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Empathy Training to Combat Provider Burnout in Geriatric Healthcare

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EMPATHY TRAINING TO COMBAT PROVIDER BURNOUT IN GERIATRIC

HEALTHCARE

by

Heather Block

A Thesis Submitted in Partial Fulfillment

Of the Requirements for the

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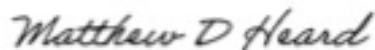The University of South Dakota

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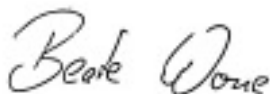
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ABSTRACT

Empathy Training to Combat Provider Burnout in Geriatric Healthcare

Heather Block

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The correlation between provider empathy and the quality of patient care is strong (Hojat, 2016). Provider bias, whether conscious or unconscious, can be detrimental for patients, particularly for vulnerable geriatric populations. This population is especially vulnerable due to the ailments that often accompany age such as diabetic neuropathy, glaucoma, hearing loss, tinnitus, cataracts, retinitis pigmentosa, and illnesses that affect mobility. The Aging Awareness Activity was created to help future healthcare providers understand the difficulties facing the geriatric population. Using hands-on tools to simulate hearing, visual, dexterity, and movement impairments allows for participants to practice activities of daily living with impairment like how a significantly aged adult would. Over 250 healthcare professional students were surveyed before and after completing the Aging Awareness Activity to determine if our activity increased empathy towards the aging population. The results of this survey concluded that this activity heightened awareness and helped introduce or reinforce the knowledge of geriatric struggles. The hope is that providing this type of hands-on experience will increase empathy towards the geriatric population and thus maintain or increase the quality of care for this vulnerable population by educating future healthcare providers.

KEYWORDS: Empathy, Burnout, Healthcare, Quality of Care, Healthcare Team, Occupational Stress

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Literature Review Introduction

Provider empathy is strongly correlated to the quality of care given to patients (Hojat, 2016). Good quality patient care is essential to favorable patient outcomes and patient satisfaction (Wang, Kline, Jackson, Laureano-Phillips, Robinson, Cowden, Arze, & Zenarosa, 2018). Certain groups of people, such as the geriatric population are particularly medically vulnerable. The Aging Awareness Activity has been created to help future healthcare providers understand the difficulties facing the geriatric population. This activity uses hands-on tools to simulate hearing, visual, dexterity, and movement impairments which allows for participants to build empathy for geriatric individuals. Over 250 South Dakota healthcare professional students were surveyed before and after completing the Aging Awareness Activity to determine if the activity increases empathy towards the aging population. The result of this survey concludes that this activity heightened awareness and helped introduce or reinforce knowledge of geriatric struggles. We hope that this type of experience will educate future healthcare professionals and increase empathy towards the geriatric population thus maintaining or increasing patient care quality.

As an introduction to this literature review on empathy levels, provider burnout categories, and how changes in these aspects can affect patients I would like to begin the discourse by stating that most studies are focused on doctors, surgeons, or other advanced care providers. Although this gives us insight into the empathy behavior and patterns of these providers it leaves large gaps in a healthcare team. These healthcare teams usually consist of an advanced care provider, a team of nurses, therapists (OT, PT, SLP, etc.), social workers, clerical staff, environmental staff, administrators, and many others. It is

essential to know the empathy characteristics and patterns of this whole team to truly understand the effects on patient care.

Chapter One: Empathy

The concepts of empathy are defined differently, which results in merely an understanding of the cognitive characteristics and actions of people and then knowing that these reactions come from a concept called "empathy". Empathy is multidimensional and involves components of emotions, morals, thoughts, and actions. Without all of these components, it is hard to have a full understanding or be able to be empathetic. Some of the common cognitive thoughts and behaviors of an empathetic person are:

- understanding past, present, and future inner emotions, perspectives, and behaviors without having to be told,
- acknowledging that you as a provider have an understanding of the patient's emotions perspectives and behaviors, and
- reacting in a positive way to help aid your patient (Haslam, 2007, p. 1792)

According to Professor Mohammadreza Hojat, a Research Professor in the Department of Psychiatry and Human Behavior and Director of the Jefferson Longitudinal Study at the Center at Thomas Jefferson University suggests, "empathy is a predominantly 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" (2007, p. 80). This distinguishes empathy from sympathy which according to Dr. Hojat is the "affective or emotional attribute that

involves intense feelings of a patient's pain and suffering" (2007, p. 80). These concepts might not be mutually exclusive, but they are different enough that it is important to keep them separated and for this thesis focus on empathy. The Merriam-Webster Dictionary adds an interesting point to the definition of empathy stating that it is understanding another person's thoughts and feelings without, "having the feelings, thoughts, and experience fully communicated in an objectively explicit manner" (2021). Patients often rely on a provider's competence to understand their circumstances, feelings, and perspective without telling them directly. It is up to the provider to gain a basic understanding of the patient's experience in the brief clinical interactions between them. Being empathetic is a trait that can be practiced with thoughts, emotions, and behaviors. Such behaviors include actively listening, identifying past, present, and future concerns of others, and letting the patient know that you understand them (Paro, Silveira, Perotta, Gannam, Enns, Giaxa, Bonito, Martins, & Tempski, 2014). This skill can be reinforced by learning how to read a patient and/or their family's body language and tone to glean nonverbal cues that may indicate more about a patient's emotions than any words they are using (Rawal, Strahlendorf & Nimmon, 2020).

An additional facet used in many definitions of empathy includes the patient's perspective. The definition adds that the patient must get the feeling that the provider understands them to give the most accurate medical history or to be open to frank conversations regarding comfort levels and treatment plans. According to Katsari, Tyritidou, and Domeyer, it is the provider's responsibility to "communicate this acknowledgment to the patient" (2020). Definitions drawn from dictionaries, research articles, and other sources are similar with an interesting discrepancy with one study's

definition from medical students states that they emphasized that empathy involved putting yourself in your patient and their families' shoes to "gain a better understanding of the patient in their own context" (Rawal, Strahlendorf, & Nimmon, 2020). It also highlighted that empathy involves a patient's feelings and quality of life in the past, present, and future (Rawal, et al., 2020). For example, a person who feels connected to a patient because they have gone through a similar experience but do not act on it in any way does not portray the most effective use of empathy regarding patient care. It is not enough to have the thoughts that someone should do something for the patient but that you are personally impacted by the connection you feel and thus react in a way that positively affects the patient.

Increased patient quality of care is the primary goal of many providers, administrators, and humanitarians. As a researcher, I hope to use empathy as a way to increase patient quality of care. I found significant research that states, "empathy [is] considered a prerequisite for a successful physician-patient relationship, an integral part of high-quality patient-centered healthcare and is regarded as probably the most robust evidence of the humanitarian side of medicine" (Katsari, Tyritidou, & Domeyer, 2020).

It is a requirement in humanity to feel a connection towards other living beings thus, empathy is extremely important for both patients and providers in the healthcare setting. It affects each individual and the connections between us all. This literature review will establish why empathy is important for both patients and providers, starting with physicians. In a study by Katsari, Tyritidou, & Domeyer it was found that empathetic physicians had higher levels of well-being, higher clinical skill ratings, have a decreased risk of medical malpractice, and suffer from lower levels of burnout (2020). In

a future chapter, we will discuss the relationship between provider burnout and empathy. Provider empathy is also said to improve self-reported quality of life (Rawal, et al., 2020).

