emerging trend in healthcare due to consumerization of the industry as well as the ease of connecting with specialists that are unattainable due to distance. The study found that telemedicine visits demonstrated much less empathy levels than regular in person visits.

The article continues to discuss what is called the “online disinhibition effect” theory, and how it impacts empathy levels. This theory explains that when someone is online, they exhibit far less empathy because there is a level of anonymity with being online. In some cases, such as on an internet forum, online users are more likely to say and do things they would not say or do in person. This is because they are less likely to feel as if they would be caught doing it. They are less likely to receive backlash, especially if their online identity does not match their in-person identity. This theory also explains that many interactions are asynchronous (not existing or happening at the same time), which also lends to being less empathetic. A phone call versus a Blackboard forum post is an example of this.

Many medical professionals do not receive any empathy training. This may be why it is reported that telemedicine encounters are less empathetic than in-person encounters. Empathy training, according to the author, should be a part of medical training especially with the emergence of telemedicine.

### *2.5 Health and Human Service Professions*

The discussion of the development of various health care professionals and their roles in their organization is important. This discussion will hopefully shed light on where the differences are in the professions as well as why possible reasons for discrepancies in empathy levels. It should be noted that some programs are not necessarily health care related but are still part of the health care and human services umbrella of careers and as such are included in the literature review and study.

A study was completed on health professions students in 2017 titled “Levels of Empathy in Undergraduate Health-Care-Professions Students” at the Illinois Wesleyan University (Kerr & Tegge, 2017). There were 157 participants in this study. The students were all declared or undeclared health professions students in respective specialties, such as occupational therapy, psychology, pre-medicine, and nursing. In this study, the Jefferson Scale of Empathy (JSE) for Health Profession Students was used. This study showed a significant difference between female and male participants with female participants scoring higher empathy levels than the male. Freshmen students also exhibited a significantly lower empathy score than students in the junior year class. Nursing students showed significantly higher empathy levels than all other majors.

### 2.5.1 Nursing

Nursing was not always a respected, or educated profession, like it is today. In fact, nurses in the 1800s were often looked at in the same light as prostitutes (Horsley, 2010). Nurses were often men since women were not allowed enough education to pursue this career path. The change in this societal attitude came from a woman named Florence Nightingale (Nightingale, 1860). She is known as the “mother of modern nursing”. She was one of the first women to pursue a career in nursing. Nightingale’s family was very liberal and progressive for the day and her father was known as a humanitarian.

Nightingale was extremely educated for the time, knowing many languages and subjects.

Nightingale fought for statistical arguments, specifically in creating the standards for nursing, hospital cleanliness, and patient hygiene. In fact, during the Crimean war, Florence Nightingale was asked to go to the Crimean hospital because soldiers were dying in droves and the conditions of the hospital were abhorrent. When she arrived at the Crimean hospital there were puddles of putrid water and the hospital was filthy. It was stated that most soldiers were no longer dying from battle wounds, but from infections they had acquired at the Crimean hospital. Nightingale insisted on fresh air and water in the hospital, as well as daily laundered bedding. She also became known as the “lady in the night” because she would do rounds and sit with the soldiers during the nighttime while carrying a lantern. It was recorded that she would sit with the soldiers and read to them or simply talk to them during the nighttime. By the end of the war it was stated that Nightingale had reduced the death rate at the Crimean hospital by two-thirds.

Nightingale’s *Notes on Nursing: What It Is and What It Is Not* also touches on empathy and nursing in an indirect way. A chapter titled “Chattering Hopes and Advices”



discusses communication with patients, and what a patient may or may not want to hear. Nightingale says, “how little does anyone in good health fancy him or even herself into the life of a sick person” (Nightingale, 1860, p. 57) which alludes to empathy being difficult for one to utilize because they themselves do not want to imagine being sick. She also goes on to discuss more in detail what she believed to be the best way to treat patients, which is honesty, but also with positivity. For example, she says “if you knew how unreasonably sick people suffer from reasonable causes of distress, you would take more pains about all these things” (Nightingale, 1860, p. 58). She believes that if more people were more understanding of how horrible it is to be extremely ill, then people would be more empathetic to their situation. She advises against telling terminally ill patients things such as: “you have a long life of activity ahead of you”. Part of being empathetic is not lying to someone to make them feel better. Because of her work, a trust fund was established in her name and that fund was used to create the first school of nursing. This was the first-time nursing was viewed as a real profession and it catapulted into being one of the most in demand professions of today’s world.

Nurses today take on many roles and specialties, even having different levels of education and licensures, such as nursing aides, registered nurses (RNs), and nurses who hold doctorates. According to the American Nursing Association, it is difficult to pinpoint what a nurse does because nursing is a very broad field (American Nursing Association, n.d.). Nurses may provide care in an acute setting but may also work in a school providing inoculations or basic care to sick students. Nurses are also involved in the care of someone in a serious accident. The scope of practice of a nurse in the state of

Pennsylvania also varies based on the nurse's education. Every state may vary in their scope of practice, but for the most part, all of them are nearly the same.

In Pennsylvania two practice acts exist: one for practical nursing and one for registered nursing (Pennsylvania State Board of Nursing, 2019). Practical nurses have less schooling and skills than a registered nurse does. A practical nurse must be licensed by the board of nursing and must also be under supervision of a registered nurse or a physician. A practical nurse must also work within their scope of practice. Registered nurses are often referred to as professional nurses, but this category also includes advanced practicing nurses such as nurse practitioners. In the state of Pennsylvania, a registered nurse can practice based on their skills, education, and certifications. These nurses must also be licensed by the board of nursing. The scope of practice in Pennsylvania lays out specific things a nurse can and cannot do based on their education and licensure. An example would be that nurse practitioners are granted the ability to refer patients to physical therapy or prescribe certain medications. Registered nurses are not able to prescribe medications or procedures.

A nurse is there to care for patients in many ways. They can use medical interventions, such as medication delivery under instruction of a physician, or as simple as making sure a patient is in a clean room. A nurse may also provide a listening ear or give advice on taking better care of one's health. Florence Nightingale's *Notes on Nursing* discussed the very core of what a nurse is and is not (Nightingale, 1860). Various topics are discussed: air quality, warmth, food, noise, bedding, lighting, and talking to patients, to mention a few. Nightingale placed emphasis on what nurses do and their responsibilities. An example is when she states the following: "If a patient is cold, if

a patient is feverish, if a patient is faint, if he is sick after taking food, if he has a bed-sore, it is generally the fault not of the disease, but of the nursing” (Nightingale, 1860, p. 6). She implores nurses to put their patients at the forefront of their profession, always focusing on the patient’s wellbeing. Nightingale goes on to say: “...by this I do not mean that the nurse is always to blame. Bad sanitary, bad architectural, and bad administrative arrangements often make it impossible to nurse” (Nightingale, 1860, p. 6) which explains what can be detrimental to nursing that may be out of the control of the nurse.

Nurses are often expected to have an innate ability to empathize with patients. Nurses are thought of having the ability to empathize with anyone’s situation. A study on nursing care for dementia patients and discussed empathy as being an important, but not an essential part of the care (Digby, Lee, & Williams, 2016). The study discussed factors that can make a nurse less empathetic. One of the most glaring issues for nursing is the lack of resources a nurse may be able to access. Nurses can become overwhelmed by a low nurse to patient ratio. This can overwhelm and may cause a nurse to not be able to empathize as well as they would with more nurses on staff and less patients in their care.

A study in Spain at the University of Cadiz explored whether interventions worked regarding empathy levels among undergraduate nursing students (Bas-Sarmiento, Fernández-Gutiérrez, Baena-Baños, & Romero-Sánchez, 2017). Forty-eight undergraduate nursing students in their second year of school participated in a quasi-experimental study regarding empathy training intervention. Students received twenty hours of interventional empathy training. This was completed in one semester where multiple empathy tests involving self-reporting, peer observation, and independent observation of empathy levels were conducted. One month after training was completed

the students participated again in role playing, classroom flipping, and observations from peers and independent observers. It was found that there was a significant improvement in empathy levels after the intervention training was completed. This study concluded that empathy training does not need to be overly extensive to have an impact on empathy levels later. It also suggested that health professions students should be required to complete this kind of training during their time as a student.

### *2.5.2 Respiratory Therapy*

A respiratory therapist is a licensed health care professional. Respiratory Therapists are licensed in a similar manner to nurses. A respiratory therapist begins as a certified respiratory therapist license (CRT) upon completion of their degree and licensure testing. They can take a more advanced licensure test to become a registered respiratory therapist (RRT). There have been discussions about offering another licensure for respiratory therapists who obtain a master's degree in respiratory therapy as an advanced practicing respiratory therapist (APRT) (American Association for Respiratory Care, 2019). This has not come to fruition yet.

Respiratory therapists are often overlooked in the health care system, mostly by patients. Many are mistaken for other professionals, such as nurses, or even physicians. Respiratory therapists are even sometimes thought of as technicians, even though they do far more than just technical work and are an integral part of patient care in the hospital, outpatient settings, and in emergency situations. According to the American Association for Respiratory Care (AARC), respiratory therapists can evaluate and diagnose respiratory illness and issues and recommend plans of care (Commission on Accreditation for Respiratory Care, 2018). They also interview patients and evaluate their

breathing to determine the best course of therapy for the patient. They may also consult and make recommendations to a patient's physician on what to change in a current respiratory protocol. Respiratory therapists are trained and educated on the collection and analysis of breath sounds, tissue, and blood to determine gas levels and other chemistry to recommend proper medical interventions. A respiratory therapist is also the main health care professional that will establish and adjust mechanical ventilation for patients who cannot breathe normally on their own. They may also be involved in educating patients and their families before they go home to maximize their therapies when outside of the hospital. Lastly, respiratory therapists also are required to respond to all code blue and emergency situations as they are one of the first line responders when it comes to any sort of medical emergency.

An extensive literature search yielded no results of studies conducted on a respiratory therapists' empathy levels. Unfortunately, it appears many allied health professions are not included in studies on this topic. However, respiratory therapists interact with patients quite often during their care, especially in intensive care units and during trauma. During these kinds of medical situations, it can be argued that empathy is important, especially for facilities that practice patient centered care. This kind of care includes the patient's friends and family in the duration of their care. Respiratory therapists encounter situations similar to physicians in trauma situations where it can be argued that empathy is less important and where being direct and honest is more important.

### 2.5.3 *Social Work*

Social work is a career that is about helping people, especially those that are vulnerable, oppressed, or those living in poverty. Social work is a multidisciplinary field. Some social workers provide counseling services to patients, while other social workers help a person apply for social services such as food stamps or Medicaid. They may also walk them through applying for financial assistance for medical care or other similar services. Social workers are employed in many settings, such as welfare assistance offices, hospitals, outpatient and inpatient facilities, counseling facilities, government, and others.