Studies suggest that there are various positive aspects to increased provider empathy such as patient satisfaction, patient outcomes, clinical diagnosis accuracy, and tendencies to follow through with the treatment plan made by their healthcare team (Rawal, et al., 2020) (Katsari, et al., 2020). In the specific instance of providers helping diabetic patients manage their chronic condition, it was found that higher provider empathy scores were correlated to controlled hemoglobin A1c levels at a rate of 56% compared to physicians with low empathy scores which had a rate of 40% controlled patient hemoglobin A1c levels (Hojat, et al., 2011). Many of these reactions are correlated to effective communication between the patient and provider. Increasing provider empathy is also tied to decreased patient anxiety, stress, and pain. As expected, a decrease in provider empathy can decrease medical professionalism and lead to decreased healthcare outcomes (Ferreira, Afonso & Ramos, 2019).

Professor Dr. Hojat argues that an empathetic patient-provider relationship in the medical setting can "contribute to earlier and more accurate diagnosis, better treatment adherence, and greater patient satisfaction" (Haslam, 2007). According to Cánovas, Carrascosa, García, Fernández, Calvo, Monsalve, & Soriano found in the Journal of *Pain Medicine,* many factors indicate a patient's resilience to difficult conditions such as chronic pain and one of the important social factors that can influence this resilience is a physicians' empathy towards them (Cánovas, et al., 2017). There is an established relationship between physician's empathy and patients' healthcare outcomes according to

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researchers in Spanish Pain Clinics and others at California Universities (Cánovas, et al., 2017) (Hojat, 2007).

Resident medical students indicate a belief that empathy can have a "positive effect on physician-patient communication" and trust (Rawal, Strahlendorf, & Nimmon, 2020) (Ferreira, Afonso, & Ramos, 2019). As mentioned in the first chapter, it is also important for the patient to know that their provider is empathetic towards them to build patient-provider trust. To gather a truly comprehensive patient history and perform a quality evaluation patient-provider trust must be established. The patient may feel more comfortable questioning and participating in a treatment plan that gives the patient more autonomy than they often desire in their own care. When a patient feels understood by their provider, they are more likely to bring up hard or uncomfortable topics, and concerns that they may have regarding their treatment. One hypothesis is that this recognition is the main contributor to increased patient satisfaction and patient compliance to their healthcare plan, which in turn often leads to increased patient outcomes. A patient is less likely to take advice from a provider they do not trust or a provider who they perceive as not caring about their everyday life. In a study conducted by Dr. Hojat and his team at Jefferson Medical College, they noted that 52% of the variance in self-reported patient surveys regarding their medical care was affected by provider "interpersonal warmth and respect" (Hojat, Louis, Markham, Wender, Rabinowitz & Gonnella, 2011).

Empathy is a complex and seemingly subjective facet of life, but like many other topics, researchers have worked to create systems to evaluate it quantitatively. One psychometric tool used by researchers to measure empathy is called the Jefferson Scale

of Empathy. This popular test measures empathy in the context of patient care and is rated on a scale of 1-7. An answer of 1 indicates strong disagreement and an answer of 7 indicates strong agreement. This spectrum allows for researchers to quantitatively measure provider empathy (Ferreira, et al., 2019). Many peer-reviewed articles use the Jefferson Scale of Empathy (JSPE) as a standard for this type of measurement. It has been tested many times with reinforcement coming from articles such as (Glaser, Markham, Adler, McManus, & Hojat, 2007).

Levels of empathy are subjective. This is shown by some studies that described physicians' perceptions of their empathy levels compared to their patient's perception of the physicians' empathy level. The results were very different. Often physicians who rank themselves as less empathetic are perceived by their patients as being more empathetic. This same study found that empathy and humility seem to be connected thus displaying a potential answer to this trend. More humble physicians underestimate their empathetic capabilities, whereas other providers may overestimate their abilities according to their patients. A physician's self-reported JSPE is inversely associated with patient perceptions (Katsari, et al., 2020)

Using self-reported surveys or surveys of patient perceptions can be used to study provider empathy. An article by Katsari, Tyritidou, & Domeyer concluded that "patient quality of life seemed the only predictor of patient perception of physician empathy" (2020). It is otherwise hard to determine how a patient sees their provider as an outsider to the patient-provider relationship.

Chapter Two: Burnout

Increases in burnout can be directly correlated with decreased capacity to express empathy. A study by Ferreira, Afonso, & Ramos indicated that higher levels of burnout often express themselves as lower self-reported empathy scores for physicians (2019, p. 216). Burnout is defined as an individual's response to chronic emotional and interpersonal stress in the work environment (Maslach, Schaufeli., & Leiter, 2001) (Paro, et al. 2014).

Burnout is a real problem that effects many people but is especially prevalent in the medical field. Compared to the general United States population with an instance of 27.8% of people being occupationally burnt out, physicians have a higher percentage with a 37.9% burnout rate (Shanafelt T., Boone S., Tan L., Dyrbye L., Sotile W., Satele D., West C., Sloan J., Oreskovich M., 2012). Between 2011 and 2014 burnout and work-life balance for physicians working in the United States has become worse; so much that over half are experiencing professional burnout (Shanafelt, Hasan, Dyrbye, Sinsky, Satele, Sloan, & West, 2015). It is important to note that this source collects data before the Covid-19 global pandemic therefore it can be anticipated that burnout rates have increased significantly. It was found that although many people in the world suffer from chronic stress and subsequent mental health problems there is no significant difference between healthcare providers and the general population in terms of depression or suicidal ideation which suggests that physician's distress is usually a factor of chronic occupational stress instead of personal stressors although the two can mix (Shanafelt, et al. 2012). Burnout can significantly decrease a provider's quality of life and satisfaction with their job. Compared to the general United States population with only 23.1%, 40.1% of physicians do not think their work left enough time for their personal/ family life

(Shanafelt, et al. 2012). This trend is equal across gender for the general population, but female providers were slightly more dissatisfied with their work-life balance than their male counterparts 43.1% to 38.9% respectfully (Shanafelt, et al. 2012).

Amongst mental health professionals, the burnout rate is reported to be as high as 67% (Wood, Prins, Bush, Hsia, Bourn, Earley, Walser, & Ruzek, 2017). In mental health professionals it is associated with increased instances of depression, anxiety, sleep disorder, physical health impairments, increased substance abuse, and impaired memory (Wood, et al., 2017). Physicians are also at high risk for occupational stress and can have negative outcomes such as anxiety, depression, burnout, relationship problems, suicidal ideation, and substance abuse (Celik, Aslan, Coskun, Coban, Haner, Kart, Skajk, Kocer, Ozkan, & Akyol, 2021). It can also affect a physician's work performance and create high provider turnover (Celik, et al., 2021). According to "A multi-institutional study exploring the impact of positive mental health on medical students' professionalism in an era of high burnout." and "relationship between burnout and professional conduct and attitudes among US medical students.", medical students with higher levels of burnout may have less altruistic professional values. They also are more likely to be involved in unprofessional behaviors (Paro, et al. 2014).