Social workers are licensed professionals in the United States and elsewhere. Licensure requirements are dependent on the state in which the social worker plans to practice. There are different levels of social worker education, and most practicing social workers have a masters level degree in social work. There are bachelor level degrees available, and in select states bachelor's degree level social workers can practice, although in a limited manner. Some states require social workers to gain experience in specific areas of social work and obtain a set number of field experience hours before they can qualify for licensure. Some states may also require a licensure test to be taken and passed before license is issued.

There is available research concerning empathy and social work. One study conducted in Australia discusses social work students, human rights, and racism (Gair, 2017). The author asked whether social workers what kind of barriers they faced when addressing racism toward Australian aborigines. The question didn't have easy answers, but the author did comment that becoming a change agent required serious critical

consciousness. In this study students of social work were asked various questions regarding empathy and other core issues related to the career of social work. Specifically, they were asked to rank different topics as more or less of a barrier to practicing social work thinking of themselves when dealing with racism against aboriginals in Australia. The responses to the survey were thought-provoking. The top three responses were: not being sure what to do, not being able to identify issues, and a lack of confidence. When asked to rank barriers when working on the issue of aboriginal racism the top three responses were: lack of confidence, not knowing what to do, and having little time. The study allowed for comment on why students chose specific responses to those questions. Some notable comments were that they felt they needed to learn a lot more to fully understand the issues, not knowing where to start, time is limited so much that there is none left to dedicate to this issue and being too busy with life as well as starting a career and family to dedicate more time to an issue like this one. Most notably a lack of empathy was not highly ranked as a barrier in either set of responses. This response indicates that the social work students self-report that they are empathetic.

Social work programs are starting to incorporate empathy training in their curricula as legislation has been introduced allowing social workers to turn away clients for virtually any reason that can be linked to religious beliefs (National Association of Social Work, 2016). The National Association of Social Work (NASW) addressed this in a statement in 2016 stating “social workers should not practice, condone, facilitate, or collaborate with any form of discrimination on the basis of race, ethnicity, national origin, color, sex, sexual orientation, gender identity or expression, age, marital status, political belief, religion, immigration status, or mental or physical disability”. This

encourages social workers to continue to care for people regardless of their beliefs or lifestyles.

#### *2.5.4 Dietician Programs*

Dieticians play a key role in many health care settings. Dieticians can be found in hospitals, outpatient facilities, and many also work in sports medicine programs across the country. In fact, UPMC Sports Medicine has a team of dieticians and nutritionists that work with people from athletes to regular people looking to work on their diet.

Dieticians are health care professionals with backgrounds in science and nutrition. Many possess a four year or more college degree and many seek out certifications and licenses. Dieticians can assist patients in losing weight by choosing healthy eating options. In some cases, dieticians may also work with patients that have eating disorders and work with them on their decision-making habits affecting diet. Dieticians can benefit from empathy to better understand what their patients are going through and how they can better help them.

A study was conducted with dieticians of varying skill levels and backgrounds, including those with graduate degrees (Spraggins, Fox, & Carey, 1990). The study consisted of 217 clinician level dieticians and 168 intern level dieticians. Four levels of empathy were measured in this study: fantasy, perspective taking, empathetic concern, and personal distress. Fantasy measured how well the person can imagine they are in a movie or a book, which shows that they can potentially try to imagine being in one of their patient's situation. Perspective taking measured the dietician's ability to place themselves in the shoes of their patients when presented with real life situations. Empathetic concern measured the ability to feel warmth and compassion when



witnessing someone in a negative situation. Personal distress measured the clinician's ability to feel anxiety and comprehension when viewing someone in a negative situation. These were measured using the Davis Interpersonal Reactivity Index, which is a self-reported test that measures the empathetic process one takes. The results of this study showed a few thought-provoking results. The responses from those with graduate level degrees showed that they had lower fantasy scores than those without advanced degrees. Those who conducted this study hypothesize that this could be due to age differences in those professionals meaning that older participants do not fantasize as well as younger participants. Participants who had completed graduate level coursework in psychology, counseling, and education also reported fewer feelings of warmth, compassion, anxiety and discomfort when witnessing a patient in a negative situation. It is thought that these professionals are just more prepared to handle the situation and therefore have developed the ability to remove emotion from the situation and control their inner feelings, remaining objective. Ultimately, there was no statistical significance between empathy levels of those who studied psychology, education, and counseling than the clinicians and interns who did not. Limitations of this study included the need for more participants on those who took professional coursework in psychology fields versus those who did not. Another limitation is that the Davis Interpersonal Reactivity Index is a validated measurement but has not been used in a study involving any health care professionals prior to this study.

Another study focused on individuals who worked in food nutrition programs such as SNAP who have worked with individuals who were considered food insecure (Harmon, et al., 2017). Food insecurity affected about 12.7 percent of American

households in 2015. This study asked students to eat for five days with only fifteen dollars to spend on food. This food was required to be balanced and nutritious. The students could not visit food banks or take charity from anyone during this period. Allowing approximately three dollars per day was in line with the food stamp program at the time. Students were also required to complete a workbook. The workbook asked questions about their experience, but also asked questions about their opinion of the food stamps program. Some of the questions asked specifically if they felt food stamps provided enough money to meet food needs. It also asked whether they felt people would become dependent on the government after receiving and using food stamps. The survey then also asked various questions regarding whether they thought it was likely a family wasted money on other things even if they could not afford food. The results of the study show an increase in empathy amongst the participants from before and after taking the survey and participating in the food insecurity exercise.

#### *2.5.5 Physical Therapy and Exercise Science*

Physical therapy and other exercise and rehabilitation programs work directly with patients and clients on reaching personal goals. The main difference between the two programs is the length of time they take to complete, the goals each program has, and the license received after graduation.

Physical therapy in the United States currently requires a doctorate in physical therapy to obtain licensure. Students typically take a four-year undergraduate curriculum in the sciences. Many will choose kinesiology or an exercise science program, but some may choose a traditional biology or chemistry degree as well. An exercise science degree is typically a bachelor's degree, but one could go on to many graduate programs in

exercise science or other related fields. Some graduate degree options would be athletic training or physical therapy.

Physical therapists usually work with patients that are referred to them by a physician or other advanced practicing practitioner, such as a licensed physician assistant. Physical Therapists are trained in techniques and skills that are crucial in resolving musculoskeletal problems. Physical therapists also work with orthopedic surgeons regarding preoperative and postoperative care for surgeries, which include repairs of bones and tendons, as well as total joint replacements. Following the performance of orthopedic surgery many patients experience pain, loss of range of motion, and loss of strength in the affected part of the body. Physical therapists address all these concerns when treating patients.

Athletic trainers differ from physical therapists in the goals they aim to achieve with their clients. An athletic trainer's primary focus is on improving and maintaining athletic ability or helping someone reach their fitness goals. The differences in what these two professionals do may or may not affect their empathy levels. No studies exist that compare empathy levels between physical therapists and exercise science professionals, or students of these disciplines.

There is a study on physical therapy students' empathy levels. The study examines if there is a relationship between the year of study and empathy levels in physical therapy students at Indiana University (Bayliss & Strunk, 2015). 169 students participated in the study. The study used the JSE a measurement instrument. Students were given a survey their first year and second year of study and then a third survey six months after graduation. The study reported a significant difference in empathy levels

from year one of study to six months post-graduation. Post-graduation surveys indicated a significant, positive increase in empathy levels compared to the first-year survey results. The study also examined if there was a relationship between empathy level and the participant's sex. The study found a significant difference in empathy levels between male and female participants overall, with females possessing higher empathy levels than males regardless of the year of study.

#### *2.5.6 Criminal Justice and Forensic Science*

According to Youngstown State University, the purpose of the criminal justice and forensic science programs are to teach students how to protect citizens using science and law (Youngstown State University, n.d.). Students of these programs may become police officers, detectives, or go on to become lawyers. They may serve in police departments, correctional facilities, or in other areas of law and justice. These professionals are typically not offered empathy training. They deal with people who have committed crimes, sometimes heinous ones, making it difficult to be empathetic even when it may be beneficial. There has been limited research on empathy and criminal justice professionals.

One study explored whether empathy training in criminal justice students' coursework could increase empathy levels (Keena & Krieger-Sample, 2018). In the study, fifty-two students participated in the intervention group and ninety-seven students participated in the control group. The study was conducted over seven years starting in 2007. The study had two components: a pen and paper empathy test and an in-person interview. Students who were part of the intervention group demonstrated higher empathy levels over the seven years while students in the control group demonstrated

significantly lower empathy levels over the seven years. The study concluded that empathy training does work and should be included in criminal justice students' training.

Another study was conducted in Sweden regarding police and empathy during interviews of suspected criminals (Oxburgh & Ost, 2011). Sexual offences are considered frequent, but unique to most other crimes. The study focused on how empathetic police were during initial interviews of suspected sex criminals. Only five percent of sex crimes result in convictions. Eighty-three offenders were asked to complete a thirty-eight question survey about their initial encounter with police officers. There were two groups of criminals: a group of murderers and a group of sex offenders. Sex offenders reported lower levels of empathy being demonstrated in their police encounters compared to murderers. Empathy among police officers during interviews can have a positive impact on an investigation. Empathetic officers are more likely to build trust with suspects and be more understanding of their answers. They can also invoke more honest and emotional responses to their questions.

### *2.5.7 Dental Hygiene*

According to Youngstown State University, dental hygienists are medical professionals who work under supervision of Dentists and provide dental services (Youngstown State University, n.d.). The dental services provided range from cleaning teeth, oral examinations, patient education, and other services. It may be important for dental hygienists to be able to empathize with patients to determine causes of dental issues and how to best educate and intervene to prevent and fix dental issues. Very little research has been done on dental hygienists and empathy.

One study on dental hygiene and empathy focused on patients with disabilities. The disabilities could be physical or mental (Jones & Miller, 2018). Dental hygienist students were asked to participate in a pre-intervention and post-intervention survey. 165 students participated in the study. Students participated in an informative education module about people with disabilities. This module included real patient experiences with dental hygienists that were positive and negative. Post measurement of participant empathy resulted in significantly higher empathy levels than before the educational module.

### *2.5.8 Public Health*

According to Youngstown State University, public health professionals are experts on how diseases spread and develop and how to education people on preventing and treating diseases (Youngstown State University, n.d.). These professionals must be good at communicating and understanding disparities in healthcare. It is also paramount for them to be empathetic to patients as they educate them on subjects they may not understand. Like many of the subjects of this literature review, it should be noted that there is very limited study on empathy and public health.

A study on public health professionals focused on where the decline in empathy occurs in a student's education and how to prevent that decline (Van Winkle, Schwartz, & Michels, 2017). During the study it was determined that most students lose significant empathy during their first year in clinical education. One study reported a decrease of 0.5 in the r value of the JSE, which is statistically significant. In some cases, it was learned that students have a perception that most patients do not want empathy, but data suggests otherwise. It is also shown that empathy levels can be improved or maintained prior to

and during the first year of clinical education by implementing empathy training. The author suggests that students that complete community service regularly have higher empathy levels. It is further suggested that community service should be part of the curriculum for students in health professions programs. These educational interventions should also be continual and not a one-time experience.