Occupational burnout can have drastic effects on an individual, but it can also affect a healthcare system as a whole. As shown above, an increase in burnout may lead to decreased productivity, efficiency, more malpractice, and more turnover. Each of these is an expensive and time-consuming problem that a healthcare system must deal with. Especially in a time like the year 2020, when a major stressor such as the global Covid-19 pandemic has put a strain on all healthcare professionals, it is difficult for an

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administrative team to manage factors such as heavy caseloads, short staffing, and ever-changing occupational requirements that can increase provider burnout. In a study of ICU units, there was an instance of 23% of ICU professionals showing symptoms of burnout in October-December of 2019 and during the follow-up survey in May-June of 2020, the instance was much higher at 36.1% (Kok, Van Gurp, Terrenstra, Van Der Hoeven, Fuchs, Hodedemaekers, & Zegers, 2021). Even in a normal year, training takes time and healthcare professionals are notoriously stretched thin as it is (Torres, Atalaya, García-Compayo, Roldán-Villalobos, Magallón-Botaya, Bartolomé-Moreno, Moreno-Martos, Melús-Palazón, Liétor-Villajos, Valverde-Bolívar, Hachem-Salas, Rodríguez, Navarro-Gil, Epstein, Cabezón-Crespo, & Moreno, 2019).

Burnout is multidimensional and affects many parts of an individual and the healthcare system. When seen at high levels in a healthcare system it is very hard to fix but better results can be seen at the individual level with hard work and time (Celik, et al., 2021). Being system-wide makes it much harder to solve the problem because it is not something an individual or administration can change overnight and affects every part of the system and its patients.

Burnout can also have negative effects on patient care because doctors who are at a higher state of occupational burnout have a weaker relationship with their patients (Ferreira, et al., 2019, p.218). Burnout harms a provider's mental and physical health, reducing their quality of life which also reduces the quality of interactions they have with their patients and healthcare team (Celik, et al., 2021). Providers who are more burnt out are more likely to be caught up in their own mental health issues, retraining, or malpractice on top of their normal duties to have enough time and physical/mental energy

to commit to their patients (Tawfik, Scheid, Profit, Shanafelt, Trockel, Adair, Sexton, & Ioannidis, 2019). Some providers may have lost confidence in their abilities and thus take unnecessary risks or do not recognize the consequences of their actions which is a clear sign of apathy (Tawfik, et al., 2019). They may pay less attention to details of history or assessment as they focus more of their remaining energy on other matters. This is detrimental to patient care as details are often the key to solving patient medical problems and building a good quality patient-provider relationship (Tawfik, et al., 2019). In a more cynical light, less attention to detail can lead to an increase in medical errors which can be very dangerous for patients (Celik, et al., 2021). In the case of burnt-out mental health, providers may be less invested in their patients resulting in lower patient satisfaction, poorer outcomes, and even increased rates of hospitalization (Wood, et al., 2017). This hurts the patient's mental, physical, emotional, and financial health, not to mention the stress it may put on their family or otherwise overwhelmed mental health facilities.

According to Tawfik, Scheid, Profit, Shanafelt, Trockel, Adair, Sexton, & Ioannidis, the effect provider burnout has on patients should be taken in knowing that there have been some studies in this area, but their objective quality measures and sample sizes leave something to be desired (2019). Due to the nature of healthcare systems, it is easiest to measure burnout factors and levels in individual providers which is very time-consuming and expensive thus sample sizes are often small. Because of their smaller sample size, the qualitative examples and accuracy of the data can be better preserved but bias can have a larger impact on the precision of the findings. For example, recall bias may increase the level of burnout indicated by tests because as we have mentioned

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burnout often has very negative side effects, and thus people are more likely to remember it than a different stable situation (Tawfik, et al., 2019).

We cannot yet decisively conclude whether reducing provider burnout increases the quality of patient care or if quality patient care reduces burnout (Tawfik, et al., 2019). This area will require more randomized trials with larger sample sizes to confirm the direction, but the relationship is clear although not necessarily in the correct chronological order of cause and effect. Assuming the two factors, patient quality of care and provider burnout would be correlated and directly changing one would indirectly affect the other can perpetuate the cycle of provider and patient distress.

The Maslach Burnout Inventory (MBI) scale is one of the best ways to assess occupational stress called the gold standard by some (Ferreira, et al., 2019). The measurement of burnout is categorized into three subcategories: emotional exhaustion (EE), cynicism or depersonalization (DP), and a low sense of personal accomplishment at work (Paro, et al. 2014) (Wood, et al., 2017). Emotional exhaustion is described as the feeling of being "emotionally overextended and exhausted by one's work" (Paro, et al. 2014). High levels of cynicism are akin to having a bleak perspective on how the world is working. Depersonalization is the state of mind where a person feels impersonal towards someone and is numbed in a way that makes it more difficult to respond or act (Paro, et al. 2014). A low sense of personal accomplishment is tied with feelings of being unfulfilled and lacking knowledge of your work. Severe burnout is classified by having a high EE and DP and feelings of low personal accomplishment at work (Celik, et al., 2021). The responses are recorded on a 7-point Likert-type scale from never to every

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day. A higher score in each of the first two subsections and a low score in the last section indicates more severe burnout (Ferreira, et al., 2019). Lower scores on the personal accomplishment at the work section were tied to a higher burnout symptom burden (Brady, Ni, Sheldrick, Trockel, Shanafelt, Rowe, Schneider, Kazis, 2020). The personal accomplishment section is inversely created to be most accurate in measuring levels of burnout.

Although it is important for patients, excessive empathy can also lead to feelings of emotional distress and burnout especially in healthcare providers (Ekman & Halpern, 2015). Compared to the general United States population physicians were at higher risk for emotional exhaustion 32.1% compared to 23.5% and a higher risk of depersonalization 19.4% compared to 15.0%. They also had an overall burnout rate of 37.9% compared to 27.8% for the general population (Shanafelt, et al. 2012).

Chapter Three: Factors Leading to Provider Burnout

Occupational stress exists on a continuum that includes burnout which is the term used when all three subcategories are high, overextended persons who report high emotional exhaustion but remain low in the other two categories, engagement which describes a person low in all three subunits and other statuses found between the two extremes (Maslach & Leiter, 2016). Apathy which is the lack of empathy towards patients and colleagues is a common symptom of provider burnout (Nicola, McNeeley & Bhargava, 2015). Although more longitudinal studies need to be done in this area most suggest that interventions can make a small but significant difference to providers who are experiencing symptoms of burnout (Stehman, Clark, Purpura & Kellogg, 2020).

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Factors that lead to burnout in healthcare providers include excessive workload, decreased autonomy, lack of perceived managerial support can increase provider burnout (Torres, et al., 2019). Recent studies have also found the complexity and sometimes unreliable nature of electronic health records can be a leading source of provider burnout (Baker Stokes, Kanwar, Jain, Adapa, Meltzer-Brody & Mazur, 2021). Inefficiency due to excessive administrative burdens and difficulty integrating personal and professional life can lead to a decline in a provider's sense of meaning in their work (Shanafelt, et al. 2012). This can lead to decreased work satisfaction which often manifests with symptoms of burnout.

A study by Apaydin, Rose, Meredith, McClean, Dresselhaus, & Stockdale from the *Journal of Internal Medicine* indicated the association between a specific VA Patient-Centered Medical Home model and a provider's likelihood of staying in practice at this facility indicating little to no individual burnout. Some traits that can predict increased provider burnout are difficulties with components of PCMH (primary care medical hospital) a patient-centered VA facility such as coordinating with specialists, responding to HER (electronic health records) alerts or managing unplanned visits, and demographic characteristics (Apaydin, Rose, Meredith, McClean, Dresselhaus, & Stockdale, 2020). A remedy that was tried by Selvam, Furqan, York, Vaidya, Hoang, Trost, Williams, Chandra, & Zakaria, 2018 in the *Journal of Evaluation in Clinical Practice* studies was adjusting the frequency of attending physicians handing patients off to the next provider. The study found that too many of these transitions could lead to delays in care while one provider is caught up on the patient's condition/ history whereas too few handoffs could lead to provider burnout (2018).