## *2.6 Clinician Burnout*

Clinician burnout is a highly talked about issue in medicine. Clinician burnout is very common due to the high stress levels incurred working in stressful clinical situations. Clinician burnout is described burnout as a “psychological syndrome involving physical depletion, feelings of helplessness, negative self-concept, and negative attitudes towards work, life, and others” (Wilkinson, Whittington, Perry, & Eames, 2017).

108 physicians and 112 nurses participated in a study in Spain focusing on primary care offices (Yuguero, Marsal, Buti, Esquerda, & Soler-González, 2017). The study explored whether burnout in clinicians would affect Quality Standard Indicator (QSI) scores when compared to their JSE scores. Burnout was measured using the Maslach Burnout Inventory (MBI) score. When compared a higher MBI score was associated with a lower the JSE score and a higher QSI score. The authors suggest that this is a fluke and think this is not a normal result compared to what is expected to happen.

Another study conducted in Germany compared MBI scores to perceived quality of care among 416 physicians (Loerbroks, Glaser, Vu-Eickmann, & Angerer, 2017). The study found that a high the MBI score was associated with a lower perceived quality of

care. A higher dedication to work is correlated to one section of the MBI, which resulted in a higher perceived quality of care. The study notes that there is little research on this topic and that more research is needed to draw strong conclusions on burnout and quality of care.



### **Chapter 3: Methods**

The purpose of the present study was to determine if there is a significant difference in the empathy levels between programs of health and human services students at Youngstown State University. Higher empathy levels are often associated with better health outcomes and higher satisfaction among patients. This study was designed to determine empathy levels from individual students and subsequently compare their empathy level with other students.

The hypotheses were as follows: (1) The health professions students will demonstrate higher empathy levels based on the results of the survey than the human services students. This may be due to the nature of their career path and personality types. Personality traits may or may not have an influence on career choice. (2) The health professions students will demonstrate lower or similar levels of empathy than human services students based on the results of the survey.

Youngstown State University describes itself as an urban research university. The University is in Youngstown, Ohio within the United States of America. Students are mostly from surrounding areas of Youngstown, but the university does attract students from all around the country and from outside of the United States. According to Youngstown State University's enrollment statistics there were approximately 3,494 students enrolled in undergraduate and graduate level health and human services programs in the Fall of 2018 (Youngstown State University, 2018). The university reported a total enrollment of 12,696 students enrolled, and health and human services had the highest enrollment just ahead of the STEM (science, technology, engineering, and mathematics) college.

The study was completed using Google Forms and through the University's Microsoft Outlook email system. The participants responded to the survey individually. Students received an email inviting them to participate in the study, the goals of the study, how their data would be used, and the ultimate purpose of the study. Students who agreed to this willingly filled out an online survey which was then submitted to be analyzed. The researcher obtained approval from Youngstown State University's Institutional Review Board to complete the study.

Students were targeted based solely on the program they were enrolled in at the time of the survey. Emails were sent out from the Bitonte College of Health and Human Services administrative office. Students received this email multiple times until the study concluded. Students targeted were enrolled in the following programs: allied health (BSAS), medical laboratory technology (AAS), medical laboratory science (BSAS), public health (BSAS), dental hygiene (BSDH), paramedic (certificate), emergency medical services (AAS), health and human services (MHHS), medical assisting technology (AAS), public health (MPH), respiratory care (BSRC), respiratory care (MRC), dietetic technician (AAS), coordinated program in dietetics (BSAS), didactic program in dietetics (BSAS), Exercise Science (BSAS), athletic training (MSAT), traditional nursing (BSN), nursing (RN-BSN Completion Program), nursing (MSN), physical therapy (DPT), social work (BSW), social work (MSW), criminal justice (AAS), criminal justice (BSAS), criminal justice (MS), and forensic science (BSAS). Students had to be enrolled in their program currently if the program was a restricted program. A restricted program is defined as a program that admits a specified quota of students based on their performance in a set of prerequisite coursework. Students still completing

prerequisites for these programs and not yet admitted were not asked to participate in the study. It should be noted that the following programs are restricted: respiratory care, nursing, and dental hygiene.

It should be noted that there was no intervention in this study or a required training course in empathy. The study solely focused on the responses to survey questions used to identify empathy levels among the participants.

The survey required participants to respond to ten statements using a Likert scale. The ten statements focused on empathy attributes and the scale was as follows: strongly disagree (1), disagree (2), etc. The statements were:

- 1) Empathy is a necessary ability for a healthcare practitioner to provide care to a patient,
- 2) Empathy is an ability that someone is born with and cannot develop,
- 3) Without empathy, a clinician's ability to care for a patient is limited,
- 4) Empathy is important for a healthcare provider to have when caring for a patient,
- 5) Empathy directly affects health outcomes,
- 6) I have the ability to empathize with patients,
- 7) When reading or watching a book or movie I find myself trying to feel how the characters are feeling,
- 8) When a patient or friend is feeling upset I try to remember a time when I was upset as well,
- 9) I try to see things from others' points of view,
- 10) When I disagree with somebody it is difficult for me to see their point of view.

The survey also asked students to self-report their age, gender, their progression into the program, and the program in which they were currently enrolled.

Using Google Forms was a simple way to create the survey, protect the data behind an account and password, and to distribute and received responses to the survey. The use of drop-down menus and pre-filled out forms made it easy for students to respond to all the required statements in the survey. All other responses were recorded using radio buttons in the survey. The data was easily downloaded as an excel file through Google Forms and then was transformed into a file that was usable in PSPP, a statistical analysis program (GNU Project, 2019).

The survey was distributed to the thesis committee before sending to the students. The thesis committee agreed that the survey is reliable and valid. IRB approval was granted prior to the survey being sent to any participants.

## Chapter 4: Data Analysis

### *4.1 Descriptive Data*

Of the 173 participants 120 of them were categorized as health profession students and 53 of them were categorized as human services students. Students were categorized based on their major or program of study indicated in the survey responses. Health profession and human services students were categorized based on the career path of their chosen major. A list of majors and programs can be referenced in the previous chapter. These categories were chosen based on whether the program leads to a career that is only health focused, human services focused, or skewed toward one type or the other if the career could technically serve both categories. For example, social work was placed in human services because while social workers do work in health care organizations, they are not solely health care providers and are utilized in prisons, government, schools, and other non-health care organizations.

The mean or average response for each statement was reported. The first statement had an average response of 4.62, indicating overall agreement. The second statement had an average response of 2.46 indicating overall disagreement. The third statement had an average response of 3.82, slightly indicating agreement. The fourth statement had an average response of 4.45, indicating very strong agreement. The fifth statement had an average response of 3.59, indicating a slight agreement. The sixth statement had an average response of 4.56 indicating a strong agreement. The seventh statement had an average response of 4.11 indicating agreement. The eighth statement had an average response of 3.92 indicating agreement. The ninth statement had an average response of 4.48 indicating very strong agreement. The tenth statement had an average

response of 2.29 indicating disagreement. The responses to statement one, six, and nine all had no “strongly disagree” responses.

#### *4.2 Kruskal-Wallis H Test*

The Kruskal-Wallis H test was used for this data analysis using a free statistical program called PSPP (GNU Project, 2019). This test is appropriate because the data is ordinal. The data are divided into two groups: health professions and human services programs. The Kruskal-Wallis H test does not assume normality and is not sensitive to outlier data. It also is suitable for data that has two or more groups being compared.

When comparing the two groups responses using the Kruskal-Wallis H test, each statement in the survey will be looked at individually. The first statement has a p-value of .366, which is not significant, indicating no statistical difference in the way either group of students responded to the statement. The results of the Kruskal-Wallis H test are reported in Table 1. The comparison for the first statement resulted in a p value of 0.366, which means there is no significance between the groups. The second statement has a p-value of .811, which also indicates no statistical significance. The third statement has a p-value of .349, indicating there is no statistical significance. The fourth statement has a p-value of .280, which indicates no statistical significance. The fifth statement has a p-value of .239, indicating no statistical significance. The sixth statement has a p-value of .647, which indicates no statistical significance. The seventh statement has a p-value of .884, which indicates no statistical significance. The eighth statement has a p-value of .528, indicating that there is no statistical significance. The ninth statement has a p-value of .208, which indicates that there is no statistical significance. The tenth and final statement has a p-value of .357, indicating no statistical significance.

### *4.3 Discussion of Analysis*

The descriptive statistical analysis reported that in many cases based on the average response to each statement when considering what each statement aimed to find out, the average response overwhelmingly agrees that empathy is important. When using the Kruskal-Wallis H test, there is no significance in any of the responses.

The first hypothesis states health professions students will demonstrate higher empathy levels based on the results of the researcher designed survey than the human services students. The researcher has rejected this hypothesis due to the results of the Kruskal-Wallis H test. The second hypothesis states health professions students will demonstrate lower or similar levels of empathy based on the results of the researcher designed survey when compared to human services students. The researcher also rejects this hypothesis, as there is no statistical significance between the two group's responses. This analysis also does not offer evidence of the responses between the two groups being similar.

Table 1

*Kruskal-Wallis Test Results Between Health Professions and Human Services Majors*

Statements	P-value
One	.366
Two	.811
Three	.349
Four	.280
Five	.239
Six	.647
Seven	.884
Eight	.528
Nine	.208
Ten	.357

*Note.* Significance level used is p-value of 0.05



## Chapter 5: Conclusion and Discussion

Empathy is an innate ability that most people possess in varying amounts and on a continuum. The study supports the hypothesis that people believe a good clinician is one that possess the ability to empathize. The study similarly supported the idea that people believe that good clinicians are empathetic and that this leads to better health outcomes based on the average responses in the survey. However, the literature review was not consistent in supporting empathy as being a skill that gives patients better health outcomes.

The findings in this study were unusual compared to what most organizations believe. However, it was positive to see that there was no significant difference in empathy between the human services and health professions groups. Further research will be needed to see if there are other factors that affect empathy that may have been overlooked in this study.

Health professions students and human services students have different career paths with different job duties, but both deal with human beings and their real-life issues. It was expected that health professions students would significantly rank their empathy much higher than human services students would. The survey was intended to see how students felt about empathy and to see what the participant's empathy level was. It also aimed to be quick and concise to improve participation. This design also planned to prevent falsification of answers as there were checks in place. For example, one of the statements was "without empathy a clinician's ability to care for a patient is limited" and another statement was "empathy is a necessary ability for a health care practitioner to provide care to a patient". This was intentional as to make sure participants' answers

were consistent. The survey did not ask students to self-identify if they were health profession students or a human services student, but rather asked what major or program they were enrolled in currently.