Of those surveyed by Apaydin, et al., 40% reported high emotional exhaustion scores placing them in the burnout category, and 63% intended to stay at that facility for at least the next two years. By staying at this facility, the researcher can conclude that the levels of burnout are not unmanageable or that the individuals do not have anywhere else to go which is unlikely considering they are primary care providers. Providers who reported high levels of emotional exhaustion were 87% less likely to remain in VA primary care (Apaydin, et al., 2020). This statistic seems to contradict a previous statement and seems to say that more people intend to stay at that VA facility for the next two years than people who intend on staying in VA primary care. This can be a result of facility contract incentives for years worked, financial circumstances of providers, and or age/ relationship status which are all factors in increased burnout. In a scenario where burnout is common and turnover could be high, facilities might provide an incentive for recent grads to come work at their facility for a certain amount of time to gain loan forgiveness or other incentives. As this new hypothetical provider becomes burnt out, they are more likely to switch to a new specialty or location as soon as possible to decrease their occupational stress. Facilities such as this specific VA try to reduce emotional exhaustion and turnover by providing additional support and training which is expensive and time-consuming (Apaydin, et al., 2020).

Demographic attributes associated with a lower risk for burnout are being older (over 35-40+), being married, having children, and having a specific hobby (Shanafelt, et al. 2012). Some demographic characteristics associated with a higher risk for burnout measured by high EE (emotional exhaustion) and DP (depersonalization) include being younger than 40 years old, being childless, sleeping less than 7 hours a night, being

female, not having a specific hobby, working more than 60+ hours a week, being a specialist, working in a state or training and research hospital compared to a private hospital, and no social life outside of work (Celik, et al., 2021). Lower personal accomplishment at work is associated with all the above factors except the number of hours worked and slept. Surgeons working more than 60+ hours a week had 1.5 times higher risk of burnout compared to surgeons working less than 60 hours a week. No social activity at least once a week is shown to increase the likelihood of burnout by 3.6 times. Higher burnout levels are found in specialists compared to generalist physicians. Private hospitals are the facility type with the least risk of burnout (Celik, et al., 2021). Variables that are independently associated with increased provider burnout are more nights on call, billing-based compensation vs a salary, and a partner/spouse that works as a non-physician healthcare provider (Celik, et al., 2021). Some studies indicate that being married reduces the risk of burnout (Shanafelt, et al. 2012) where others do not show any association (Celik, et al., 2021) or even a negative association. A study found that surgeons with severe burnout tend to be very young and likely to be married or have a steady partner (Celik, et al., 2021).

Within the medical field, certain practices are much more likely to be burnt out. These specialties often include the physicians at the front line of care such as family medicine, general internal medicine, and emergency medicine (Shanafelt, et al. 2012). General surgeons were found to have very high rates of burnout with 75.5% of the study's sample having at least one significant result in a subset of the MBI scale with 22% displaying severe burnout (Celik, et al., 2021).

Neurology was also found to have a higher risk whereas pathology, dermatology, general pediatrics, and preventative medicines had the lowest instances of burnout (Shanafelt, et al. 2012). This trend also correlated to physician work-life balance satisfaction with those specializing in dermatology, general pediatrics, and preventative compared to those in family medicine, general internal medicine, emergency medicine, and obstetrics/gynecology having lower job satisfaction (Shanafelt, et al. 2012).

For mental health professionals' large caseloads, an overabundance of work, lack of control, organizational bureaucracy and politics, and time-consuming administrative requirements are all factors that lead to increased levels of burnout (Wood, et al., 2017). Other healthcare workers are also more likely to develop occupational burnout due to high patient volumes, long hours, chronic exposure to human suffering, poor social support, life or death situations/decision making, and often poor work-life balance (Celik, et al., 2021) (Shanafelt, et al. 2012). Many providers suffer from secondary traumas which occur when a provider is exposed to adverse patient events such as suffering and death, recognition of poor patient care given out of that provider's scope of practice or department, and/or many minor instances with a cumulative effect (Tawfik, et al., 2019). Physicians also work a median of 10 more hours per week compared to the general United States population (Shanafelt, et al. 2012).

An interesting relationship exists between the highest level of education achieved and burnout risk. For example, people who graduated college with a bachelor's, master's, or non-physician professional or doctoral degree had a lower risk of burnout compared to high school graduates. On the other hand, physicians (Medical Doctor and DOs) had an

increased risk for burnout (Shanafelt, et al. 2012). Outside of the medical field, a more advanced career often indicates less occupational stress but within the medical field often the opposite is true (Shanafelt, et al. 2012).

In comparison with medical residents and specialists, residents were shown to have higher scores indicating burnout (Ferreira, et al., 2019). This may be because medical residents work more hours on average with less experience and are often younger than their specialist counterparts (Ferreira, et al., 2019, p. 218). Even so, specialists who work more hours compared to their colleagues are more likely to be burned out (Ferreira, et al., 2019). In this same study, specialists were also found to have higher empathic capabilities and less burnout regardless of gender (Ferreira, et al., 2019).

Medical students are not left out of this phenomenon and are at high risk of burnout during all years of their education (Paro, et al. 2014). They are usually young and although early in their careers they are often transitioning from didactic student to clinical experiences which decreases confidence and increases stress (Rawal, et al., 2020). New environments can increase stress especially in the medical setting where stakes are high. In the clinical rotation portion of their training, medical students are exposed to the same traumatic events that providers are but without the years of experience, coping mechanisms, and pure exposure to handling these experiences in a healthy concise way. Third and fourth-year medical students are more likely to have high emotional exhaustion, depersonalization, and thus be burnout which correlates with the transition from didactic to clinical rotations for many medical programs. Another risk factor for increased burnout in medical school upperclassmen resident cynicism (Rawal,

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et al., 2020). Medical student's negative perception of their quality of life and excessive burnout can lead them to direct their energy inwards instead of using what energy they have left to help others (Rawal, et al., 2020). In a sort of animalistic way, this makes sense using the oxygen mask on an airplane scenario when in the case of an emergency you are instructed to always put on your oxygen mask first before helping anyone with theirs. It is a form of self-preservation and in some cases also the best reaction to help aid others in the long run.

Several demographic differences can leave medical students with a predisposition to experience occupational or academic burnout. Some examples by Paro, et al. include female students reporting lower physical and psychological quality of life, higher emotional exhaustion, and lower depersonalization than their male counterparts (Paro, et al. 2014). In the last years of medical training, students are found to have high levels of emotional exhaustion and depersonalization. As stated previously increased depersonalization is a strong indicator of burnout and lower empathetic concern (Paro, et al. 2014).

Nursing, dental, and other medical subspecialties are also affected by academic and occupational burnout. As years of education/training increased, levels of empathy decreased for these students as well (Lashgari, Vaghee, Moonaghi, & Vashani, 2018). Many demographic, social, and environmental factors can lead to an increased risk of burnout. Providers from every discipline and level of schooling are at risk of experiencing burnout symptoms. As stated in Chapter Two, occupational and academic stress if left unmanaged can have very detrimental effects on both patients and providers.

It is important to create a healthy occupational environment that encourages the practice of empathy.

Barriers to Empathy

Barriers to empathy are a lack of personal experience, knowledge, and/or a person's way of protecting themselves from the trauma that comes with working in healthcare. Certain providers, residents, and medical students may need to take a mental step back from their patients to preserve their own ability to function and help the next patient. It is hard to see people suffer even strangers, so some residents depersonalize them to decrease their own vulnerability (Rawal, et al., 2020). Young medical residents describe some of the barriers that occur to practicing empathy daily which include heavy workloads, relative inexperience, and academic strain of learning. Inversely older residents notice an increase in their empathy at work and attribute it to a more complete understanding of the field practically and academically (Rawal, et al., 2020).