There are some explanations as to why the study concluded with the results it did. One such explanation is how the groups “health professions students” and “human services students” were created. A few majors could cross between the two groups. Social work students were one of the largest groups that did this due to the large response rate received in the study. The social work student can work in health care or they can work in a human service organization. It was decided that when a program could cross between both fields that it would be categorized as a human services program. Health professions programs were defined as career paths that led to employment in health care organizations delivering health care services with no other readily available option. Another field that was categorized into human services was the Master of health and human services program. While many students in this program will work in health care, many will also work in human services organizations as administrative staff. The program has tracks that can be completed by the student that can give additional training and education to work in other fields as well. This was a difficult decision to make as the results of the study could potentially have been different, for example, if social work had been categorized as a health profession and not a human services profession. Social work students are often viewed as empathetic by nature as they work with vulnerable populations. If social work had been moved into the health professions category it may have changed the results of the study to favor this group as being more empathetic.

Another criticism of the study is the survey. While it is valid and reliable, it was limited in the data it collected. The study could have benefited from a longer survey that captured more data. The use of a standard test such as the Jefferson Empathy Scale would have been favorable to the chosen survey. However, the length and cost of this type of survey tool was prohibitive. The researcher attempted to strike a balance between participation and the quality of the data that was collected. In retrospect, the author would have preferred to collect more data and a larger sample size.

Some future considerations should be made for further study on this topic. The topic of empathy and health care is extremely limited in research. More and more health care organizations are requiring some sort of empathy training. Studies in chapter two of this thesis discussed how empathy training can make a difference in participants' empathy levels. Training is expensive, time consuming, and because of this it would be in the best interest of the field to continue to explore this topic. Further exploration may help determine the most effective way of pursuing empathy training. Further studies may also indicate that empathy is an innate ability and that training cannot make it better. It would also be worth studying whether salaries of specific health or human service careers affect empathy levels. More information is also needed on whether more empathetic clinicians make better decisions when treating their patients. As health care finance delivery continues to remain controversial and a topic of discussion this will be even more important to discuss.

In conclusion, the study did not support the hypothesis that health care professions students have higher empathy levels when compared to human services students at Youngstown State University. It also did not support the hypothesis that

human services students would have equal or lower empathy levels than health professions students. In the future more in depth and larger studies are recommended to continue this important research.

## References

- Abrishami, D. (2018). The Need for Cultural Competency in Health Care. *Radiologic Technology*, 441-448.
- American Association for Respiratory Care. (2019). *Respiratory Therapy Degree Advancement*. Retrieved 2019, from American Association for Respiratory Care: [http://www.aarc.org/careers/respiratory\\_therapy\\_degree\\_advancement/](http://www.aarc.org/careers/respiratory_therapy_degree_advancement/)
- American Nursing Association. (n.d.). *What is nursing?* Retrieved 2019, from American Nursing Association: <https://www.nursingworld.org/practice-policy/workforce/what-is-nursing/>
- Bas-Sarmiento, P., Fernández-Gutiérrez, M., Baena-Baños, M., & Romero-Sánchez, J. M. (2017). Efficacy of empathy training in nursing students: A quasi-experimental study. *Nurse Education Today*, 59-65.
- Bayliss, A. J., & Strunk, V. A. (2015). Measurement of Empathy Changes During a Physical Therapist's Education and Beyond. *Journal of Physical Therapy Education*, 29(2), 6-12.
- Bjelica, A. (2019). Relevance of the Hippocratic Oath Today. *Medical Review*, 5-10.
- Commission on Accreditation for Respiratory Care. (2018, January 1). *Accreditation Standards for Entry into Respiratory Care Professional Practice*. Retrieved 2019, from CoARC: <https://www.coarc.com/CoARC/media/Documents/CoARC-Entry-Standards-1-1-18.pdf>
- Digby, R., Lee, S., & Williams, A. (2016). Nurse empathy and the care of people with dementia. *Australian Journal of Advanced Nursing*, 52-60.

- Gair, S. (2017). Pondering the Colour of Empathy: Social Work Students' Reasoning on Activism, Empathy and Racism. *British Journal of Social Work*, 162-180.
- GNU Project. (2019, April 10). PSPP for Mac OS Version 1.2.0-1. Boston, MA.
- Greck, M. d., Wang, G., Yang, X., Wang, X., Northoff, G., & Han, S. (2012). Neural substrates underlying intentional empathy. *Social Cognitive and Affective Neuroscience*, 135-144.
- Harmon, A., Landolfi, K., Shanks, C. B., Hansen, L., Iverson, L., & Anacker, M. (2017). Food Insecurity Experience: Building Empathy in Future Food and Nutrition Professionals. *Journal of Nutrition Education and Behavior*, 49(3), 218-227.
- Heyes, C. (2018). Empathy is not in our genes. *Neuroscience and Biobehavioral Reviews*, 499-507.
- Hojat, M. (2016). *Empathy in health professions education and patient care*. New York: Springer International. Retrieved 2019
- Horsley, K. (2010, October). Florence Nightingale. *Journal of Military and Veteran's Health*. Retrieved 2019
- Jones, D. M., & Miller, S. R. (2018). Effectiveness of an Educational Module on Dental Hygiene Students' Attitudes Towards Persons with Disabilities. *The Journal of Dental Hygiene*, 27-34.
- Keena, L., & Krieger-Sample, L. (2018). Empathy-Focused Learning: Teaching Criminal Justice Students to Care. *American Journal of Criminal Justice*, 389-410.
- Kerr, N., & Tegge, A. M. (2017). Levels of Empathy in Undergraduate Health-Care-Professions Students. *International Journal for Human Caring*, 41-45.