Another more drastic strain on an individual resident practicing with maximum empathy is the environment that they are in may not be conducive to taking the extra time or energy to show empathy for patients (Rawal, et al., 2020). This may come from the workplace atmosphere or could be as simple as administrative deadlines/quotas. This type of guidelines allows for an organization to dehumanize medicine and run more like a cold corporate business than a humanitarian one.

Traits of Resilience

Many factors can indicate how a person will react to occupational stress. These factors are individual to each person and can include previous adverse experiences, current coping strategies. Other factors include the culture of the workplace including the organization's outlook on mental health and the stigma that surrounds it. If a workplace does not acknowledge their provider's psychological issues it can greatly decrease that provider's resilience (Venegas, Nkangu, Duffy, Fergusson, & Spilg, 2019). Some specializations seem to be notorious for recruiting empathetic people. An example is pediatrics which specializes in caring for infants, children, and adolescents (Rawal, et al., 2020). Empathy for patients is important in all healthcare settings regarding face-to-face interaction and those behind the scenes who may have a much less direct patient interaction such as lab technicians and sanitary services. All of these services affect patients as their actions have a direct effect on the patient down the line. For example, if a medical laboratory technician inadequately practices empathy, they may not pay as much attention to test results or get them to the provider/patient/families promptly. On the other hand, a laboratory technician who never directly sees patients but diligently does their job accurately and efficiently completes their labs will have shown that patients, their families, and the provider empathy but understanding that these tests are important and deserve the respect to do them well. They also understand that it matters to the provider and patient how quickly these results are produced. An organization's expectation of their employee's workload and hours can also indicate the resilience of their employees (Venegas, et al., 2019). A study by Paro, Silveira, Perotta, Gannam, Enns, Giaxa, Bonito, Martins, & Tempski states that some people may be innately more empathetic than others

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(2014). It goes on to explain as I have in previous chapters that empathy is a complex and multidimensional practice/art. It acknowledges that some of the factors that influence a person's ability to give empathetic care can come from their own life experiences (Paro, et al. 2014). These experiences could be in or outside of the academic setting, but they are just as influential. According to Paro, female medical students have a higher disposition to "empathetic concern" and have more personal distress compared to male medical students (2014). Another study concurs with the research done by Paro and his team, stating that female practitioners express empathy more effectively to patients than their male counterparts (Katsari, et al., 2020). Other factors that can predict if a person is more or less likely to have healthy empathy levels are gender, marital status (Married women are more likely to be empathetic than single women), duration of employment, and quality of life (Katsari, et al., 2020).

The trend explained in chapter one is that as a medical resident learns and experiences more from their time as a young resident to a senior resident, they become more empathetic. Maintaining this level of empathy throughout a person's career can be challenging. Factors such as compassion fatigue, burnout with poor coping skills, time constraints, and any hidden administrative curriculum can make empathy hard to preserve (Rawal, et al., 2020). Residents who advocated for themselves gaining more autonomy and exposure to chronic care which usually improves patient-provider relationships and gives the provider a brief glimpse into the patient's world allows for the provider to have greater empathy. According to Rawal and his team of researcher's empathy often ebbs and flows but being able to maintain a steady level can be called resilience and is often borne out of personal adversity (2020). Like most things in life, empathy is practiced on a

spectrum. Conditions of care can range from genuine care to apathy which can create varying levels of patient satisfaction.

Chapter Four: Limitations to Literature Review

A limitation to this literature review is that often the surveys that are used to collect data for research studies are sent to providers online via email or other forms. The statistics in chapter three show that younger providers are more at risk to experience burnout but as studies do not often control for the age of participating recipients this could partly be due to self-reported measures that young people are more likely to fill out. There has been a movement towards destigmatizing mental health in recent decades that has a large effect on younger providers. Growing up in this environment may make these young residents/providers more willing to accurately suggest that they are having struggles with mental health in the workplace compared to their more traditional colleagues. Another limitation is that although there are very strong correlations between increased empathy and decreased burnout, we cannot say for certain that they are a direct result of the other. This difference may be due to the limited sample size of many of the studies implying a correlation between provider burnout and decreased quality of care. This discrepancy may over-project the effect of decreased patient care quality.

Methods

The Aging Awareness Activity was designed to increase provider empathy by providing a hands-on simulation of common ailments that affect the geriatric population. It was created by members of the University of South Dakota's Healthcare Executives

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Advancing in Leadership (H.E.A.L) organization. The H.E.A.L. organization is a component of the national organization Congress on Healthcare Leadership. Dr. Carole South-Winter is the advisor for the University of South Dakota (USD) HEAL Organization. She has been a vital part of developing, pitching, networking, and organizing our team's efforts to educate the next generation of healthcare professionals and administrators. To increase provider empathy, we directed our intervention efforts towards professional healthcare students attending the Emergency and Disaster Training Event at the University of South Dakota including Medical Students, Physician Assistant, Dental Hygiene, Nursing, Clinical Psychology, and other students.

The 2020 Emergency and Disaster Training Event was held at the University of South Dakota's Lee Medical School Building on February 28th, 2020. The event ran from 7:30 am - 5 pm and included almost 300 students. It was created to prepare future healthcare professionals in South Dakota to help their communities in the case of a disaster or mass emergency. Stations were spread throughout the Lee Medical School building with rotating groups of Nursing, Medical, Physician Assistant, Dental Hygiene, Clinical Psychology, Pharmacy, Health Science, Medical Laboratory Science, Physical and Occupational Therapy along with other professional healthcare students going through a cycle of stations. These stations were designed to teach students a wide variety of emergency responses and other interprofessional skills. Students in groups of 2-4 were placed at Aging Activity stations around a classroom guided by members of the H.E.A.L. club as they went through each station. Each station lasted around 3 minutes and included impairments such as simulations of ailments that interfere with normal sight, hearing, mobility, dexterity, memory, pain, and others.

The stations included six sections that simulated ailments affecting vision, hearing, mobility, dexterity, memory, pain and simulated how these ailments could be debilitating and isolating for elderly individuals. Some stations included multiple ailments while others only simulated one ailment at a time.

At the first station, participants use Ace wrap around their knees and patent-pending shoes which simulated the painful "pins and needles" feeling of diabetic neuropathy. The Ace wrap represents arthritis of the knees and both ailments affect mobility. Paired with participants being asked to step over 12-inch obstacles one participant described the experience as helping them "understand[ing] the pain someone with certain conditions may face every day".

The next station focused on visual impairments with the participants using glaucoma glasses that simulate the loss of peripheral vision loss due to glaucoma. The activity asks participants with glaucoma glasses to read a makeup bill and write a check and then take a certain amount of change out of a coin purse to buy a fake stamp. Many participants found the glasses, "significantly increased the effort needed to pay a bill".

Station 3 included white noise headphones to simulate the loss of hearing that often comes with age. Participants were asked to pair up with one partner reading fake fire escape plan instructions and the other wearing noise-canceling headphones with white noise playing. Then the partner wearing the headphones was told to write down the simple instructions they heard. There were two different instructions for each pair which negated one partner from simply memorizing the instructions before it was their turn to listen and record. One participant noted that they "learned how awkward it is to not

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understand instructions" and another participant said, "writing instructions while hearing impaired, it felt kinda frustrating".

Another station also used noise-canceling headphones but this time participants were asked to play a concentration-like memory game while one partner had headphones with a loop of recorded tinnitus playing. Tinnitus is a constant ringing in the ears that can happen as a result of injury or loss of hearing. The partners would play and then switch showing the unaffected partner how much difference the ailment made in their ability to focus and remember components of the card game. One respondent noted that "Tinnitus, while memory matching [was the most difficult task,] because it was very distracting & made it challenging to focus".

Using the simulation glasses again we created a likeness of cataracts which often make vision blurry or cloudy. It is a common condition for people over the age of 60. For this station we had participants wear the glasses and gave them instructions to sort differently colored "medications" which in reality were different colored tic tacs into a weekly pill sorter. An example of the instructions included: blue pills on the weekend, red pills on Monday, Wednesday, and Friday, and orange pills on Tuesday and Thursday. After taking off the glasses one participant remarked that the most difficult station was "separating your pills with cataracts because you literally cannot see anything! The man at the station told me I would have overdosed one day of the week because I could not organize my pills". This response was common and appeared to be alarming to participants as they had not previously realized how deadly the consequences of mismanaged geriatric ailments can be.

The last station involved participants splitting into pairs and playing cards with each other. One partner would have glasses that simulated retinitis pigmentosa, an eye disease that damages the back wall of the eye and causes severe vision impairment. The other partner will have noise-canceling headphones with white noise to simulate hearing loss. While the pair play the card game go fish, they will hopefully begin to understand how isolating it is to not be able to communicate with others as easily as they are now. Participants noted that the simulated impairments made playing cards difficult "because everything was taking longer and was more frustrating" and "communication is skewed".

Before the pre-professional students began the aging awareness activity, they were asked to take a pre-activity survey which can be found in Appendix A. After completing the aging awareness activities each participant was asked to also take a post-activity survey which is located in Appendix B. These paper surveys were recorded into Microsoft Excel and coded.

The survey was made of both quantitative and qualitative data. The quantitative data such as the demographics of the participants including age and "profession" were assigned numbers and coded as such. The qualitative data were coded using keywords and themes. Quotations were also taken from qualitative survey responses to glean a better picture as to the effect the aging awareness activity had on participants.

Once the data had been properly coded statistical analysis was performed using R Studio and Microsoft Excel. The model used a total of n= 267 responses although there were more individual surveys without a complete pair of pre-and post-survey or lacking a name. Only surveys with completed pre-, post-, and identifiable names were used for

analysis in R Studio. Each name was assigned a participant number to allow for correct

pre-and post-survey comparisons and then the names were erased to negate any potential

bias. Paper surveys were shuffled to prohibit bias based on profession, education, age, or

researcher reaction to responses.

Results

There were a total of 267 pairs of pre and post responses to the survey including a

variety of ages, professions, and experiences. The significance level for all tests

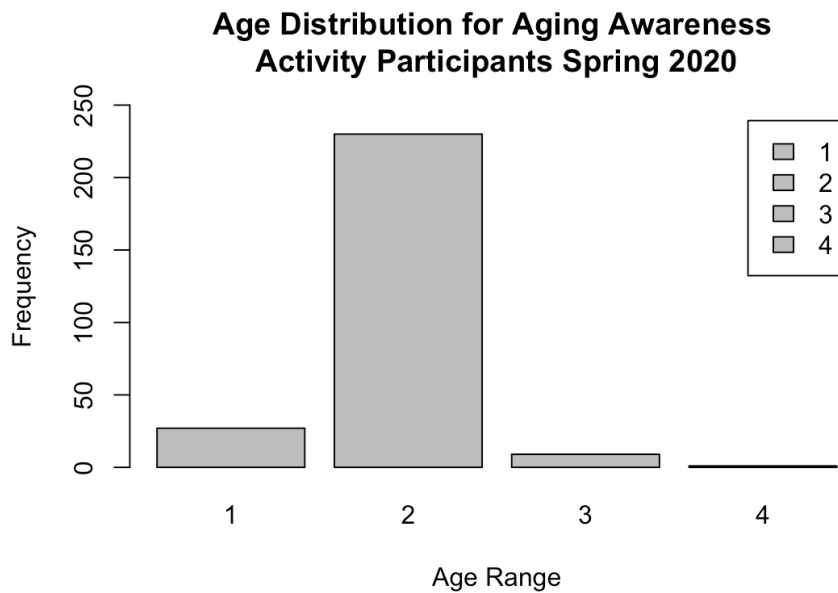performed was set at 5% ($p < 0.05$).

Figure 1

Figure 1.1: Illustrates the self-reported age distribution of the Aging Awareness Activity
participants who filled out both the pre-and post-activity surveys. The legend shows 1 which represents
ages 11- 20 years of age, 2 indicates ages 21-30 years of age, 3 shows the age range of 31-40 and number 4
shows ages 41-50. We had no participants who self-reported being above the age of 51 years old. The
frequency of each age range is shown on the y axis with each range as follows: 1 = 27, 2 = 230, 3 = 9, and
4 = 1.

Questions using a Likert-like scale of 1-5 with 1 being the least difficult and 5 being the most difficult were used to compare responses on the survey. "On a scale of 1-5, 5 being the most difficult, how difficult is it to conduct everyday activities, such as using technology and cooking?". This question was paired with the participants' response to the question "What is your profession?". Examples of self-reported professions named by participants were "Medical Student", "Physician Assistant Student", "Nursing Student" and other pre-professional student types that you can observe in Table 1.1. The frequency of each profession from most to least frequent is Pharmacy Student (54), Nursing Student (41), Medical Student (38), Physical Therapy Student (29), Student (25), Occupational Therapy Student (25), Dental Hygiene Student (19), Physician Assistant Student (17), Undergraduate Student (10), Clinical Psychology Student (3), Medical Laboratory Science Student (3), Other (3).

Table 1.1

Pre Survey Average Perceived Difficulty by Profession

Profession	Average Perceived Difficulty (1-5)	Count of Q4 Profession Code
Clincial Psychology Student	3.00	3
Dental Hygeine Student	3.11	19
Medical Laberatory Science Student	4.00	3
Medical Student	3.68	38
Nursing Student	3.32	41
Occupational Therapy Student	3.72	25
Other	4.00	3
Pharmacy Student	3.46	54
Physical Therapy Student	3.72	29
Physician Assistant Student	3.68	17
Student	3.68	25
Undergraduate Student	3.50	10
Grand Total	**3.54**	**267**

Table 1.1: The weighted average perceived difficulty on a scale of 1-5 for all participants was 3.54. The total participation was n= 267 and the frequency of each profession is shown under "Count of Profession" on the far-right column of the table. The median is 3.68 and the standard deviation is 0.0237.

The ranking from highest to lowest average perceived difficulty for Table 1.1 is as follows, 1 Medical Laboratory Science Student, 2 Other, 3 Occupational Therapy Student, 4 Physical Therapy Student, 5 Medical Student, 6 Physician Assistant Student, 7 Student, average (3.54), 8 Undergraduate Student, 9 Pharmacy Student,10 Nursing Student, 11 Dental Hygiene Student and finally 12 Clinical Psychology Student.