- Loerbroks, A., Glaser, J., Vu-Eickmann, P., & Angerer, P. (2017). Physician burnout, work engagement and the quality of patient care. *Occupational Medicine*, 356-362.
- National Association of Social Work. (2016, April 20). *NASW joins other mental health organizations to protest so-called "Religious Freedom" laws*. Retrieved from National Association of Social Work:  
<https://www.socialworkers.org/News/News-Releases/ID/96/NASW-joins-other-mental-health-organizations-to-protest-so-called-Religious-Freedom-laws>
- Nightingale, F. (1860). *Nursing Notes: What it is and What it is Not*. London: Harrison, 59, Pall Mall.
- Ogle, J., Bushnell, J. A., & Caputi, P. (2013). Empathy is related to clinical competence in medical care. *Medical Education*, 824-831.
- Oxburgh, G., & Ost, J. (2011). The Use and Efficacy of Empathy in Police Interviews with Suspects of Sexual Offences. *Journal of Investigative Psychology and Offender Profiling*, 178-188.
- Pennsylvania State Board of Nursing. (2019). *Pennsylvania Department of State*. Retrieved from Board Law and Regulations:  
<https://www.dos.pa.gov/ProfessionalLicensing/BoardsCommissions/Nursing/Pages/Board-Laws-and-Regulations.aspx#.VTAurP50xRA>
- Ratka, A. (2018). Empathy and the Development of Affective Skills. *American Journal of Pharmaceutical Education*, 1140-1143.
- Rizzolatti, G., Fadiga, L., Gallese, V., & Fogassi, L. (1996). Premotor cortex and the recognition of motor actions. *Cognitive Brain Research*, 131-141.

- Spraggins, E. F., Fox, E. A., & Carey, J. C. (1990). Empathy in clinical dietitians and dietetic interns. *Journal of the American Dietetic Association*, 244-.
- Svenaesus, F. (2015). The relationship between empathy and sympathy in good health care. *Medical Health Care and Philosophy*, 267-277.
- Terry, C., & Cain, J. (2016). The Emerging Issue of Digital Empathy. *American Journal of Pharmaceutical Education*, 1-3.
- Van Winkle, V. J., Schwartz, B. D., & Michels, N. (2017). A Model to Promote Public Health by Adding evidence-Based, empathy- enhancing Programs to All Undergraduate Health-care curricula. *Frontiers in Public Health*, 1-5.
- Wilkinson, H., Whittington, R., Perry, L., & Eames, C. (2017). Examining the relationship between burnout and empathy in healthcare professionals: A systematic review. *Elsevier*, 18-29.
- Youngstown State University. (2018, September 6). *Preliminary Enrollment Summary 14th Day Fall 2018*. Retrieved May 2019, from Youngstown State University: [https://ysu.edu/sites/default/files/institutional-research/9\\_11\\_18\\_update/ADAPreliminary%20Fall%202018.pdf](https://ysu.edu/sites/default/files/institutional-research/9_11_18_update/ADAPreliminary%20Fall%202018.pdf)
- Youngstown State University. (n.d.). *Criminal Justice Major*. Retrieved 2019, from Youngstown State University: <https://ysu.edu/academics/bitonte-college-health-and-human-services/criminal-justice-major>
- Youngstown State University. (n.d.). *Dental Hygiene Major*. Retrieved 2019, from Youngstown State University: <https://ysu.edu/academics/bitonte-college-health-and-human-services/dental-hygiene-major>



Youngstown State University. (n.d.). *Public Health Major*. Retrieved 2019, from

Youngstown State University: <https://ysu.edu/academics/bitonte-college-health-and-human-services/public-health-major>

Yuguero, O., Marsal, J. R., Buti, M., Esquerda, M., & Soler-González, J. (2017).

Descriptive study of association between quality of care and empathy and burnout in primary care. *BMC Medical Ethics*, 1-8.

## Appendix 1: Researcher Designed Survey

Responses to statements:

1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

Statements:

- 1) Empathy is a necessary ability for a healthcare practitioner to provide care to a patient.
- 2) Empathy is an ability that someone is born with and cannot develop.
- 3) Without empathy, a clinician's ability to care for a patient is limited.
- 4) Empathy is important for a healthcare provider to have when caring for a patient.
- 5) Empathy directly affects health outcomes.
- 6) I have the ability to empathize with patients.
- 7) When reading or watching a book or movie I find myself trying to feel how the characters are feeling.
- 8) When a patient or friend is feeling upset, I try to remember a time when I was upset as well.
- 9) I try to see things from others' points of view.
- 10) When I disagree with somebody it is difficult for me to see their point of view

## **Appendix 2: Institutional Research Board Approval**

Dear Investigators,

Thank you for the updates. Your protocol entitled Empathy Levels in Undergraduate Health Professions Students has been reviewed and is deemed to meet the criteria of an exempt protocol category #3. You will be collecting data including basic demographic information and responses to an empathy scale from unidentified adult participants.

The research project meets the exempt definition of 45 CFR 46.101(b)(2) and is therefore approved. You may begin the investigation immediately. Please note that it is the responsibility of the principal investigator to report immediately to the YSU IRB any deviations from the protocol and/or any adverse events that occur. Please reference your protocol number 077-19 in all correspondence about the research associated with this protocol.

Good luck on your project. This is an interesting one!

Dr. Karen H. Larwin