Table 1.2

Post Survey Average Perceived Difficulty by Profession

Profession	Average Perceived Difficulty (1-5)	Count of Profession
Clincial Psychology Student	3.50	3
Dental Hygeine Student	4.00	19
Medical Laberatory Science Student	4.33	3
Medical Student	4.39	38
Nursing Student	4.49	41
Occupational Therapy Student	4.20	25
Other	4.33	3
Pharmacy Student	4.37	54
Physical Therapy Student	4.45	29
Physician Assistant Student	4.25	17
Student	3.84	25
Undergraduate Student	4.40	10
Grand Total	**4.29**	**267**

Table 1.2: Depicts the average perceived difficulty on a scale of 1-5 for all participants after completing the Aging Awareness Activity was 4.29. The total participation was still n= 267 and the same frequency of each profession is shown under "Count of Profession" on the far-right column of the table indicating accuracy in the pre-and post-survey. The median was 4.33 and the standard deviation was 0.0121.

The average perceived difficulty increased by 0.75 points after the Aging Awareness Activity. The ranking from highest to lowest average perceived difficulty for Table 1.2 is as follows, 1 Nursing Student, 2 Physical Therapy Student, 3 Undergraduate Student, 4 Medical Student, 5 Pharmacy Student, 6 Medical Laboratory Science Student,

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7 Other, 8 Physician Assistant Student, 9 Occupational Therapy Student, 10 Dental

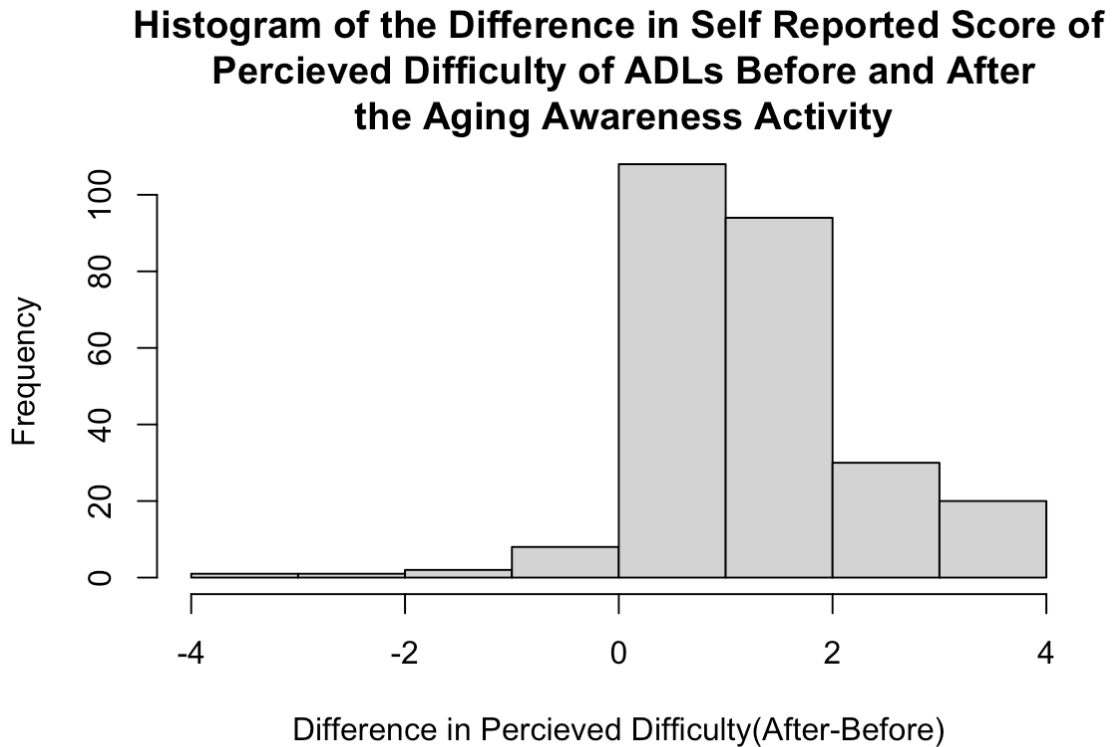Hygiene Student, 11 Student, 12 Clinical Psychology Student.

Figure 2

Figure 2: Illustrates the difference in self-reported perceived difficulty of ADLs for geriatric individuals before and after the Aging Awareness Activity. The test had 263 degrees of freedom and a p-value of $2.2e^{-16}$. The critical value for this example with a significance level of a=0.05 is 0.6754. The 95% confidence interval is $0.6321878 < \mu d > 0.9056910$ with a sample estimated mean of 0.7689.

Although a multitude of questions were asked on the pre and post surveys I argue

the most important quantitative question on the pre-survey was, "On a scale from of 1-5,

5 being the most difficult, how difficult do you perceive the same everyday activities

being for a significantly aged individual?". A similar question was asked on the post-

survey, "On a scale from of 1-5, 5 being the most difficult, how difficult do you perceive

everyday activities being for a significantly aged individual after experiencing the

activity?". A paired t-test was used to compare the participant's responses to the perceived difficulty of ADLs before and after the aging awareness activity. The paired t-test allowed me to compare the results of the same respondent to the results in the pre-and post-survey. The null hypothesis being tested by this paired T-test is that the mean change in perceived score before and after the Aging Awareness Activity was zero (ud = 0). The alternative hypothesis is that the mean change in perceived score before and after the Aging Awareness Activity was not zero (ud $\neq$ 0). The t-test had 263 degrees of freedom and a p-value of $2.2e^{-16}$. The critical value for this example with a significance level of a=0.05 is 0.6754. Due to the p-value being significantly less than the critical value we can reject the null hypothesis that the Aging Awareness Activity makes no difference on participants' responses of perceived difficulty. The 95% confidence interval is 0.6321878 < μd > 0.9056910. This means that there was a statistically significant difference between the before and after group.

Figure 3

Distribution of Respondants Who Self-Reported Changed Perspecitive After Aging Awareness Activity (n=278)
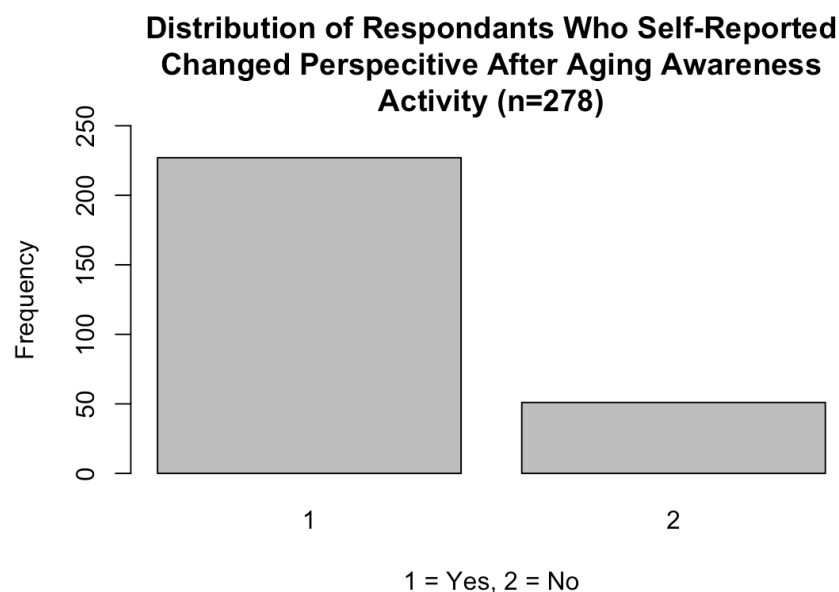
1 = Yes, 2 = No

Figure 3: Illustrates the distribution of respondents who reported a change in perspective after participating in the Aging Awareness Activity. The frequency of "Yes" was 227 counts and there were 51 "No" counts.

Figure 3 shows the results of the question posed in the post-activity survey which asked, "Did this experience change your perspective of the aging process?". The respondent could circle either yes or no to answer. The n value for this figure is higher than others because it solely depicts responses from a question found on the post-activity survey.

Discussion

Figure 1 which depicts the self-reported age distribution of the Aging Awareness Activity participants shows that the vast majority of participants were between the ages of 21- 30 with the second most common age range being 11-20. This is expected as our target audience was pre-professional healthcare students. Most of these students from across South Dakota are traditional undergraduate or graduate students. This may affect their perception of geriatric difficulty in a few ways. The first being that because they are younger, they do not generally struggle with the same ailments geriatric individuals have to deal with. Secondly, they are more likely to be early in their education and thus have had less interaction with the population in question. The more interaction a person has with a population the more likely they are to understand their daily lives better.

Table 1.1 illustrating the average perceived difficulty of daily activities sorted by profession showed the average being 3.54 which is close to the middle indicating to me that individuals know that daily life is hard for elderly patients, but they do not perceive it as extremely difficult. This could be for the reasons stated above. I noted that the lowest

average perceived difficulty was 3.00 for the students that self-reported as clinical psychology students. I found this curious and would have liked to be able to examine the relationship between professional dynamics and perceived difficulty more in-depth with individuals. The highest average was the same for both Medical Laboratory Science Students and students that did not indicate a specific profession so were coded as other. The ranking from highest to lowest average perceived difficulty for Table 1.1 was informative of the ways different students perceive geriatric struggles. I noticed that generally, the professions such as Pharmacy Student, Dental Hygiene, and Clinical Psychology Students who may have a more hands-off approach to healthcare ranked the perceived difficulty lower. This ranking is not to say that they have less empathy but that these students do not perceive the daily lives of geriatric individuals to be significantly harder than theirs. Other professions such as Physical and Occupational Therapy students that work very closely with individuals in the healthcare setting seemed to have a sense that geriatric patient's ADLs are indeed very difficult for them to even before the Aging Awareness Activity.

Table 1.2 showed the average perceived difficulty on a scale of 1-5 for all participants after completing the Aging Awareness Activity. The average perceived difficulty after the activity was 4.29. This is a marked change in 0.75 points in perceived difficulty that leads me to believe that the Aging Awareness Activity had a significant effect on the participants. The standard deviation between Table 1.1 and Table 1.2 shows an increase in precision for the data. This may indicate that people are more concisely understanding geriatric issues.

Comparing the rank of average perceived difficulty before and after the Aging Awareness Activity Pharmacy Student +4, Nursing Student +9, Medical Student +1, Physical Therapy Student +2, Student -4, Occupational Therapy Student -6, Dental Hygiene Student +1, Physician Assistant Student -2, Undergraduate Student +5, Clinical Psychology Student 0, Medical Laboratory Science Student -5, and Other -5. This is not to say that any professional group with a negative number "lost" empathy for geriatric issues but that other professional groups increased their average perceived difficulty more substantially after the AAA.

Figure 2 Although a multitude of questions were asked on the pre- and post-surveys the question that gleaned the most information was question 3 on the pre-survey and question 1 on the post-survey. The comparison of this information for unnamed participants showed how each individual was affected by the AAA. The paired t-test demonstrated that there indeed was a statistically significant change between the after and before and that the average perceived difficulty was increased overall by a sample estimate mean of 0.7689.

Figure 3 illustrates the distribution of respondents who reported a change in perspective after participating in the Aging Awareness Activity. The response of almost 82% of the participants reporting that "Yes" their perspective was changed after completing the AAA is encouraging that empathy training like this one can be successful in the future.

Our study had several limitations one being that these were samples of convenience. The participants of this survey were not assigned certain stations to complete but they are not a truly random sample because the majority of the pre-professional students are from the University of South Dakota, South Dakota State University, Dakota State University, Northern State University, and Mount Marty College. The emergency awareness event in SD may not be a representative sample of the United States pre-professional student population. This should be taken into consideration when observing the results of this survey. Due to time constraints, not every person was able to complete all of the stations before completing the post-survey so their responses could be based on partial participation in the Aging Awareness Activity. This survey was not controlled for factors such as personality, social-economic status, ethnic background, previous training, or preexisting psychiatric conditions, and other extraneous variables.

Conclusion

The results of this survey concluded that this activity heightened awareness and helped introduce or reinforce South Dakota professional healthcare student's knowledge of geriatric struggles. This is important because as the geriatric population rises this population will be seen more in clinics, hospitals, nursing homes, and other healthcare facilities and healthcare professionals need to be ready to provide the best quality care possible. Even though this short training intervention, we were able to increase participant's perceived difficulty of ADLs for geriatric patients. This change shows

improved empathy for this population. By increasing empathy for the geriatric population, we hope to perform further studies that could show the specific correlation between increased geriatric empathy and the quality of geriatric patient care. Other further studies could include research into how a provider's empathy progresses over a provider's career. The demographics of a patient or their families may affect provider empathy. How this relationship is established and how this trend forms is a question that has yet to be answered. Many more questions need to be explored but at this time I can conclude that there are barriers to providers actively practicing empathy which can lead to burnout and decreased empathy. Empathy is an important trait for healthcare professionals because it affects the lives of their patients and everyone around them. By working to decrease provider burnout and increase empathy we can increase patient satisfaction and outcomes. I strive to make empathy a part of my everyday life to provide quality care for those in need.

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Appendix A

Pre Activity Survey
Circle the appropriate option

Name: _____

1. What is your current age?
· 11-20
· 21-30
· 31-40
· 41-50
· 51-60
· 61-70
· 71-80
· 81-90
· Other _____

2. On a scale of 1-5, 5 being the most difficult, how difficult is it to conduct everyday activities, such as using technology and cooking?
       1   2   3   4   5

3. On a scale of 1-5, 5 being the most difficult, how difficult do you perceive the same everyday activities being for a significantly aged individual?
       1   2   3   4   5

3. What is your profession?

_____

4. What are you hoping to learn from this experience?

_____

5. Circle the appropriate option:

A.   I give my consent to allow HEAL to use any photographs taken of me for marketing purposes.

B.   I do NOT give my consent to allow HEAL to use any photographs taken of me for marketing purposes.

Pre-Activity Survey given to all participants of the Aging Awareness Activity.

Appendix B

Post-Activity Survey
Circle the appropriate option

Name:_____

1. On a scale of 1-5, 5 being the most difficult, how difficult do you perceive everyday activities being for a significantly aged individual after experiencing the activity?

     1   2   3   4   5

2. What was the most difficult task in the activity and why?
_____
_____

3. What is the most impactful thing about participating in the activity?
_____
_____

4. In your opinion, how can we improve the activity?
_____
_____

5. Did this experience change your perspective of the aging process?

     Yes   No

6. Were the effects of aging represented accurately and respectfully, in your experience? If not, how can we improve?
_____
_____

7. Would you recommend this activity to others? Why? Why not?
_____
_____

As challenging as this activity may have been at your current stage of life, please be aware that people you encounter may be living this experience on a permanent basis. Along with that, the aging population often experiences other ailments compounded on those that we have simulated here. The aging population in our culture lives with these obstacles while also often being faced with judgements, stereotypes, and a lack of understanding by those in their life. Thank you for taking this opportunity to expand your understand of the aging population with The University of South Dakota Healthcare Executives Advancing in Leadership.

Post Activity Survey is given to all participants after completing the Aging Awareness

Activity.